

Power Systems

*Failing function codes, failing items,
and symbolic FRUs*

IBM

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and symbolic FRUs*

IBM

Note

Before using this information and the product it supports, read the information in “Safety notices” on page v, “Notices” on page 307, the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125-5823.

This edition applies to IBM Power Systems™ servers that contain the POWER8® processor and to all associated models.

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Contents

Safety notices	v
Failing function codes, failing items, and symbolic FRUs	1
Failing function codes	1
Failing items	162
Symbolic FRUs	182
Notices	307
Accessibility features for IBM Power Systems servers	308
Privacy policy considerations	309
Trademarks	310
Electronic emission notices	310
Class A Notices.	310
Class B Notices.	314
Terms and conditions.	317

Safety notices

Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, safety information documentation is included in the publications package (such as in printed documentation, on DVD, or as part of the product) shipped with the product. The documentation contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information documentation. You should also refer to the safety information documentation any time you do not clearly understand any safety information in the U.S. English publications.

Replacement or additional copies of safety information documentation can be obtained by calling the IBM Hotline at 1-800-300-8751.

German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

Laser safety information

IBM® servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

Laser compliance

IBM servers may be installed inside or outside of an IT equipment rack.

DANGER: When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- If IBM supplied the power cord(s), connect power to this unit only with the IBM provided power cord. Do not use the IBM provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
 - For AC power, disconnect all power cords from their AC power source.
 - For racks with a DC power distribution panel (PDP), disconnect the customer's DC power source to the PDP.
- When connecting power to the product ensure all power cables are properly connected.

- For racks with AC power, connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- For racks with a DC power distribution panel (PDP), connect the customer’s DC power source to the PDP. Ensure that the proper polarity is used when attaching the DC power and DC power return wiring.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Do not attempt to switch on power to the machine until all possible unsafe conditions are corrected.
- Assume that an electrical safety hazard is present. Perform all continuity, grounding, and power checks specified during the subsystem installation procedures to ensure that the machine meets safety requirements.
- Do not continue with the inspection if any unsafe conditions are present.
- Before you open the device covers, unless instructed otherwise in the installation and configuration procedures: Disconnect the attached AC power cords, turn off the applicable circuit breakers located in the rack power distribution panel (PDP), and disconnect any telecommunications systems, networks, and modems.

DANGER:

- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. For AC power, remove the power cords from the outlets.
3. For racks with a DC power distribution panel (PDP), turn off the circuit breakers located in the PDP and remove the power from the Customer's DC power source.
4. Remove the signal cables from the connectors.
5. Remove all cables from the devices.

To Connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. For AC power, attach the power cords to the outlets.
5. For racks with a DC power distribution panel (PDP), restore the power from the Customer's DC power source and turn on the circuit breakers located in the PDP.
6. Turn on the devices.

Sharp edges, corners and joints may be present in and around the system. Use care when handling equipment to avoid cuts, scrapes and pinching. (D005)

(R001 part 1 of 2):

DANGER: Observe the following precautions when working on or around your IT rack system:

- Heavy equipment–personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices. In addition, do not lean on rack mounted devices and do not use them to stabilize your body position (for example, when working from a ladder).



- Each rack cabinet might have more than one power cord.
 - For AC powered racks, be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
 - For racks with a DC power distribution panel (PDP), turn off the circuit breaker that controls the power to the system unit(s), or disconnect the customer's DC power source, when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

(R001 part 2 of 2):

CAUTION:

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.



- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

CAUTION:

Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building.

- Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:
 - Remove all devices in the 32U position (compliance ID RACK-001 or 22U (compliance ID RR001) and above.
 - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.
 - Ensure that there are little-to-no empty U-levels between devices installed in the rack cabinet below the 32U (compliance ID RACK-001 or 22U (compliance ID RR001) level, unless the received configuration specifically allowed it.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- If the rack cabinet you are relocating was supplied with removable outriggers they must be reinstalled before the cabinet is relocated.
- Inspect the route that you plan to take to eliminate potential hazards.
- Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.
- Verify that all door openings are at least 760 x 230 mm (30 x 80 in.).
- Ensure that all devices, shelves, drawers, doors, and cables are secure.
- Ensure that the four leveling pads are raised to their highest position.
- Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.
- Do not use a ramp inclined at more than 10 degrees.
- When the rack cabinet is in the new location, complete the following steps:
 - Lower the four leveling pads.
 - Install stabilizer brackets on the rack cabinet.
 - If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.
- If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.

(R002)

(L001)



DANGER: Hazardous voltage, current, or energy levels are present inside any component that has this label attached. Do not open any cover or barrier that contains this label. (L001)

(L002)



DANGER: Rack-mounted devices are not to be used as shelves or work spaces. (L002)

(L003)



or



or



or



or



DANGER: Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)

(L007)



CAUTION: A hot surface nearby. (L007)

(L008)



x

CAUTION: Hazardous moving parts nearby. (L008)

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION:

This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

(C026)

CAUTION:

Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Although shining light into one end and looking into the other end of a disconnected optical fiber to verify the continuity of optic fibers may not injure the eye, this procedure is potentially dangerous. Therefore, verifying the continuity of optical fibers by shining light into one end and looking at the other end is not recommended. To verify continuity of a fiber optic cable, use an optical light source and power meter. (C027)

CAUTION:

This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

CAUTION:

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information: laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

CAUTION:

The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

Do Not:

- **Throw or immerse into water**
- **Heat to more than 100°C (212°F)**
- **Repair or disassemble**

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

CAUTION:

Regarding IBM provided VENDOR LIFT TOOL:

- Operation of LIFT TOOL by authorized personnel only.
- LIFT TOOL intended for use to assist, lift, install, remove units (load) up into rack elevations. It is not to be used loaded transporting over major ramps nor as a replacement for such designated tools like pallet jacks, walkies, fork trucks and such related relocation practices. When this is not practicable, specially trained persons or services must be used (for instance, riggers or movers).
- Read and completely understand the contents of LIFT TOOL operator's manual before using. Failure to read, understand, obey safety rules, and follow instructions may result in property damage and/or personal injury. If there are questions, contact the vendor's service and support. Local paper manual must remain with machine in provided storage sleeve area. Latest revision manual available on vendor's web site.
- Test verify stabilizer brake function before each use. Do not over-force moving or rolling the LIFT TOOL with stabilizer brake engaged.
- Do not move LIFT TOOL while platform is raised, except for minor positioning.
- Do not exceed rated load capacity. See LOAD CAPACITY CHART regarding maximum loads at center versus edge of extended platform.
- Only raise load if properly centered on platform. Do not place more than 200 lb (91 kg) on edge of sliding platform shelf also considering the load's center of mass/gravity (CoG).
- Do not corner load the platform tilt riser accessory option. Secure platform riser tilt option to main shelf in all four (4x) locations with provided hardware only, prior to use. Load objects are designed to slide on/off smooth platforms without appreciable force, so take care not to push or lean. Keep riser tilt option flat at all times except for final minor adjustment when needed.
- Do not stand under overhanging load.
- Do not use on uneven surface, incline or decline (major ramps).
- Do not stack loads.
- Do not operate while under the influence of drugs or alcohol.
- Do not support ladder against LIFT TOOL.
- Tipping hazard. Do not push or lean against load with raised platform.
- Do not use as a personnel lifting platform or step. No riders.
- Do not stand on any part of lift. Not a step.
- Do not climb on mast.
- Do not operate a damaged or malfunctioning LIFT TOOL machine.
- Crush and pinch point hazard below platform. Only lower load in areas clear of personnel and obstructions. Keep hands and feet clear during operation.
- No Forks. Never lift or move bare LIFT TOOL MACHINE with pallet truck, jack or fork lift.
- Mast extends higher than platform. Be aware of ceiling height, cable trays, sprinklers, lights, and other overhead objects.
- Do not leave LIFT TOOL machine unattended with an elevated load.
- Watch and keep hands, fingers, and clothing clear when equipment is in motion.
- Turn Winch with hand power only. If winch handle cannot be cranked easily with one hand, it is probably over-loaded. Do not continue to turn winch past top or bottom of platform travel. Excessive unwinding will detach handle and damage cable. Always hold handle when lowering, unwinding. Always assure self that winch is holding load before releasing winch handle.
- A winch accident could cause serious injury. Not for moving humans. Make certain clicking sound is heard as the equipment is being raised. Be sure winch is locked in position before releasing handle. Read instruction page before operating this winch. Never allow winch to unwind freely. Freewheeling will cause uneven cable wrapping around winch drum, damage cable, and may cause serious injury. (C048)

Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metalically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metalically to OSP wiring.

Note: All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

The dc-powered system is intended to be installed in a common bonding network (CBN) as described in GR-1089-CORE.

Failing function codes, failing items, and symbolic FRUs

Failing function codes (FFCs), failing items, and symbolic field replaceable units (FRUs) provide the information necessary to fix a problem that is identified by a system reference code (SRC) or service request number (SRN).

The procedures and functions of the HMC Enhanced + Tech Preview (Pre-GA) login option and interface type, which was provided with the Hardware Management Console (HMC) version 8.2.0, are the same as the HMC Enhanced+ login option and interface type that is provided with HMC version 8.3.0 and later. Only the HMC Enhanced+ is referred to in the documentation, but that content also applies to the HMC Enhanced + Tech Preview (Pre-GA) interface.

Failing function codes

Failing function codes represent functions within the system unit.

The failing function codes are listed in numerical order.

Failing function code 11A

The cryptographic coprocessor adapter battery kit is the failing item.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
11A		09J8199	Cryptographic coprocessor adapter battery kit	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 132

The program that just loaded might be damaged.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 141

The 857 MB disk enclosure assembly is the failing item.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
141		4569502	857 MB Disk Enclosure Assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 151

Failing function code 151 is not supported on these models. Continue with the next FRU in the list.

Failing function code 152

A power supply is the problem.

See FFC 153.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 153

An expansion unit power supply is the failing item.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
153	5887	See System parts.	Power supply	Un-P1-Ex

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 159

The problem is with a tablet.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
159	6093 Models 21, 22	6247455	Tablet cursor	Un-P1-Cx-Ty
159	6093 Models 11, 12	74F3131	Tablet cursor, 4-button	Un-P1-Cx-Ty
159	6093 Models 11, 12	74F3132	Tablet cursor, 6-button	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 165

Failing function code 165 is not supported on these models. Continue with the next FRU in the list.

Failing function code 166

The problem is with a fan assembly.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
166	5887	See System parts.	Fan (in power supply FRU)	Un-P1-Ex
166	5147-024, ESLL, or ESLS	See System parts.	Fan (in power supply FRU)	Un-P1-Ex
166	Any	See System parts.	Fan assembly	Un-Ax

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 169

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 185

The problem is with an X.25 interface co-processor adapter.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
185	Any	71G6458	X.25 Interface Co-Processor adapter	Un-P1-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 186

The problem is with the co-processor multiport adapter.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
186	Any	33F8967	Co-Processor Multiport adapter Model 2	Un-P1-Cx
186	Any	84F7540	Co-Processor Multiport adapter Model 2 daughter card	Un-P1-Cx

CCIN or FFC	Type and model	Part number	Description	Location code
186	Any	53F2662	Co-Processor Multiport adapter Model 2 memory module (1 MB)	Un-P1-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 188

The problem is with a tablet stylus.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
188	6093 models 11, 12	74F3133	Tablet stylus	
188	6093 models 21, 22	6247454	Tablet stylus	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 190

The problem is with an internal disk signal cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
190		21P7063	Internal disk signal cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 192

The problem is with a power supply for a portable disk drive.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
192	7203	00G2960	Portable disk drive power supply	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 199

The problem is with an internal disk unit backplane.

See FFC 2667.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 201

The problem is with an internal disk signal cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
201		21P7063	Internal disk signal cable (associated with FFC 190)	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 210

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 221

The problem is a system I/O control logic problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
221	All	See System parts.	System backplane or I/O backplane	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 227

The problem is a system status logic problem.

Replace the system backplane or I/O backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 240

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 241

The problem is an Ethernet network problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
241	Any		Ethernet network problem	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2502

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2503

A SAS RAID enablement card might be failing.

Replace the SAS RAID enablement card.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2504

A SAS RAID auxiliary cache card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2504	All	44V3298	SAS RAID auxiliary cache card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2505

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2508

A PCIe3 FPGA accelerator adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
59AB	5148-21L, 5148-22L, 8247-21L, 8247-22L, or 8284-22A	See PCIe3 LP FPGA Accelerator Adapter (FC EJ13; CCIN 59AB).	PCIe3 FPGA accelerator adapter (low profile)	
59AB	8247-42L, 8286-41A, or 8286-42A	See PCIe3 FPGA Accelerator Adapter (FC EJ12; CCIN 59AB).	PCIe3 FPGA accelerator adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2509

A RAID card might be failing.

Replace the RAID card (CCIN 2CCA) at location Un -P3. For part number information, see 8408-44E or 8408-E8E system parts.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 250B

A RAID card might be failing.

Replace the RAID card (CCIN 2CD2) at location Un -P3. For part number information, see 8408-44E or 8408-E8E system parts.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 250D

A RAID card might be failing.

Replace the RAID card (CCIN 2CCD) at location Un -P3. For part number information, see 8408-44E or 8408-E8E system parts.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 251

The problem is in the cables for a parallel printer.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
251	Any	8529214	Cable, parallel printer	<i>Un-P1-Cx-Ty</i>
251	Any	8185219	Cable, parallel printer	<i>Un-P1-Cx-Ty</i>

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2512

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2513

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2514

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2515

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2516

A PCIe JBOD SAS adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2516	Any	See Managing PCI adapters.	PCIe JBOD SAS adapter	<i>Un-Px-Cx</i>

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2517

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2518

A PCIe RAID SAS adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2518	Any	See Managing PCI adapters.	PCIe RAID SAS adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2519

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 251D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 252

The problem is in the standard 9-pin to 25-pin converter cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
252	Any	23R4632	Standard 9-pin to 25-pin converter cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2520

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2521

The processor subsystem chassis might be failing.

Replace the processor subsystem chassis.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2522

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2523

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2524

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2525

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2526

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2527

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2528

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2529

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 252B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 252D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 252E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 253

The multiprotocol cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
253	Any		The problem is in the multiprotocol cable, EIA-422A, which is provided by the customer.	<i>Un-P1-Cx-Ty</i>

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2530

The Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2530	Any	09P3196	10/100 Mbps Ethernet PCI adapter II	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2531

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2532

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2533

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2534

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2535

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2537

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2538

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 254

The problem is in the 4-port multiprotocol EIA-232, V.24 cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
254	Any	71F0165	4-port multiprotocol EIA-232, V.24 cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 254E

The Fibre Channel expansion card might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
254E	Any	13N2056	Fibre Channel expansion card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2550

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2551

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2555

A 73 GB SAS interface 3.5 inch form-factor drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2555	Any	See Finding parts, locations, and addresses.	73 GB SAS interface 3.5 inch form-factor drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2556

A 146 GB SAS interface 3.5 inch form-factor drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2556	Any	See Finding parts, locations, and addresses.	146 GB SAS interface 3.5 inch form-factor drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2557

A 300 GB SAS interface 3.5 inch form-factor drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2557	Any	See Finding parts, locations, and addresses.	300 GB SAS interface 3.5 inch form-factor drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 256

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2562

The keyboard/mouse USB PCI attachment card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2562	Any	09P2470	Keyboard/mouse USB PCI attachment card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2564

The keyboard/mouse USB PCI attachment card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2564	Any	80P2994	Keyboard/mouse USB PCI attachment card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2566

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2568

The CD-ROM might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2568	Any		Generic USB CD-ROM	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 256D

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
256D	Any	26R0893 26R0889	4 Gb Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 256E

The 4-port 10/100/1000 Base-TX PCI Express adapter might be failing.

Replace the 4-port 10/100/1000 Base-TX PCI Express adapter. If the problem is not resolved, replace the I/O backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 257

The problem is in the 4-port multiprotocol, V.35 cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
257	Any	71F0162	4-port multiprotocol, V.35 cable	<i>Un-P1-Cx-Ty</i>

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2570

The cryptographic accelerator PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2570	Any	11P1856	IBM cryptographic accelerator PCI adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2571

The 2-port PCI asynchronous EIA-232 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2571	Any	80P4353	2-Port PCI Asynchronous EIA-232 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2572

The xCrypto coprocessor card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2572	Any	41U0442 12R6540	PCI xCrypto coprocessor card	
11A		41V1061	Battery kit	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2576

The 4-port PCIe serial adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2576	Any	See Managing PCI adapters.	4-port PCIe serial adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2578

The cryptographic coprocessor adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2578	Any	See Managing PCI adapters.	PCIe cryptographic coprocessor adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2579

The cryptographic coprocessor adapter battery is the failing item.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2579	Any	See Managing PCI adapters.	PCIe cryptographic coprocessor adapter battery	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 257E

The cryptographic coprocessor adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
257E	Any	See Managing PCI adapters.	PCIe3 cryptographic coprocessor adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 258

The problem is in the 4-port multiprotocol cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
258	Any	40F9897	4-port multiprotocol cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2580

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2581

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2583

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2586

The failing function code indicates a failure in the Host Ethernet Adapter (HEA), which is a part of the pass-through card.

The HEA controller is integrated on the I/O backplane in the system unit. Replace the pass-through card. If the problem is not resolved, replace the I/O backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2587

The DVD-ROM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2587	Any	39J5774	Slimline DVD-ROM drive	Un-P4-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2588

The DVD-RAM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2588	Any	39J5772	IBM 4.7 GB Slimline DVD-RAM drive	Un-P4-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 259

The problem is in the async EIA-232D, V.24 cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
259	Any	42R5206	Async EIA-232D, V.24 cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2590

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2591

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2592

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2593

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25A0

A backplane might be failing.

Replace the system backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25A2

The USB DVD-RAM drive might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25A2	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system	USB DVD-RAM drive	
25A2	8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system	USB DVD-RAM drive	
25A2	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system	USB DVD-RAM drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25A3

The integrated serial adapter on the Ethernet PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2B56	Any	00E0778	2 x 1 Gb and 2 x 10 Gb twinaxial Ethernet adapter	
2B57	Any	00E0784	2 x 1 Gb and 2 x 10 Gb optical Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25A4

The 2-port PCIe asynchronous EIA-232 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25A4	Any	See PCIe 2-port Async EIA-232 Adapter (FC 5289; CCIN 57D4).	2-port PCIe asynchronous EIA-232 full-height adapter	

CCIN or FFC	Type and model	Part number	Description	Location code
25A4	Any	See PCIe LP 2-port Async EIA-232 Adapter (FC 5290; CCIN 57D4).	2-port PCIe asynchronous EIA-232 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25B9

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25C0

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25C1

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25C2

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25C3

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25C4

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 25D0

The audio adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25D0	Any	00P4648	PCI audio adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25D2

Configuring JS21 SAS expansion adapter.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25D3

A 2-port 6 Gb LSI SAS expansion PCIe x8 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25D3	Any	74Y0500	2-port 6 Gb LSI SAS expansion PCIe x8 adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25D5

A 4-port 6 Gb LSI SAS expansion PCIe x8 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25D5	Any	46K3659	4-port 6 Gb LSI SAS expansion PCIe x8 adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25E5

The graphics adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25E5	Any	10N7756	PCIe 2D graphics adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25E6

The graphics adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25E6	Any	74Y2025	Low profile PCIe 2D graphics adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25E7

The graphics adapter cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
25E7	Any	74Y2031	Low profile PCIe 2D graphics adapter Y-breakout cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 25F8

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 260

The problem is in the 4-port multiprotocol, X.21 cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
260	Any	71F0164	4-port multiprotocol, X.21 cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2600

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2600	Any	80P6416	PCI 64-Bit Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2601

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2601	Any	03N7069	PCI 64-Bit Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2602

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2602	Any	03N5012	PCI 64-Bit 4 GB Fibre Channel adapter (Low Profile 1-Port)	
2602	Any	03N5029	PCI 64-Bit 4 GB Fibre Channel adapter (2-Port)	
2602	Any	03N5027	PCI 64-Bit 4 GB Fibre Channel adapter (Low Profile 2-Port)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2603

The 1-port or 2-port 4 Gb PCIe Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2603	Any	See Managing PCI adapters.	1-port 4 Gb PCIe Fibre Channel adapter	Un-Px-Cx
2603	Any	See Managing PCI adapters.	2-port 4 Gb PCIe Fibre Channel adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2604

Configuring Fibre Channel daughter card.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2606

The 8 Gb Fibre Channel 2-port PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2606	Any	See Managing PCI adapters.	8 Gb Fibre Channel 2-port PCI adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2608

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2608	Any	See PCIe2 FH 4-Port 8 Gb Fibre Channel Adapter (FC 5729).	PCIe2 4-port 8 Gb Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2609

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2609	Any	See PCIe2 16 Gb 2-port Fibre Channel Adapter (FC EN0A; CCIN 577F).	PCIe2 16 Gb 2-port Fibre Channel full-height adapter	
2609	Any	See PCIe2 LP 16 Gb 2-port Fibre Channel Adapter (FC EN0B; CCIN 577F).	PCIe2 16 Gb 2-port Fibre Channel low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 261

The problem is in the RS/232 interposer.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
261	Any	10N7453	RS/232 interposer	Un-P1-Tx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2611

The 36/72 GB Data72 4-mm internal tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2611	Any	95P1989	36/72 GB Data72 4-mm internal tape drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2612

The 80/160 GB internal tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2612	Any	19P4898	80/160 GB internal tape drive with VXA technology	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2613

The 200/400 GB half high Ultrium 2 tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2613	Any	96P1775	200/400 GB Half High Ultrium 2 tape drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2614

The 160/320 GB internal tape drive VXA-320 might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2614	Ant	95P1976	160/320 GB internal tape drive VXA-320	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2615

The DAT 160 80 GB tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2615	Any	23R9723	DAT 160 80 GB tape drive	Un-D1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2616

The 36/72 GB 4 mm internal tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2616	Any	23R2619	36/72 GB 4 mm internal tape drive	Un-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2617

The LTO3 400 GB tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2617	Any	23R7038	LTO3 400 GB tape drive	Un-D1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2618

The 800 GB/1.6 TB Ultrium 4 SAS tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2618	Any	45E1127	800 GB/1.6 TB Ultrium 4 SAS tape drive	Un-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2619

The 3.5 inch DAT 160 80 GB SAS tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
1124	Any	46C2214	3.5 inch DAT 160 80 GB SAS tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 262

The problem is in the 8-port multiport interface cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
262	Any	00F5524	8-port multiport interface cable	Un-P1-Cx-Tx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2625

The 2-port 4x InfiniBand QDR adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2625	Any	74Y2987	2-port 4x InfiniBand QDR adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2628

The PCIe2 2-port 4x InfiniBand QDR adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2628	Any	See PCIe2 LP 2-port 4X InfiniBand QDR Adapter (FC 5283; CCIN 58E2).	PCIe2 2-port 4x InfiniBand QDR low-profile adapter	
2628	Any	See PCIe2 2-port 4X InfiniBand QDR Adapter (FC 5285; CCIN 58E2).	PCIe2 2-port 4x InfiniBand QDR full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2629

A PCIe QDR host channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
	Any	See "Failing function code 2625" on page 29.	PCIe QDR host channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 262B

The 2-port PCIe2 10 GbE RoCE SFP+ adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
262B	Any	See PCIe2 LP 2-Port 10 GbE RoCE SFP+ Adapter (FC EC27; CCIN EC27).	PCIe2 2-port 10 GbE RoCE SFP+ low-profile adapter	
262B	Any	See PCIe2 2-Port 10 GbE RoCE SFP+ Adapter (FC EC28; CCIN EC27).	PCIe2 2-port 10 GbE RoCE SFP+ full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 262D

The 2-port PCIe2 10 GbE RoCE SR adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
262D	Any	See PCIe2 LP 2-port 10 GbE RoCE SR Adapter (FC EC29; CCIN EC29).	PCIe2 2-port 10 GbE RoCE SR low-profile adapter	
262D	Any	See PCIe2 LP 2-port 10 GbE RoCE SR Adapter (FC EC30; CCIN EC29).	PCIe2 2-port 10 GbE RoCE SR full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 263

The problem is in the EIA-232 terminal cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
263	Any	10N6535	EIA-232 Terminal cable	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2631

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2640

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2641

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2642

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2643

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2644

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2645

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2646

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2647

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2648

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2649

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 264B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 264D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 264E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2650

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2651

Configuring SVC.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2653

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2654

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2655

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2658

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2659

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 265B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 266

The problem is in the RJ-45 to DB-25 converter cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
266	Any	59F3432	RJ-45 to DB-25 converter cable	<i>Un-P1-Cx-Ty</i>

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2667

The problem is with a SAS enclosure services manager or with a system backplane.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2667	5887	See System parts.	Enclosure services manager	<i>Un-P1-C1, Un-P1-C2</i>

CCIN or FFC	Type and model	Part number	Description	Location code
2667	5147-024, ESLL, or ESLS	See System parts.	Enclosure services manager	Un-P1-C1, Un-P1-C2
2667	System unit	See System parts.	System backplane or I/O backplane	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 267

The problem is in the 4-port multiprotocol jumper cable assembly.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
267	Any	81F8570	4-port multiprotocol jumper cable assembly	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2670

A 73 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2670	Any	42R8391	73 GB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2671

A 146 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2671	Any	42R8392	146 GB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2672

A 300 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2672	Any	44V6833	300 GB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2679

The DVD-RAM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2679	Any	See System parts.	SATA Slimline DVD-RAM drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 267B

The DVD-ROM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
267B	Any	See System parts.	SATA Slimline DVD-ROM drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2680

The problem is with a generic SAS adapter.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2680	Any		Generic SAS adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2681

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2682

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2684

A 73 GB SAS interface small-form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2684	Any	See System parts.	73 GB SAS interface small-form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2685

A 146 GB SAS interface small-form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2685	Any	See System parts.	146 GB SAS interface small-form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2687

A 73 GB SAS small-form factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2687	Any	See System parts.	73 GB SAS small-form factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2690

A 600 GB SAS interface 3.5 inch form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2690	Any	See System parts.	600 GB SAS interface 3.5 inch form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2699

A 600 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2699	Any	See System parts.	600 GB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26B4

A 200 GB SATA 1.8 inch form-factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26B4	Any	See System parts.	200 GB SATA 1.8 inch form-factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26B8

A 200 GB SAS solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
	Any	See System parts.	200 GB SAS solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26BD

The SAS to SATA bridge function for SATA solid-state drives might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
57CD	Any	See Managing PCI adapters.	3Gb PCIe RAID and SSD SAS adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26D0

The DAT 320 160 GB SAS tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26D0	Any	See System parts.	DAT 320 160 GB SAS tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26D1

The DAT 320 160 GB USB tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26D1	Any	See System parts.	DAT 320 160 GB USB tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26D2

A 600 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26D2	Any	See System parts.	600 GB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26D3

A 300 GB SAS interface small-form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26D3	Any	See System parts.	300 GB SAS interface small-form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26DD

A 900 GB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
26DD	Any	See System parts.	900 GB SAS interface small-form factor 10,000 rpm disk drive	U n -P x -D x

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26E0

An internal RDX USB 2 dock might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26E0	Any	46C5380	Internal 5.25 inch RDX USB 2 dock	
26E0	Any	46C2217	Internal 3.5 inch RDX USB 2 dock	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26E1

An external RDX USB 2 dock might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26E1	Any	46C5381	External RDX USB 2 dock	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26E2

A removable disk cartridge might be failing.

Removable disk cartridges are supply items. To receive warranty service or to purchase additional removable disk cartridges in the United States and Canada, call 1-888-IBM-MEDIA. In other locations, contact your local provider of IBM storage products or see Storage Media (<http://www.ibm.com/storage/media>).

Removable disk cartridges are not service items. IBM service representatives are not dispatched to service or replace removable disk cartridges.

Failing function code 26E5

The LTO5 SAS tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
26E5	Any	46C2006	LTO5 SAS tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26E7

An internal RDX USB 3 dock might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
26E7	Any	46C2346	Internal 5.25 inch RDX USB 3 dock	
26E7	Any	46C2444	Internal 3.5 inch RDX USB 3 dock	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 26E9

An external RDX USB 3 dock might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
26E9	Any	46C2347	External RDX USB 3 dock	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 271

The problem is an X.25 attachment cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
271	Any	07F3151	Cable, X.25 attachment cable, X.21 (3 m)	Un-P1-Cx-Ty
271	Any	53F3926	Cable, X.25 attachment cable, X.21 (6 m)	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2710

The OHCI USB Native or Lily 4-port PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2710	Any	See Managing PCI adapters.	OHCI USB Native or Lily 4-port PCIe adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2712

The USB converter card might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
2712	7226-1U3	46C2592	USB converter card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2713

The SATA redriver card might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
2713	7226-1U3	46C1761	SATA redriver card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2714

The integrated xHCI USB 3.0 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2714	Any	See System parts.	Replace the system backplane.	U n -P1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2715

A PCIe2 4-port USB 3.0 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
58F9	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-Port USB 3.0 Adapter (FC EC45; CCIN 58F9).	PCIe2 4-port USB 3.0 adapter (low profile)	
58F9	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-Port USB 3.0 Adapter (FC EC46; CCIN 58F9).	PCIe2 4-port USB 3.0 adapter	
58F9	8408-44E or 8408-E8E	See PCIe2 4-Port USB 3.0 Adapter (FC EC46; CCIN 58F9).	PCIe2 4-port USB 3.0 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 272

The problem is an X.25 attachment cable, V.24.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
272	Any	07F3160	Cable, X.25 attachment cable, V.24 (3 m)	Un-P1-Cx-Ty
272	Any	53F3927	Cable, X.25 attachment cable, V.24 (6 m)	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2720

The DVD-RAM drive might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
2720	Any	See SATA Slimline DVD-RAM Drive (FC 5771).	SATA Slimline DVD-RAM drive (FC 5771)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2722

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2723

The LTO6 FC tape drive might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2723	Any	35P1060	LTO6 FC tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 273

The problem is an X.25 attachment cable, V.35.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
273	Any	07F3171	Cable, X.25 attachment cable, V.35 (3 m)	Un-P1-Cx-Ty
273	Any	53F3928	Cable, X.25 attachment cable, V.35 (6 m)	Un-P1-Cx-Ty

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2740

A 400 GB SAS small-form factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2740	Any	See System parts.	400 GB SAS small-form factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2743

A 800 GB SAS small-form factor solid-state drive might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
2743	Any	See System parts.	800 GB SAS small-form factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 274E

A 400 GB SAS small-form factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
274E	Any	See System parts.	400 GB SAS small-form factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2751

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2752

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2753

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2754

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2756

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2757

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 276

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 277

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2777

The GX++ to PCIe2 1-port 4X InfiniBand QDR adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
2777	Any	00E9887	GX++ to PCIe2 1-port 4X InfiniBand QDR adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2778

A PCIe3 2-port 10 GbE NIC and RoCE SR adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2778	Any	See PCIe3 2-Port 10GbE NIC and RoCE SR Adapter (FC EC2N; CCIN 57BE).	PCIe3 2-port 10 GbE NIC and RoCE SR adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2779

A PCIe3 2-port 10 GbE NIC and RoCE SFP+ copper adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2779	Any	See PCIe3 2-Port 10GbE NIC and RoCE SFP+ Copper Adapter (FC EC38; CCIN 57BC).	PCIe3 2-port 10 GbE NIC and RoCE SFP+ copper adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 277B

A PCIe3 2-port 100 GbE (NIC and RoCE) QSFP28 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
277B	Any	See PCIe3 2-port 100 GbE (NIC and RoCE) QSFP28 Adapter (FC EC3L and FC EC3M; CCIN 2CEC).	PCIe3 2-port 100 GbE (NIC and RoCE) QSFP28 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2780

A 300 GB SAS interface small-form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2780	Any	See System parts.	300 GB SAS interface small-form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2782

A 600 GB SAS interface small-form factor 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2782	Any	See System parts.	600 GB SAS interface small-form factor 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2783

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2784

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2785

A 2 TB SAS interface 3.5 inch form factor 7200 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2785	Any	See System parts.	2 TB SAS interface 3.5 inch form factor 7200 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2786

A 4 TB SAS interface 3.5 inch form factor 7200 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2786	Any	See System parts.	4 TB SAS interface 3.5 inch form factor 7200 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2787

A 6 TB SAS interface 3.5 inch form factor 7200 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2787	Any	See System parts.	6 TB SAS interface 3.5 inch form factor 7200 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 279

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 27D2

A 1.2 TB SAS interface small-form factor 10,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

FFC	Type and model	Part number	Description	Location code
27D2	Any	See System parts.	1.2 TB SAS interface small-form factor 10,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E3

A 400 GB SAS 1.8 inch form-factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E3	Any	See System parts.	400 GB SAS 1.8 inch form-factor solid-state drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E4

A 200 GB SAS interface 1.8 inch form-factor read intensive solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E4	Any	See System parts.	200 GB SAS interface 1.8 inch form-factor read intensive solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E5

A 200 GB SAS interface 1.8 inch form-factor 4K sector read intensive solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E5	Any	See System parts.	200 GB SAS interface 1.8 inch form-factor 4K sector read intensive solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E6

An 8 TB SAS interface 3.5 inch form factor 7200 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E6	Any	See System parts.	8 TB SAS interface 3.5 inch form factor 7200 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E7

A 1.6 TB SAS interface small form-factor 4K sector solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E7	Any	See System parts.	1.6 TB SAS interface small form-factor 4K sector solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E8

A 1.6 TB SAS interface small form-factor solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27E8	Any	See System parts.	1.6 TB SAS interface small form-factor solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27E9

A 1860 GB SAS interface small form factor 4K sector mainstream solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

Note: Replacement of the mainstream solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about mainstream SSDs, see Mainstream solid-state drives.

CCIN	Type and model	Part number	Description	Location code
5B20	System unit	See Disk drive and solid-state drive system parts.	1860 GB SAS interface small form factor 4K sector mainstream solid-state drive	Un-Px-Dy
5B21	5887 disk drive enclosure	See Disk drive and solid-state drive system parts.	1860 GB SAS interface small form factor 4K sector mainstream solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27EB

A 400 GB SAS interface 1.8 inch form-factor 4K sector solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27EB	Any	See System parts.	400 GB SAS interface 1.8 inch form-factor 4K sector solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27ED

An 800 GB SAS interface 1.8 inch form-factor 4K sector solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27ED	Any	See System parts.	800 GB SAS interface 1.8 inch form-factor 4K sector solid-state drive	Un-Px-Dy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 27EE

A 10 TB SAS interface 3.5 inch form factor 7200 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
27EE	Any	See System parts.	10 TB SAS interface 3.5 inch form factor 7200 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2811

A PCIe3 Coherent Accelerator Processor Interface (CAPI) accelerator adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2811	Any	See PCIe3 LP CAPI Accelerator Adapter (FC EJ16).	PCIe3 CAPI accelerator adapter (low profile)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2820

A 960 GB SAS interface small form-factor 4K sector mainstream solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

Note: Replacement of the mainstream solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about mainstream SSDs, see Mainstream solid-state drives.

CCIN or FFC	Type and model	Part number	Description	Location code
2820	Any	See System parts.	960 GB SAS interface small form-factor 4K sector mainstream solid-state drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2821

A 3.94 TB SAS interface small form-factor 4K sector mainstream solid-state drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

Note: Replacement of the mainstream solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about mainstream SSDs, see Mainstream solid-state drives.

CCIN or FFC	Type and model	Part number	Description	Location code
2821	Any	See System parts.	3.94 TB SAS interface small form-factor 4K sector mainstream solid-state drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2822

A 300 GB small form-factor 4K sector 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2822	Any	See System parts.	300 GB small form-factor 4K sector 15,000 rpm disk drive	Un-Px-Dx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2824

A 600 GB small form-factor 4K sector 15,000 rpm disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2824	Any	See System parts.	600 GB small form-factor 4K sector 15,000 rpm disk drive	U n -P x -D x

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 287

A power supply in an expansion unit might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 289

A power supply in an expansion unit might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 293

The problem is a PCI-to-PCI bridge problem.

Replace the system backplane or I/O backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 296

The problem is a PCI device or adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
296	Any		The FRU can only be identified by its location code reported by the diagnostic programs. See the Display Diagnostic Log summary for more information regarding the service request number.	Un-P1-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 297

The texture memory module for the GXT800P graphics adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
297	Any	93H6055	Texture memory module for the GXT800P graphics adapter	Un-P1-Cx-Cy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 298

The problem is in the base memory module for the GXT800P graphics adapter.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any	93H6057	Base memory module for the GXT800P graphics adapter	Un-P1-Cx-Cy

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2C3

The problem is in a 2-port multiprotocol adapter cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2C3	Any	93H5263	2-Port Multiprotocol adapter cable V.24	Un-P1-Cx-Tx
2C3	Any	93H5264	2-Port Multiprotocol adapter cable V.35	Un-P1-Cx-Tx
2C3	Any	93H5265	2-Port Multiprotocol adapter cable V.36	Un-P1-Cx-Tx
2C3	Any	93H5267	2-Port Multiprotocol adapter cable X.21	Un-P1-Cx-Tx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2C9

The problem is in the PCI bus on the I/O backplane.

Replace the I/O backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D01

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D02

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2D02	Any		Generic USB reference to controller/adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D03

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D05

The battery pack for the internal SAS RAID enablement card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2D05	Any	74Y5667	Battery pack for the internal SAS RAID enablement card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D06

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D07

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D0B

The SAS RAID adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2D0B	Any	44V4813	PCI Express x8 Ext Dual-x4 3 Gb SAS RAID adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D0E

The PCIe SAS RAID battery pack might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2D0E	Any	44V7597	PCIe SAS RAID battery pack	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D11

A PCIe3 RAID SAS quad-port 6 Gb adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
57B4	Any	See PCIe3 RAID SAS quad-port 6 Gb Adapter (FC EJ0J; CCIN 57B4).	PCIe3 RAID SAS quad-port 6 Gb adapter	U n -P x -C x

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D14

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D15

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D16

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D17

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D18

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D19

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D1B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D1D

Failing function code 2D1D is not supported on these models. Continue with the next FRU in the list.

Failing function code 2D1F

A PCIe2 1.8 GB cache RAID SAS adapter tri-port 6 Gb adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
57BB	Any	See PCIe2 1.8 GB Cache RAID SAS Adapter Tri-port 6Gb (FC ESA3; CCIN 57BB).	PCIe2 1.8 GB cache RAID SAS adapter tri-port 6 Gb adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D20

A PCIe2 1.8 GB cache RAID SAS adapter tri-port 6 Gb adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
57B5	Any	See PCIe2 1.8 GB Cache RAID SAS Tri-port 6 Gb Adapter (FC 5913; CCIN 57B5).	PCIe2 1.8 GB cache RAID SAS adapter tri-port 6 Gb adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D21

A PCIe3 12 GB cache RAID SAS quad-port 6 Gb adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
57CE	Any	See PCIe3 12 GB Cache RAID SAS quad-port 6 Gb Adapter (FC EJ0L; CCIN 57CE) .	PCIe3 12 GB cache RAID SAS quad-port 6 Gb adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D22

A PCIe3 12 GB cache RAID PLUS SAS quad-port 6 Gb adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2D22	Any	See PCIe3 12 GB Cache RAID PLUS SAS quad-port 6 Gb Adapter (FC EJ14; CCIN 57B1).	PCIe3 12 GB cache RAID PLUS SAS quad-port 6 Gb adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D23

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D24

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D25

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D26

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D27

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D28

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2D3

The problem is in the service processor card.

The FRU part number is 10N8752.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D35

A PCIe3 SAS RAID adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
57D7	8247-21L or 8247-22L	See PCIe3 x8 SAS RAID internal adapter 6 Gb (FC EL3V; CCIN 57D7).	PCIe3 x8 SAS RAID internal adapter 6 Gb	Un-P1-C14 or Un-P1-C15
57D7	8284-21A or 8284-22A	See PCIe3 x8 SAS RAID internal adapter 6 Gb (FC EJ0T and FC EJ0V; CCIN 57D7).	PCIe3 x8 SAS RAID internal adapter 6 Gb	Un-P1-C14 or Un-P1-C15
57D7	8247-42L, 8286-41A, or 8286-42A	See PCIe3 x8 SAS RAID internal adapter 6 Gb (FC EJ0N and FC EJ0S; CCIN 57D7).	PCIe3 x8 SAS RAID internal adapter 6 Gb	Un-P1-C14 or Un-P1-C15

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D36

A PCIe3 cache SAS RAID adapter might be failing.

All failing items listed in the following table for a specific type and model must be replaced at the same time. Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
57D8	8247-21L or 8247-22L	See PCIe3 x8 cache SAS RAID internal adapter 6 Gb (FC EL3U; CCIN 57D8).	PCIe3 x8 cache SAS RAID internal adapter 6 Gb Note: Replace the adapter and its associated backup power module card.	Un-P1-C14 and Un-P1-C14-C1 or Un-P1-C15 and Un-P1-C15-C1
57D8	8284-21A or 8284-22A	See PCIe3 x8 cache SAS RAID internal adapter 6 Gb (FC EJ0U; CCIN 57D8).	PCIe3 x8 cache SAS RAID internal adapter 6 Gb Note: Replace the adapter and its associated backup power module card.	Un-P1-C14 and Un-P1-C14-C1 or Un-P1-C15 and Un-P1-C15-C1
57D8	8247-42L, 8286-41A, or 8286-42A	See PCIe3 x8 cache SAS RAID internal adapter 6 Gb (FC EJ0P; CCIN 57D8).	PCIe3 x8 cache SAS RAID internal adapter 6 Gb	Un-P1-C14 or Un-P1-C15

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D4

The problem is a system/SP interface logic problem (I/O backplane or system backplane).

For the FRU part number, see the service information for the unit on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D40

A 3Gb PCIe RAID and SSD SAS adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
57CD	Any	See Managing PCI adapters.	3Gb PCIe RAID and SSD SAS adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D5

The problem is a service processor to primary I/O bus problem.

Replace the I/O backplane. The FRU part number is 42R7352.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D6

The problem is a service processor card.

Replace the service processor card. The FRU part number is 10N8752.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D7

The problem is in the operator panel.

The FRU part number is 39J3272.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2D9

The problem is in the power controller.

Replace the I/O backplane. The FRU part number is 42R7352.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E0

The problem is in the fan sensor.

Replace the I/O backplane. The FRU part number is 42R7352.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E01

The 10 Gb Ethernet-SR PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E01	Any	10N9033	10 Gb Ethernet-SR PCIe adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E02

The 10 Gb Ethernet-LR PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E02	Any	10N9034	10 Gb Ethernet-LR PCIe adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E03

The 10 Gb Ethernet-SR PCIe host bus adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E03	Any	10N9505	10 Gb Ethernet-SR PCIe host bus adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E04

The 10 Gb Ethernet-CX4 PCIe host bus adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E04	Any	46K6696	10 Gb Ethernet-CX4 PCIe host bus adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E08

A PCIe2 2 x 10 Gb Ethernet and 2 x 1 Gb Ethernet UTP adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E08	Any	See PCIe2 LP 2x10GbE SFP+ Copper 2x1GbE UTP Adapter (FC 5279; CCIN 2B52).	PCIe2 2 x 10 Gb Ethernet and 2 x 1 Gb Ethernet UTP low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E0B

A PCIe2 2 x 10 Gb Ethernet and 2 x 1 Gb Ethernet UTP adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E0B	Any	See PCIe2 LP 2x10GbE SR 2x1GbE UTP Adapter (FC 5280; CCIN 2B54).	PCIe2 2 x 10 Gb Ethernet and 2 x 1 Gb Ethernet UTP low-profile adapter	
2E0B	Any	See PCIe2 2x10 GbE SR 2x1 GbE UTP Adapter (FC 5744; CCIN 2B44).	PCIe2 2 x 10 Gb Ethernet and 2 x 1 Gb Ethernet UTP full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E1

The problem is a thermal sensor.

Replace the operator (control) panel. The FRU part number is 39J3272.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E12

The Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E12	Any	46C7006	8 Gb Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E17

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E17	Any	See PCIe2 LP 8 Gb 4-port Fibre Channel Adapter (FC ENOY).	PCIe2 low-profile 8 Gb 4-port Fibre Channel adapter (FC ENOY)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E19

A PCIe2 8 Gb 2-port Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E19	Any	See PCIe2 8 Gb 2-Port Fibre Channel Adapter (FC EN0F and EN0G; CCIN 578D).	PCIe2 8 Gb 2-port Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E2

The problem is a voltage sensor problem.

Replace the system backplane. The FRU part number is 03N6902.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E20

A 10 Gb PCIe FCoE CNA slot Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E20	Any	See System parts.	10 Gb PCIe FCoE CNA slot Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E22

A 10 Gb PCIe FCoE CNA slot Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E22	Any	See System parts.	10 Gb PCIe FCoE CNA slot Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E24

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E24	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E24	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E26

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E26	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E26	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E3

The problem is in the serial port controller.

Replace the service processor card. The FRU part number is 10N8752.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E30

A 10 Gb Ethernet-SR PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E30	Any	74Y2094	10 Gb Ethernet-SR PCIe adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E31

A 10 Gb twinaxial Ethernet PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E31	Any	74Y2095	10 Gb twinaxial Ethernet PCIe adapter	Un-Px-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E38

An Ethernet PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2B57	Any	00E0784	2 x 1 Gb and 2 x 10 Gb optical Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E39

An Ethernet PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2B56	Any	00E0778	2 x 1 Gb and 2 x 10 Gb twinaxial Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E3B

An Ethernet PCIe adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2B56	Any	00E0778	2 x 1 Gb and 2 x 10 Gb twinaxial Ethernet adapter	
2B57	Any	00E0784	2 x 1 Gb and 2 x 10 Gb optical Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E4

The problem is in the JTAG/COP controller.

Replace the service processor. The FRU part number is 10N8752.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E41

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E41	Any	See PCIe2 LP 4-port 1GbE Adapter (FC 5260).	PCIe2 LP 4-port 1 GbE adapter (FC 5260)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E42

A PCIe2 2-port 10 GbE BaseT RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC4	8247-21L or 8247-22L	See PCIe2 LP 2-port 10 GbE BaseT RJ45 Adapter (FC EL3Z; CCIN 2CC4).	PCIe2 2-port 10 GbE BaseT RJ45 adapter (low profile)	
2CC4	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 2-port 10 GbE BaseT RJ45 Adapter (FC EN0X; CCIN 2CC4).	PCIe2 2-port 10 GbE BaseT RJ45 adapter (low profile)	
2CC4	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, 8284-22A, or 8247-42L	See PCIe2 2-port 10 GbE BaseT RJ45 Adapter (FC EN0W; CCIN 2CC4).	PCIe2 2-port 10 GbE BaseT RJ45 adapter	
2CC4	8247-42L	See PCIe2 2-port 10 GbE BaseT RJ45 Adapter (FC EL55; CCIN 2CC4).	PCIe2 2-port 10 GbE BaseT RJ45 adapter	
2CC4	8408-44E or 8408-E8E	See PCIe2 2-port 10 GbE BaseT RJ45 Adapter (FC EN0W; CCIN 2CC4).	PCIe2 2-port 10 GbE BaseT RJ45 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E43

A PCIe2 4-port (10Gb+1GbE) SR+RJ45 or PCIe2 4-port (10Gb+1GbE) Copper SFP+RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC3	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-Port (10Gb+1GbE) SR+RJ45 Adapter (FC EN0T; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) SR+RJ45 adapter (low profile)	
2CC3	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-Port (10Gb+1GbE) Copper SFP+RJ45 Adapter (FC EN0V; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) Copper SFP+RJ45 adapter (low profile)	
2CC3	8247-42L	See PCIe2 4-Port (10Gb+1GbE) SR+RJ45 Adapter (FC EN0S; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) SR+RJ45 adapter	
2CC3	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-Port (10Gb+1GbE) Copper SFP+RJ45 Adapter (FC EN0U; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) Copper SFP+RJ45 adapter	
2CC3	8408-44E or 8408-E8E	See PCIe2 4-Port (10Gb+1GbE) SR+RJ45 Adapter (FC EN0S; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) SR+RJ45 adapter	
2CC3	8408-44E or 8408-E8E	See PCIe2 4-Port (10Gb+1GbE) Copper SFP+RJ45 Adapter (FC EN0U; CCIN 2CC3).	PCIe2 4-port (10Gb+1GbE) Copper SFP+RJ45 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E44

A PCIe3 4-port 10 GbE SR adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E44	Any	See PCIe3 4-port 10 GbE SR Adapter (FC EN15; CCIN 2CE3).	PCIe3 4-port 10 GbE SR full-height adapter	
2E44	Any	See PCIe3 LPX 4-port 10 GbE SR Adapter (FC EN16; CCIN 2CE3).	PCIe3 4-port 10 GbE SR low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E45

A PCIe3 4-port 10 GbE SR adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E45	Any	See PCIe3 4-port 10 GbE SR Adapter (FC EN15; CCIN 2CE3).	PCIe3 4-port 10 GbE SR full-height adapter	
2E45	Any	See PCIe3 LPX 4-port 10 GbE SR Adapter (FC EN16; CCIN 2CE3).	PCIe3 4-port 10 GbE SR low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E46

A PCIe3 4-port 10 GbE SFP+ copper adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E46	Any	See PCIe3 4-port 10 GbE SFP+ Copper Adapter (FC EN17; CCIN 2CE4).	PCIe3 4-port 10 GbE SFP+ copper full-height adapter	
2E46	Any	See PCIe3 LPX 4-port 10 GbE SFP+ Copper Adapter (FC EN18; CCIN 2CE4).	PCIe3 4-port 10 GbE SFP+ copper low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E47

A PCIe3 4-port 10 GbE SFP+ copper adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E47	Any	See PCIe3 4-port 10 GbE SFP+ Copper Adapter (FC EN17; CCIN 2CE4).	PCIe3 4-port 10 GbE SFP+ copper full-height adapter	
2E47	Any	See PCIe3 LPX 4-port 10 GbE SFP+ Copper Adapter (FC EN18; CCIN 2CE4).	PCIe3 4-port 10 GbE SFP+ copper low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E54

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E54	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E54	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E55

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E55	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E55	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E56

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E56	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E56	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E57

A PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E57	Any	See PCIe2 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0H; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet full-height adapter	
2E57	Any	See PCIe2 LP 2x10Gb FCoE 2x1GbE SFP+ Adapter (FC EN0J; CCIN 2B93).	PCIe2 2-port 10 Gb FCoE SR and 2-port 1 Gb RJ45 Ethernet low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E58

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E59

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E5D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E5E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E60

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E6

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E62

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E63

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E7

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 2E70

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E71

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E72

A PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E72	8247-21L or 8247-22L	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL3C; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E72	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0L; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E72	8247-42L	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL57; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E72	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E72	8408-44E or 8408-E8E	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E8

The problem is in a processor card.

To determine the FRU part number, check the system unit for installed processor cards.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E80

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E81

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E82

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E83

A PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
2CC0	Any	See PCIe2 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0M; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 full-height adapter	
2CC0	Any	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) LR and RJ45 Adapter (FC EN0N; CCIN 2CC0).	PCIe2 4-port (10 Gb FCoE and 1 GbE) LR and RJ45 low-profile adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E84

A PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E84	8247-21L or 8247-22L	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL3C; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E84	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0L; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E84	8247-42L	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL57; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E84	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E84	8408-44E or 8408-E8E	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E85

A PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E85	8247-21L or 8247-22L	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL3C; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E85	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0L; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	

CCIN or FFC	Type and model	Part number	Description	Location code
2E85	8247-42L	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL57; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E85	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E85	8408-44E or 8408-E8E	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E86

A PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E86	8247-21L or 8247-22L	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL3C; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E86	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0L; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E86	8247-42L	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL57; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E86	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E86	8408-44E or 8408-E8E	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 2E87

A PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 adapter might be failing.

Use the following table to determine the part number for the field-replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
2E87	8247-21L or 8247-22L	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL3C; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E87	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-22A, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See PCIe2 LP 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0L; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 low-profile adapter	
2E87	8247-42L	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EL57; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E87	8247-42L, 8286-41A, or 8286-42A	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	
2E87	8408-44E or 8408-E8E	See PCIe2 4-port (10Gb FCoE and 1GbE) Copper and RJ45 Adapter (FC EN0K; CCIN 2CC1).	PCIe2 4-port 10 Gb FCoE and 1 Gb Ethernet copper and RJ45 full-height adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 301

The problem is in system memory.

Go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 303

The problem is in system memory.

Go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 304

The problem is in system memory.

Go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 305

The problem is in system memory.

To determine the FRU part number, go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 306

The problem is a remote I/O (RIO) cable.

To determine the FRU part number, go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 30A

The problem is in system memory.

To determine the FRU part number, go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 30B

The problem is in system memory.

To determine the FRU part number, go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 440

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 441

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 442

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 443

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 444

The problem is a 2-port multiprotocol PCI adapter (ASIC).

The FRU part number is 00P5920.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 445

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 446

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 447

The problem is a PCI 64-bit Fibre Channel adapter.

The FRU part number is 80P4384.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 451

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 453

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 458

The problem is a 36 GB DAT tape drive.

The FRU part number is 71P9163.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 459

The problem is a 36 GB DAT72 tape drive.

The FRU part number for the 36/72 GB 4 mm DAT72 SAS tape drive is 23R2530.

The FRU part number for the 36/72 GB 4 mm DAT72 LVD tape drive is 95P1988.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 541

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 542

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 56B

The problem is a 36.4 GB 15,000 rpm disk drive.

The FRU part number is 07N6777.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 56D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 57B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 57D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 58B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 58D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 59B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 601

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 60B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 613

The problem is a 8 mm 80 GB VXA-2 tape device.

The FRU part number is 95P1871.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 61B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 61D

The 36.4 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
61D	Any	00P1519	36.4 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 61E

The 18.2 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
61E	Any	00P1511	18.2 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 621

The problem is a 9.1 GB LVD 80-pin drive and carrier (U2).

The FRU part number is 03N3301.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 623

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 624

The problem is an 18.2 GB LVD 80-pin drive and carrier (U2).

The FRU part number is 03N3302.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 62D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 62E

The 9.1 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
62E	Any	00P1508	9.1 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 636

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 637

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 638

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 639

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 63A

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 63B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 63C

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 63D

The problem is a disk drive failure.

Go to the service information for the system on which you are working.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 63E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 63F

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 640

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 643

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 644

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 646

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 64A

The 9.1 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64A	Any	00P1508	9.1 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 64B

The 9.1 GB LVD 80-pin drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64B	Any	00P1517	9.1 GB LVD 80-pin drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 64C

The 18.2 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64C	Any	00P1511	18.2 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 64D

The 18.2 GB LVD 80-pin drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64D	Any	00P1520	18.2 GB LVD 80-pin drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 64E

The 36.4 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64E	Any	00P1514	36.4 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 64F

The 36.4 GB 10,000 rpm drive and carrier might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
64F	Any	00P1519	36.4 GB 10,000 rpm drive and carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 650

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
650	Any	See note.	Unknown disk drive	

Note: This FFC indicates that the disk drive could not be configured correctly. Refer to the disk drive FRU part number.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 653

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 655

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 657

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 65A

See failing function code 67E.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 65B

This failing function code is no longer used.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 65E

See failing function code 254A.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 65F

See failing function code 254B.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 662

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 663

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
663		87H3734	IBM ARTIC960RxD PCI adapter (base card)	
663		47L8851	IBM ARTIC960RxF adapter	
663		09J8829	IBM ARTIC960 Quad T1/E1 adapter (daughter card)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 664

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 667

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 669

The PCI Gb Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
669	Any	41L6396	PCI Gigabit Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 66A

The keyboard/mouse USB PCI attachment card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
66A	Any	09P2470	Keyboard/mouse USB PCI attachment card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 66C

The 10/100/1000 base-T Ethernet PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
66C	Any	00P1690	10/100/1000 base-T Ethernet PCI adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 66D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 66E

The DVD-RAM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
66E	Any	04N5967	4.7 GB DVD-RAM drive, black bezel	
66E	Any	04N5968	4.7 GB DVD-RAM drive, white bezel	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 670

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 671

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 672

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 673

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 674

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
674	Any	31L7567	ESCON channel PCI adapter assembly	
674	Any	39H8084	IBM ARTIC960Rx PCI base adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 675

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
675	Any	87H3427	IBM ARTIC960Hx PCI base adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 677

The PCI 32-bit Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
677	Any	09P1173	PCI 32-Bit Fibre Channel adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 678

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 679

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 67B

The cryptographic coprocessor card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
67B	Any	See Managing PCI adapters.	PCI cryptographic coprocessor card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 67E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 681

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 682

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 683

The 2105 might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
683	Any		2105 - all models	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 684

The remote asynchronous note might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
684	Any	93H6563	Enhanced remote asynchronous node, 16-Port RS-422	
684	Any	93H7091	Power supply, remote async node	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 685

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 686

The 8-port asynchronous EIA-232/RS-422 adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
686	Any	93H6541	8-port asynchronous EIA-232/RS-422 adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 687

The 128-port asynchronous controller might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
687	Any	93H6545	128-port asynchronous controller	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 689

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 68C

The 20 GB 4 mm tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
68C	Any	19P0802	20 GB 4 mm tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 68E

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 690

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 691

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 692

A tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
692	Any	59H3121	7205-311 35 GB DLT tape drive	
692	Any	59H3569	3447-105 35 GB DLT tape drive	
692	Any	59H3569	3447-106 35 GB DLT tape drive	
692	Any	59H3570	7337-305 35 GB DLT tape drive	
692	Any	59H3570	7337-306 35 GB DLT tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 693

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
693	Any	93H5839	Eicon ISDN DIVA PRO 2.0 PCI S/T adapter for PowerPC® system	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 697

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
697	Any	21H3890	TURBOWAYS 155 PCI MMF ATM adapter (1 MB)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 698

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
698	Any	21H7977	TURBOWAYS 155 PCI UTP ATM adapter (1 MB)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 699

An adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
699	Any	94H0385	3Com Fast EtherLink XL PCI 10/100 Ethernet for PowerPC Microprocessor-based Systems	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 69B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 69D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 6C9

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 6CC

An SSA drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
6CC	Any	59H6259	4.5 GB SSA drive (DCHC/DGHC) in a blue-handled carrier	
6CC	Any	21H8734	9.1 GB 1.6-inch SSA drive (DCHC) in a blue-handled carrier	
6CC	Any	05J6446	9.1 GB 1.0-inch SSA drive (DGHC) in a blue-handled carrier	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 700

The 1.1 GB 8-bit SE disk drive assembly might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
700	Any	74G6995	1.1 GB 8-bit SE disk drive assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 701

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
701	Any	74G7006	1.1 GB 16-bit SE disk drive assembly	
701	Any	06H8631	Tray assembly	
701	Any	06H7691	4 position ID cable	
701	Any	27H0380	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 702

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
702	Any	74G7009	1.1 GB 16-bit DE disk drive assembly	
702	Any	74G7015	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 703

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
703	Any	74G6996	2.2 GB 8-bit SE disk drive	
703	Any	74G6998	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 704

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
704	Any	74G8824	2.2 GB 16-bit SE disk drive assembly	
704	Any	74G7007	2.2 GB 16-bit SE disk drive unit	
704	Any	06H8631	Tray assembly	
704	Any	06H7691	4 position ID cable	
704	Any	27H0380	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 705

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
705	Any	74G7010	2.2 GB 16-bit DE disk drive assembly	
705	Any	74G7015	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 706

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
706	Any	74G7008	4.5 GB 16-bit SE disk drive	
706	Any	74G8825	4.5 GB 16-bit SE disk drive assembly	
706	Any	06H8631	Tray assembly	
706	Any	06H7691	4 position ID cable	
706	Any	27H0380	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 707

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
707	Any	74G7011	4.5 GB 16-bit DE disk drive assembly	

CCIN or FFC	Type and model	Part number	Description	Location code
707	Any	74G7015	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 709

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 711

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
711	Any		Unknown adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 713

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
711	Any	87H3427	IBM ARTIC960Hx PCI base adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 716

The system memory might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 717

The Ethernet adapter is being configured.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 721

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 722

The disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		Unknown disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 723

The CD-ROM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
723	Any		Unknown CD-ROM drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 724

The tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
724	Any		Unknown tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 725

The display might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
725	Any	96G2130	P50 display, 15-inch, northern hemisphere	
725	Any	96G2699	P50 display, 15-inch, southern hemisphere	
725	Any	96G3020	P70 display, 17-inch, northern hemisphere	
725	Any	96G2150	P70 display, 17-inch, southern hemisphere	
725	Any	21L4570	P72 display, 17-inch, northern (white)	
725	Any	21L4571	P72 display, 17-inch, northern (black)	
725	Any	61H0215	P72 display, 17-inch, southern (white)	
725	Any	61H0216	P72 display, 17-inch, southern (black)	
725	Any	61H0412	P92 display, 19-inch, northern (white)	
725	Any	61H0223	P92 display, 19-inch, northern (black)	
725	Any	61H0224	P92 display, 19-inch, southern (white)	
725	Any	61H0225	P92 display, 19-inch, southern (black)	
725	Any	96G2701	P200 display, 20-inch, northern hemisphere	
725	Any	96G3049	P200 display, 20-inch, southern hemisphere	
725	Any	60H0233	P202 display, 21-inch, northern (white)	
725	Any	60H0234	P202 display, 21-inch, northern (black)	
725	Any	60H0235	P202 display, 21-inch, southern (white)	
725	Any	60H0236	P202 display, 21-inch, southern (black)	
725	Any		Unknown adapter type	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 726

The input device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
726	Any		Unknown input device	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 727

The async device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
727	Any		Unknown async device	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 728

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 730

The diskette drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
730	Any		Unknown diskette drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 733

The 140 GB 8 mm tape library might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
733	Any	59H3161	140 GB 8 mm tape library	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 734

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 736

The keyboard and speaker cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
736	Any	Located on the underside of the keyboard	Quiet touch keyboard and speaker cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 741

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 742

The T2 PCI Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
742	Any	11H8128	T2 PCI Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 745

The tape cartridge auto loader might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any	Service documentation for this device supplies the FRU part numbers.	48 GB DDS-3 tape cartridge auto loader	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 746

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 747

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 749

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 74A

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 750

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 751

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 757

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 759

The 1080 MB disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
759	Any	87G8976	1080 MB disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 763

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
763	Any	31L7847	SP switch MX adapter	
763	Any	46H9688	Wrap plug	
763	Any	77G0818	Terminator	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 764

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
764	Any	08L0398	SP system attachment adapter	
764	Any	46H9688	Wrap plug	
764	Any	77G0818	Terminator	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 772

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 773

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 774

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 775

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 776

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 777

The 10/100 Base-TX Ethernet PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
777	Any	94H0823	10/100 Base-TX Ethernet PCI adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 778

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 77B

The 4-port 10/100 Ethernet Tx PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
77B	Any	03N3952	4-port 10/100 Ethernet Tx PCI adapter	
77B	Any	09P1421	4-port 10/100 Ethernet Tx PCI adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 77C

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 780

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 781

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 783

The 24/48 GB DDS-2 4 mm tape autoloader might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
783	Any	76H0473	24/48 GB DDS-2 4 mm tape autoloader (vertical orientation)	
783	Any	76H0474	24/48 GB DDS-2 4 mm tape autoloader (horizontal orientation)	
783	Any	41H8714	tape magazine	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 784

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 785

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 786

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 787

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 788

The video capture adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
788	Any	07L9009	Ultimedia video capture adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 789

The external 2.6 GB rewritable optical disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
789	Any	50G0212	External 2.6 GB rewritable optical disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 78B

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 78D

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 790

The multibus integrated Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
790	Any	42R7352	Multibus integrated Ethernet adapter problem. Replace the I/O backplane.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 791

The 2.2 GB 16-bit SE disk drive assembly might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
791	Any	74G8824	2.2 GB 16-bit SE disk drive assembly	
791	Any	74G7007	2.2 GB 16-bit SE disk drive unit tray assembly	
791	Any	06H8631	Tray assembly	
791	Any	06H7691	Four-position ID cable	
791	Any	27H0380	Electronics card assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 792

The 4.5 GB 16-bit SE disk drive assembly might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
792	Any	83H7105	4.5 GB 16-bit SE disk drive assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 793

The 9.1 GB 16-bit SE disk drive assembly might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
793	Any	76H2698	9.1 GB 16-bit SE disk drive assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 795

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 799

The 2-port multiprotocol PCI adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
799	Any	93H6086	2-Port Multiprotocol PCI adapter	
799	Any	93H3662	2-Port Multiprotocol PCI Wrap Plug	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 7C0

The system backplane might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
7C0	Any	03N6902	Interface problem between processor and system. Replace the system backplane.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 7C1

The system backplane might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
7C1	Any		Business audio subsystem problem. Replace the system unit's system backplane.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 804

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 806

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 807

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 80C

The SSA adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
80C	Any		SSA adapter problem. See the <i>SSA Adapters User's Guide and Maintenance Information</i> .	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 811

The processor complex might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
811	Any		Processor complex being identified	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 812

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
812	Any		Common standard adapter logic problem Note: For type, model, and FRU information, see FFC 227.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 814

The NIO backplane might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
814	Any	11K0571	NIO backplane, 9076 and POWER3 SMP high node	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 815

Floating-point processor problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
815	Any		Floating-point processor problem Note: For type, model, and FRU information, see FFC 210.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 816

Operator panel logic problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
816	Any		Operator panel logic problem Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 817

The system backplane might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
817	Any		System backplane. For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 820

There might be an interprocessor-related testing problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		Interprocessor-related testing problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 821

There might be a standard keyboard adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
821	Any		Standard keyboard adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 823

There might be a standard mouse adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
823	Any		Standard mouse adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 824

There might be a standard tablet adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		Standard tablet adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 825

The NIO backplane might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
825	Any	11K0571	NIO backplane, 9076 and POWER3 SMP high node	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 826

There might be a system port 1 adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
826	Any		System port 1 adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 827

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 828

There might be a standard diskette adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		Standard diskette adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 82C

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 830

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 831

There might be a system port 2 adapter problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		System port 2 adapter problem. Note: For type, model, and FRU information, see FFC 221.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 836

The 128-port async controller might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
836	Any	73H3384	128-port async controller	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 837

The remote async node might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
837	Any	88G3842	Remote async node, 16-port EIA-232 enhanced remote async node	
837	Any	93H6549	Remote async node, 16-port EIA-232 rack mounted node	
837	Any	40H2589	Remote async node, 16-port EIA-232 power supply	
837	Any	80P3869	Remote async node	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 840

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 844

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 845

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 846

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 868

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 887

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 891

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 892

The display adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
892	Any		Vendor display adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 893

The LAN adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
893	Any		Vendor LAN adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 894

The async communications adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
894	Any		Vendor async communications adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 899

There might be an atape problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
899	Any		Atape problem	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 89C

The CD-ROM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
89C	Any	73H1513	600 MB Double Speed Tray-Loading CD-ROM Note: The 2x CD-ROM drive is no longer available. A 4x CD-ROM drive will be shipped as a replacement.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 900

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 901

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 902

The display might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
902	Any		Vendor display	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 903

The async device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
903	Any		Vendor async device	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 904

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 905

The device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
905	Any		Other vendor device	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 908

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 912

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 913

The 1 GB DE disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
913	Any	6374682	1 GB DE disk drive, half-height	
913	Any	6374683	Differential frame electronics Attention: Check RETAIN for frame electronics availability. Replace the complete drive assembly whenever possible. Replace the logic card only when the data on the disk must be saved.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 914

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 915

The 4 GB or 8 GB 4 mm tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
915	Any	59H3481	4 GB or 8 GB 4 mm tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 917

The 2.0 GB DE F/W disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
917	Any	86F0767	2.0 GB DE F/W disk drive Note: If the disk drive is in a 7134 drawer, replace it with FRU part number 67G3022.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 918

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 921

The keyboard might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
921	Any	1392090	101-key keyboard	
921	Any	1394609	101-key keyboard	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 922

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 923

The keyboard might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
923	Any	1392090	106-key international keyboard problem Keyboard, Chinese	
923	Any	79F0167	106-key international keyboard problem Keyboard, Japanese-Kanji	
923	Any	66G0507	106-key international keyboard problem Japanese, Enhanced	
923	Any	06H5286	106-key international keyboard problem Keyboard, Korean	
923	Any	02G7353	106-key international keyboard problem Keyboard, Taiwanese	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 925

The mouse might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
925	Any	93H9113	3-button mouse	
925	Any	76H5084	3-button mouse	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 926

The tablet might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
926	Any	6247450	Tablet, 5083 model 21	
926	Any	74F3130	Tablet, 6093 model 11	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 927

The tablet might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
927	Any	6247452	Tablet, 5083 model 22	
927	Any	74F3140	Tablet, 6093 model 12	
927	Any	93H7714	Tablet, 6093 model 21	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 929

The cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
929	Any	39F8227	Dials, 6094 model 10 cable, serial attachment, power	

CCIN or FFC	Type and model	Part number	Description	Location code
929	Any	39F8302	Dials, 6094 model 10 cable, serial attachment, power	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 930

The keyboard might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
930	Any	39F8226	Lighted program function keyboard (LPEK), 6094 model 20	
930	Any	39F8302	Cable, serial attachment, power	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 935

The diskette drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
935	Any	93F2361	1.44 MB 3.5-inch white diskette drive	
935	Any	76H4091	1.44 MB 3.5-inch black diskette drive	
935	Any	07L7814	1.44 MB 3.5-inch diskette drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 938

The adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any		Serial HIPPI PCI adapter Note: 1. Use the number printed above the bar code to order this part. 2. The FRU part number of the wrap plug that is used for this adapter is 21H3547.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 946

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 947

The 1000 MB 16-bit disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
947	Any	84G3491	1000 MB, 16-bit disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 950

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 951

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 952

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 953

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 954

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 955

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 956

The 355 MB or 670 MB logic card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
956	Any	6373521	355 MB or 670 MB logic card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 959

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 960

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 962

The machine type 3161 device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
962	Any		A machine type 3161 device is attached. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 963

The machine type 3163 device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
963	Any		A machine type 3163 device is attached. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 964

The tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
964	Any	59H2839	20 GB 8 mm SE SCSI tape drive (internal, white)	
964	Any	59H4120	20 GB 8 mm SE SCSI tape drive (internal, black)	
964	Any	59H2835	20 GB 8 mm diff SCSI tape drive (external, white)	
964	Any	59H2842	400 GB 8 mm diff tape autoloader (No LCD in bezel, white)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 966

The audio and video decoder adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
966	Any	93H2136	MediaStreamer audio and video decoder adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 968

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 970

The 1/2-inch 9-track tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
970	Any		1/2-inch 9-track tape drive. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 971

The 150 MB 1/4-inch tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
971	Any	16G8423	150 MB 1/4-inch tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 972

The 2.3 GB 8 mm tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
972	Any	16G8421	2.3 GB 8 mm tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 973

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 974

The CD-ROM drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
974	Any	88G3929	CD-ROM drive (type A or type B bezel)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 980

The machine type 4216 device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
980	Any		Machine type 4216. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 981

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 982

The machine type 3852 device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
982	Any		Machine type 3852. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 983

The machine type 4201 device might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
983	Any		Machine type 4201. Use device documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 984

The 1 GB 8-bit disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
984	Any	45G9467	1 GB 8-bit disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 986

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 987

The 600 MB CD-ROM-2 disk drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
987	Any	73H1513	600 MB CD-ROM-2 disk drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 989

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 990

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 991

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 992

The machine type 5202 might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
992	5202		Use the service documentation for the 5202.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 993

The machine type 5204 might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
993	5204		Use the service documentation for the 5204.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 994

The 5 GB or 10 GB 8 mm internal tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
994	5202	59H3159	5 GB or 10 GB 8 mm internal tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 995

The 1.2 GB 1/4-inch cartridge tape drive might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
995	Any	21H5155	1.2 GB 1/4-inch cartridge tape drive	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code 998

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code 999

The machine type 3514, 7137 disk array subsystems might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
999	Any		Machine type 3514, 7137 disk array subsystems Note: Refer to the 3514 or 7137 documentation.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B08

The Ethernet 10 base twisted-pair transceiver might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B08	Any	02G7431	Ethernet 10 base twisted-pair transceiver	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B09

The Ethernet/ISO 8802.3 transceiver might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B09	Any	02G7437	Ethernet/ISO 8802.3 transceiver (formerly IEEE 802.3)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B10

There might be a thermal fuse problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B10	Any	03N6902	System board PTC (thermal fuse) Note: If a thermal fuse has opened, it should reset within 10 minutes after turning the power off. If the thermal fuse does not reset, a faulty device might be drawing excessive power through the fuse.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B31

The keyboard type is unknown.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B31	Any		Unknown keyboard type	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B3A

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code B54

The 128-port async controller cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B54	Any	43G0936	128-port async controller cable, 0.2 m (9 in.)	
B54	Any	43G0937	128-port async controller cable, 4.6 m (15 ft)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B69

The coprocessor multiport adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B69	Any	33F8967	Coprocessor multiport adapter, model 2 (0 MB)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B71

The 8-port EIA-232-D multiport model 2 interface card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B71	Any	53F2612	8-Port EIA-232-D multiport, model 2 interface card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B72

The 8-port EIA-422-A multiport model 2 interface card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B72	Any	53F2615	8-Port EIA-422-A multiport, model 2 interface card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B73

The 6-port V.35 multiport model 2 interface card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B73	Any	72F0164	6-port V.35 multiport, model 2 interface card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B74

The 6-port V.21 multiport model 2 interface card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B74	Any	04G5500	6-Port V.21 multiport, model 2 interface card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B77

The coprocessor 1 MB memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B77	Any	53F2662	Coprocessor 1 MB memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B81

The coprocessor multiport interface cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B81	Any	40F9897	Coprocessor multiport interface cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B82

The coprocessor multiport V.35 cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B82	Any	71F0162	Coprocessor multiport V.35 cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B83

The problem is a PCI 64-bit Fibre Channel adapter.

The FRU part number is 80P4384.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
B83	Any	71F0164	Coprocessor multiport X.21 cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code B88

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code C11

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code C22

The RJ-45 to DB25 converter cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C22	Any	94H0779	RJ-45 to DB25 converter cable kit	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C24

The fiber optic cable for the PCI Fibre Channel adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C24	Any	54G3384	Fiber optic cable for PCI Fibre Channel adapter (6.7 m)	
C24	Any	55G3384	Fiber optic cable for PCI Fibre Channel adapter (12.8 m)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C33

The GPSS card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C33	Any	73H4034	GPSS card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C34

The RSS card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C34	Any	11H8490	RSS card (without memory sockets)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C35

The VOO card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C35	Any	65G4887	VOO card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C36

The attachment adapter cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C36	Any	65G4892	Attachment adapter cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C44

The VOO or RSS crossover cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C44	Any	65G4894	VOO or RSS crossover cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C45

The 12 MB VRAM memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C45	Any	65G4889	12 MB VRAM memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C46

The 16 MB VRAM memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C46	Any	65G4890	16 MB VRAM memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C47

The 16 MB DRAM memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C47	Any	65G4891	16 MB DRAM memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C48

The RSS and GPSS crossover card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C48	Any	65G4893	RSS and GPSS crossover card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C94

The 4 MB memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C94	Any	68X6356	IBM ARTIC960 4 MB memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C95

The 4-port selectable interface board might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C95	Any	87H3413	IBM ARTIC960 4-port selectable interface board	
C95	Any	87H3428	IBM ARTIC960 4-port T1/E1 interface card	
C95	Any	87H3701	IBM ARTIC960Hx DSP interface card	
C95	Any	11K0790	IBM ARTIC960 quad T1/E1 interface card	
C95	Any	51H8702	IBM ARTIC960 PCI adapter interface board	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C97

The wrap plug might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C97	Any	87H3502	IBM ARTIC960 4-port T1/E1 interface card wrap plug Note: A wrap plug is included with each adapter and cable.	
C97	Any	87H3311	IBM ARTIC960 4-port selectable interface board wrap plug Note: A wrap plug is included with each adapter and cable.	
C97	Any	5605670	ESCON wrap plug Note: A wrap plug is included with each adapter and cable.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code C98

The cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
C98	Any	87H3405	IBM ARTIC960 4-port selectable EIA-232 cable Note: A wrap plug is included with each adapter and cable.	
C98	Any	87H3396	IBM ARTIC960 4-port selectable RS-449 cable Note: A wrap plug is included with each adapter and cable.	

CCIN or FFC	Type and model	Part number	Description	Location code
C98	Any	87H3408	IBM ARTIC960 4-port selectable X.21 cable Note: A wrap plug is included with each adapter and cable.	
C98	Any	87H3399	IBM ARTIC960 4-port selectable V.35 cable Note: A wrap plug is included with each adapter and cable.	
C98	Any	87H3402	IBM ARTIC960 4-port selectable EIA-530 cable Note: A wrap plug is included with each adapter and cable.	
C98	Any	87H3518	IBM ARTIC960 4-port T1 RJ-45 cable Note: A wrap plug is included with each adapter and cable.	
C98	Any	87H3515	IBM ARTIC960 4-port E1 RJ-45 cable Note: A wrap plug is included with each adapter and cable.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D01

There might be a L2 cache problem.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D01	Any	See System parts.	Generic L2 cache problem. Replace the processor card.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D06

The 64 port to 128 port converter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D06	Any	88G3650	64 Port to 128 port converter kit (four to a pack) Note: The converter part number is 88G3651.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D08

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code D46

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code D50

The problem is with an internal disk signal cable.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D50	Any		See FFC 190.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D56

The printer and terminal serial cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D56	Any	10N6535	EIA-232E printer and terminal serial cable	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D57

The 8-port multiport interface cable ISA async adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D57	Any	07L9822	8-Port multiport interface cable ISA async adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D59

The TP PCI Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D59	Any	93H7766	TP PCI Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D60

The T2 PCI Ethernet adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D60	Any	93H1902	T2 PCI Ethernet adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D66

The machine type 7250 RSS card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D66	Any	11H4436	Machine type 7250, RSS card (with memory sockets)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D67

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D67	Any	See System parts.	8 MB, ECC, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D68

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D68	Any	See System parts.	16 MB, ECC, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D69

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D69	Any	See System parts.	32 MB, ECC, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D70

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D70	Any	See System parts.	64 MB, ECC, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D71

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D71	Any	42H2771	8 MB, ECC, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D72

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D72	Any	42H2772	16 MB, ECC, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D73

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D73	Any	42H2773	32 MB, ECC, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D74

The system memory might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D74	Any		System memory. See the system unit service information.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D75

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D75	Any	See System parts.	8 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D76

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D76	Any	See System parts.	16 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D77

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
d77	Any	See System parts.	32 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D78

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D78	Any	See System parts.	64 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D83

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D83	Any	See System parts.	8 MB, parity, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D84

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D84	Any	See System parts.	16 MB, parity, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D85

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D85	Any	See System parts.	32 MB, parity, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D86

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D86	Any	See System parts.	64 MB, parity, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D87

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D87	Any	See System parts.	8 MB, parity, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D88

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D88	Any	See System parts.	16 MB, parity, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D89

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D89	Any	See System parts.	32 MB, parity, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D90

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D90	Any	See System parts.	64 MB, parity, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D91

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D91	Any	See System parts.	8 MB, parity, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D92

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D92	Any	See System parts.	16 MB, parity, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D93

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D93	Any	See System parts.	32 MB, parity, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D94

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D94	Any	See System parts.	64 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D95

The graphics adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D95	Any	94H0029	GXT550P graphics adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code D96

The graphics adapter might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
D96	Any	93H6267	GXT255P high-performance PCI graphics adapter	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E10

The riser card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E10		73H4532	Riser card	
E10		73H4532	Riser card	
E10		23L8117	Riser card	
E10			See FFC 227.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E11

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E11	Any	See System parts.	128 MB, ECC, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E12

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E12	Any	93H6821	128 MB, ECC, 60 nsec memory module	
E12	Any	93H6823	128 MB, ECC, 60 nsec memory module	
E12	Any	93H6822	128 MB, ECC, 60 nsec memory module	
E12	Any	93H4702	128 MB, ECC, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E13

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E13	Any		128 MB, ECC, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E14

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E14	Any		128 MB, parity, 50 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E15

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E15	Any		128 MB, parity, 60 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E16

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E16	Any		128 MB, parity, 70 nsec memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E17

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E17	Any	19H0288	Memory 16 MB memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E18

The memory module might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E18	Any	35H8751	Memory 64 MB memory module	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E19

The power supply sensor failed.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E19	Any	See System parts.	Power supply sensor failed I/O backplane	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E1A

The memory card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E1A	Any	23L7595 04N5011	4 GB memory card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E22

The video cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E22	Any		Video cable (generic)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E23

The audio cable might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E23	Any		Audio cable (generic)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E24

The resistor assembly might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E24	Any	94H0623	Resistor assembly	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E26

The power distribution card might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E26	Any	See System parts.	Power distribution card	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E29

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code E2A

The cache might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E2A	Any	03N7031	128 MB cache, U.S. (includes battery)	
E2A	Any	19K0561	128 MB cache, Japan (includes battery)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code E30

This failing function code is not supported on the system. Continue with the next FRU in the failing item list.

Failing function code E3A

The cache battery might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
E3A	Any	37L6903	128 MB cache battery, U.S.	
E3A	Any	00N9561	128 MB cache battery, Japan	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code Exx

A firmware checkpoint error occurred.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
Exx	Any		(xx represents any character) See the Firmware Checkpoint Three-Digit Error Code section of the service information.	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Failing function code Fxx

A firmware checkpoint error occurred.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
Fxx	Any		(xx represents any character) See the Firmware Checkpoint Three-Digit Error Code section of the service information.	

Failing function code XXX

The 3-digit portion of the service request number (SRN) indicates the failing function code to service.

Use the 3-digit portion of the SRN to find the failing function code. See “Failing function codes” on page 1.

Failing function code XXXX

The 4-digit portion of the service request number (SRN) indicates the failing function code to service.

Use the 4-digit portion of the SRN to find the failing function code. See “Failing function codes” on page 1.

Failing items

Failing items provide the information necessary to fix a problem identified by a system reference code (SRC).

The failing items are listed in numerical order.

FI00015

FI00015 is not supported on these models. Continue with the next FRU in the list.

FI00017

FI00017 is not supported on these models. Continue with the next FRU in the list.

FI00020

FI00020 is not supported on these models. Continue with the next FRU in the list.

FI00021

FI00021 indicates that the combined function I/O processor (CFIOP) is the failing item.

Note the CFIOP type and see Managing PCI adapters to determine the FRU part number to replace.

FI00022

FI00022 indicates that the Licensed Internal Code for the service processor might be the failing item.

Ask your next level of support for assistance.

FI00040

FI00040 indicates that the backplane or a connection to the backplane might be failing.

See the symbolic FRU BACKPLN.

FI00047

FI00047 is not supported on these models. Continue with the next FRU in the list.

FI00050

FI00050 is not supported on these models. Continue with the next FRU in the list.

FI00055

FI00055 indicates that a primary optical link cable is the failing item.

The failing item is either the optical bus cable for the bus that you are working with or its paired bus cable on the optical link card.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00056

FI00056 indicates that any optical bus cable or a missing optical bus wrap connector is the failing item.

For cable FRU part numbers, see Planning for cables. For wrap connector FRU part numbers, see Managing PCI adapters.

FI00057

FI00057 indicates that the secondary optical link cable is the failing item.

The failing item is the optical cable that runs between the bus expansion adapter cards in two separate expansion units. Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00060

FI00060 is not supported on these models. Continue with the next FRU in the list.

FI00062

FI00062 is not supported on these models. Continue with the next FRU in the list.

FI00065

FI00065 is not supported on these models. Continue with the next FRU in the list.

FI00070


FI00070 indicates that a storage device attached to the IPL device I/O adapter is the failing item.

Determine the IPL device that is failing. Choose one of the following navigation options depending on the interface type of the Hardware Management Console (HMC):

- If you are using an HMC Classic or HMC Enhanced interface, complete the following steps:
 1. In the navigation area, click **Systems Management**.
 2. Click **Servers**.
 3. Click the server on which the logical partition is located.

4. Select the logical partition and click the **Properties** task.
 5. In the Properties window, click the **Settings** tab.
- If you are using an HMC Enhanced+ interface, complete the following steps:



1. In the navigation area, click the **Resources** icon  , and then select **All Systems**.
2. To enable the tasks for the server you want, select the server.
3. Click **Actions > View System Partitions**.
4. To enable the tasks for the partition you want, select the name of that partition.
5. Click **Actions > View Partition Details**.

Note the IPL storage device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

If the IPL storage device is not the failing item, any storage device attached to the IPL device I/O adapter might be the failing item.

FI00072

FI00072 indicates that the load-source media is the failing item.

Complete the following steps:

1. Choose from the following options:
 - If the load source is tape, replace the tape in the alternate IPL tape unit.
 - If the load source is an optical storage unit, replace the compact disk.
 - If the load source is a hard disk drive, replace the hard disk drive.
2. If replacing the media does not work, try replacing the drive. Note the device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

FI00090

FI00090 indicates that the removable media device for an alternate IPL is the failing item.

Determine the device that is failing by performing the following steps:

1. Select function **01** (Select IPL) on the control panel and press Enter to verify that the active IPL type is D.

Note: Use the system configuration list to identify the device.

The possible failing devices are the following type numbers: 3490, 3570, 3590, 632x, 6382, 6383, 6386, 6387, 63A0, 7208, 9348, and 9427.

2. Use the service information for the specific removable media unit for an alternate IPL to analyze the device failure.

FI00092

FI00092 indicates that either the load source for an alternate IPL or the interface to the load source is the failing item.

Complete the following steps:

1. If the load source is an optical unit, perform function 3 to start the system again, if necessary. This will make the unit ready.
2. Locate the alternate load source device for the system.

3. Replace the device.

FI00096

FI00096 is not supported on these models. Continue with the next FRU in the list.

FI00098

FI00098 indicates that the load-source disk device is the failing item.

Complete the following steps:

1. Determine the disk unit 1 type number. It is printed on a label on the front of the system frame.
2. If the system does not have a label that identifies the disk unit type, determine the part number of the disk unit by looking at a label located on the disk unit. You must remove the disk unit to see this label.
3. Replace the disk unit.
4. Locate the alternate load source device for the system.
5. Replace the device.

FI00099

FI00099 indicates that the Licensed Internal Code failed or responded in an unpredictable way.

Ask your next level of support for assistance.

FI00121

FI00121 indicates that any media device attached to this I/O adapter might be the failing item.

Use the device type to determine the part. Note the device type, and see the following Managing devices topics to determine the FRU part number to replace.

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

FI00122

FI00122 indicates that a reserved IOA port on the IOP is the failing item.

If the IOP is type 2624, the failing item is type 6146 IOA.

Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00123

FI00123 indicates that the device terminating plug might be failing.

Go to symbolic FRU DEVTERM.

FI00124

FI00124 is not supported on these models. Continue with the next FRU in the list.

FI00130

FI00130 indicates that the Licensed Internal Code for one of the IOPs or IOAs is the failing item.

Determine the IOP or IOA type and location:

1. Determine the address of the IOP or IOA card. See the System reference code format description.
2. Determine the location of the IOP or IOA card. See Part locations and location codes, and get the type from the card in that location or address.
3. Look for PTFs that are associated with the reference code and the identified hardware type, and have the customer apply them.

FI00131

FI00131 indicates that one of the IOPs or IOAs, if active, is the failing item.

Determine the IOP or IOA type and location:

1. Determine the address of the IOP or IOA card. See the System reference code format description.
2. Determine the location of the IOP or IOA card. See Part locations and location codes, and get the type from the card in that location or address.
3. Use the IOP or IOA type to determine the part to replace.

FI00132

FI00132 indicates that one of the IOAs is the failing item.

Perform the MABIP55 procedure to isolate the failing IOA.

FI00141

FI00141 indicates that the IOP for the 7208 tape drive is the failing item.

The failing IOP is the type 2621 IOP.

Note the IOP type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00142

FI00142 is not supported on these models. Continue with the next FRU in the list.

FI00180

FI00180 is not supported on these models. Continue with the next FRU in the list.

FI00185

FI00185 indicates that the 12-port ASCII workstation attachment cable is the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00187

FI00187 is not supported on these models. Continue with the next FRU in the list.

FI00189

FI00189 is not supported on these models. Continue with the next FRU in the list.

FI00200

FI00200 indicates that the ac module or the removable power cable is the failing item.

FI00204

FI00204 indicates that the bus cable between the system unit and an expansion unit or the bus cable between two expansion units is the failing item.

FI00206

FI00206 is not supported on these models. Continue with the next FRU in the list.

FI00230

FI00230 indicates that the Licensed Internal Code for the failing node is the failing item and needs to be restored.

Determine the type of node and select the Licensed Internal Code load:

- **Primary node** - AJSFDJ04
- **Secondary node** - AJSFDJ05

FI00235

FI00235 indicates that an SPCN cable that connects two frames or a frame to a node is the failing item. This failing item is applicable only if an SPCN cable is installed.

The following list shows the lengths of the possible failing items:

- SPCN cable (6 meters)
- SPCN cable (15 meters)
- SPCN cable (30 meters)
- SPCN cable (60 meters)
- Optical SPCN cable (100 meters)
- SPCN optical adapter
- SPCN port cable (frame-to-node)
- Frame-to-frame cable
- SPCN optical adapter

Note the cable type, and see the Planning for cables to determine the FRU part number to replace.

FI00236

FI00236 is not supported on these models. Continue with the next FRU in the list.

FI00237

FI00237 is not supported on these models. Continue with the next FRU in the list.

FI00238

FI00238 is not supported on these models. Continue with the next FRU in the list.

FI00239

FI00239 is not supported on these models. Continue with the next FRU in the list.

FI00240

FI00240 is not supported on these models. Continue with the next FRU in the list.

FI00244

FI00244 is not supported on these models. Continue with the next FRU in the list.

FI00245

FI00245 indicates that the card enclosure for an unknown unit type is the failing item.

See the symbolic FRU BACKPLN.

FI00246

FI00246 is not supported on these models. Continue with the next FRU in the list.

FI00248

FI00248 is not supported on these models. Continue with the next FRU in the list.

FI00253

FI00253 is not supported on these models. Continue with the next FRU in the list.

FI00255

FI00255 is not supported on these models. Continue with the next FRU in the list.

FI00256

FI00256 is not supported on these models. Continue with the next FRU in the list.

FI00300

FI00300 indicates that media is the failing item.

Use the following list to determine the service action to perform:

- If the load source is a tape, replace the tape in the alternate IPL tape unit.
- If the load source is an optical storage unit, replace the compact disc.
- If the load source is a disk drive, replace the disk drive.

FI00301

FI00301 indicates that the magnetic storage I/O processor (MSIOP) or the combined function I/O processor (CFIOP) is the failing item.

Note the IOP type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00302

FI00302 indicates that the Licensed Internal Code for the magnetic storage I/O processor (MSIOP) or the combined function I/O processor (CFIOP) is the failing item.

Ask your next level of support for assistance.

FI00310

FI00310 is not supported on these models. Continue with the next FRU in the list.

FI00315

FI00315 indicates that the installation time life of the battery power unit has been exceeded.

Check any attached units that have battery power units and perform maintenance as needed.

FI00316

FI00316 indicates that no I/O processors were found on the bus.

Verify the configuration information for the system. If a bus is configured to be empty, there is no problem.

FI00317

FI00317 indicates that the I/O processor cards at consecutive direct select addresses appear to be failing.

Check the I/O processor cards to ensure that they are properly seated in their connectors and to verify that the backplane is not damaged. The I/O processor cards or a damaged backplane could cause this problem.

FI00318

FI00318 indicates that an I/O adapter attached to an I/O processor card on the failing bus is the failing item.

Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00319

FI00319 indicates that the Licensed Internal Code on an I/O processor is the failing item.

Install a PTF to correct the problem.

Ask your next level of support for assistance.

FI00320

FI00320 indicates that the display station used as the console is the failing item.

FI00360

FI00360 indicates that the IPL disk device is the failing item. Replace the disk device.

FI00380

FI00380 indicates that the workstation card might be failing.

On the bus that has the system console or the failing logical partition's console, the failing item is the first workstation IOP card or the workstation IOA card. The bus with the system console is bus 0001. For systems with multiple logical partitions, the logical partition's console is on bus 0001 and the consoles for other logical partitions are determined by the logical partition configuration.

Note the IOP or IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00500

FI00500 indicates that the I/O (SCSI) bus cable is the failing item.

See FI01140.

FI00580

FI00580 indicates that any storage device might be the failing item.

The address of the failing storage device cannot be determined.

Note the device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

FI00581

FI00581 indicates that a storage device at the address identified by the problem isolation procedures for the reference code is the failing item.

Use the service information of the I/O device to continue analyzing the problem.

Note the device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

FI00584

FI00584 indicates that any storage device might be the failing item.

The address of the failing storage device cannot be determined.

For device FRU part numbers, see Finding parts, locations, and addresses.

FI00601

FI00601 indicates that the display station is the failing item.

If a link protocol converter is used to connect the console to the system, the protocol converter is the failing item.

Refer to the display station or link protocol converter documentation for service information.

FI00602

FI00602 indicates that the cable between the workstation attachment and the device is the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00603

FI00603 indicates that the 5299 multiconnector is the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00604

FI00604 indicates that a printer is the failing item.

Use the printer device information to analyze the problem.

FI00605

FI00605 indicates that a magnetic stripe reader on a display station is the failing item.

Refer to the documentation for the display station for service information.

FI00606

FI00606 indicates that the storage media is the failing item. Replace the storage media.

FI00607

FI00607 indicates that a selector light pen attached to a display station is the failing item.

Refer to the documentation for the display station for service information.

FI00608

FI00608 indicates that the link protocol converter is the failing item.

Refer to the documentation for the link protocol converter for service information.

FI00610

FI00610 indicates that the twinaxial workstation IOP or the twinaxial workstation IOA attached to a combined function I/O processor (CFIOP), communications IOP, or combined function IOP is the failing item.

Use the workstation IOP or IOA type to determine the part.

Note the CFIOP or IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00611

FI00611 is not supported on these models. Continue with the next FRU in the list.

FI00612

FI00612 is not supported on these models. Continue with the next FRU in the list.

FI00613

FI00613 is not supported on these models. Continue with the next FRU in the list.

FI00614

FI00614 indicates that a unit reference code of FFFF was indicated when the user entered the ANZPRB (Analyze Problem) command from a workstation.

The failing items for this error can be identified by running the complete ANZPRB command. The failing items are also in the problem log when the Work with Problem (WRKPRB) command is entered.

FI00615

FI00615 indicates that the twinaxial workstation attachment cable is the failing item.

Check the twinaxial workstation attachment cable for the FRU part number.

Note the cable type, and refer to Planning for cables to determine the FRU part number to replace.

FI00616

FI00616 indicates that the 5259 migration data link is the failing item.

Replace the 5259 migration data link.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00626

FI00626 indicates that the modem on the failing port is the failing item.

Replace the modem.

FI00630

FI00630 indicates that the multiline communications IOP is the failing item.

Note the IOP type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00631

FI00631 indicates that a cable other than the cable from the workstation IOA to the first device is the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00632

FI00632 indicates that the cable from the workstation IOA to the first device is the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00700

FI00700 indicates that the remote data terminal equipment (DTE) or an attached device is the failing item.

Report this problem to the operator of the remote equipment.

FI00701

FI00701 indicates that a local communications cable is the failing item.

Use the cable to determine the part.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00702

FI00702 indicates that the local cable for the automatic call unit is the failing item.

Check the interface cable for the automatic call unit for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00703

FI00703 indicates that the automatic call unit is the failing item.

Refer to the documentation for the automatic call unit for service information.

FI00704

FI00704 indicates that the local data circuit-terminating equipment (DCE) is the failing item.

Refer to the documentation for the DCE for service information.

FI00705

FI00705 indicates that the remote data circuit-terminating equipment (DCE) is the failing item.

Report this problem to the operator of the remote equipment.

FI00708

FI00708 indicates that the local communications cable (X.21 interface) is the failing item.

Check the communications cable for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00709

FI00709 indicates that the local communications cable (V.35 interface) is the failing item.

Check the communications cable for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00710

FI00710 indicates that the local communications cable (the V.24 interface with remote power on) is the failing item.

The remote power-on feature is given support by using an available pin on the EIA-232/V.24 enhanced or EIA-232/V.24 nonenhanced cables. Check the communications cable for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00711

FI00711 indicates that the local communications cable (token-ring interface cable) is the failing item.

Note: An IBM cabling system patch cable or a comparable cable might have been supplied by the user to increase the length of this cable. Any cable attached to the token-ring interface cable might also be the failing item.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00712

FI00712 indicates that the token-ring access unit is the failing item.

Refer to the documentation for the token-ring access unit for service information.

FI00716

FI00716 indicates that the EIA-232/V.24 enhanced cable is the failing item.

Check the communications cable for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00717

FI00717 indicates that the EIA-232/V.24 non-enhanced cable is the failing item.

Check the communications cable for the part number.

FI00718

FI00718 indicates that an IOP card is the failing item.

Note the CFIOP type and see Managing PCI adapters to determine the FRU part number to replace.

FI00719

FI00719 indicates that an IOA card is the failing item.

Complete the following steps:

1. Is the IOA location information available in the service action log or management console?
 - **Yes:** Replace the IOA. Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.
 - **No:** Continue with the next step.
2. Determine the address of the IOA card. See the System reference code format description.
3. Determine the location of the IOA card. See Part locations and location codes for the model you are working on and get the type from the card at that address.
4. Replace the IOA. Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00720

FI00720 indicates that the Ethernet transceiver is the failing item.

Verify that the signal quality error switch in the transceiver that the Ethernet is attached to is set to active.

See the transceiver operator's information for the correct operation or the correct removal and replacement procedure.

FI00721

FI00721 indicates that the token-ring IOA card is the failing item.

Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00722

FI00722 indicates that the cable attached to the local area network IOA is the failing item.

Replace the cable.

FI00723

FI00723 indicates that the communications two-port adapter cable for the communications IOA card is the failing item.

Replace the communications two-port adapter cable.

If this action does not correct the problem, use the IOA type to determine the part. Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00725

FI00725 indicates that the Ethernet IOA card is the failing item.

Use the IOA type to determine the part. Note the IOA type and see Managing PCI adapters to determine the FRU part number to replace.

FI00726

FI00726 indicates that a communications IOA card is the failing item:

Use the IOA type to determine the part. Note the IOA type, and see Managing PCI adapters to determine the FRU part number to replace.

FI00727

Failing item FI00727 is not supported on these models. Continue with the next FRU in the list.

FI00728

FI00728 indicates that the local communications cable (RS449/V.36 interface) is the failing item.

Check the communications cable for the part number.

Also, note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00730

FI00730 indicates that the Licensed Internal Code module for an I/O card might be the failing item.

Ask your next level of support for assistance.

FI00731

FI00731 is not supported on these models. Continue with the next FRU in the list.

FI00732

FI00732 is not supported on these models. Continue with the next FRU in the list.

FI00733

FI00733 is not supported on these models. Continue with the next FRU in the list.

FI00734

FI00734 is not supported on these models. Continue with the next FRU in the list.

FI00735

FI00735 is not supported on these models. Continue with the next FRU in the list.

FI00741

FI00741 indicates that the telephone cable to the wall outlet is the failing item.

Check the cable for the part number.

Note the cable type, and see Planning for cables to determine the FRU part number to replace.

FI00742

FI00742 indicates that the communications coupler is the failing item.

Check the coupler for the part number.

Note the coupler type and see Planning for cables to determine the FRU part number to replace.

FI00751

FI00751 indicates that the Licensed Internal Code module is the failing item.

Ask your next level of support for assistance.

FI00810

FI00810 indicates that the magnetic tape is the failing item.

Replace the magnetic tape.

FI00830

FI00830 indicates that the external signal cable is the failing item.

See EXTSCSI for cable part numbers.

FI00832

FI00832 indicates that the external signal cable is the failing item.

See EXTSCSI for cable part numbers.

FI00841

FI00841 indicates that the terminating plug for the attached device is the failing item.

For tape devices, see FI00880.

FI00842

FI00842 indicates that the external signal cable for the attached device is the failing item.

See symbolic FRU EXTSCSI.

FI00844

FI00844 indicates that the device controller for the attached device is the failing item.

For tape devices, see FI00882.

FI00845

FI00845 indicates that the device controller for the attached device is the failing item.

See symbolic FRU EXTSCSI.

FI00850

FI00850 indicates that the interface cables attached to the tape IOP are the failing items.

FI00851

FI00851 indicates that the I/O device attached to the I/O adapter is the failing item.

Use the service information of the I/O device to continue analyzing the problem.

Note the device type, and see the following Managing devices topics to determine the FRU part number to replace.

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

FI00856

FI00856 indicates that an active tape IOP is the failing item.

Use the IOP type to determine the part.

Note the CFIOP type and see Managing PCI adapters to determine the FRU part number to replace.

FI00870

FI00870 indicates that a storage device is the failing item.

Use the device type to determine the part. If a device location is not listed in the service action log entry or in the hardware service manager (HSM), the failing device is either externally attached or the failing device might be part of an unsupported configuration. If the device is in a 3995 or 3996 optical library, see the maintenance information for the 3995 or 3996 optical library to replace the failing device.

Note: The 636x tape unit is located in the FC 5032 removable storage unit.

FI00871

FI00871 indicates that the attached tape device is the failing item.

If the device is a 3580 or 3592 external tape unit, refer to the device information to determine the part number to replace. Otherwise, see the following Managing devices topics.

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

FI00872

FI00872 indicates that the interface is the failing item.

Complete the following:

- Internal device: See FI01140.
- External device: See symbolic FRU EXTSCSI.

FI00880

FI00880 indicates that a terminating plug on the device bus to this IOP is the failing item.

Note: If the unit is a 9427, an internal terminating plug is used. See the service information for the specific device.

The following list shows the possible failing items:

- Terminating plug for 2440 Tape Unit: Part number 79X3795
- Terminating plug for 3490, 3570, 3590, and 7208 Model 342 Tape Units: Part number 61G8324
- SCSI differential terminating plug for 3995 iSeries Optical Library Dataserver: Part number 79X3795
- SCSI single-ended terminating plug for 3995 iSeries Optical Library Dataserver Models C4x: Part number 34H5608
- Terminator for 637x, 638x, and 6390 Tape Units: Terminator is part of the disk unit backplane. Use the IOA type, and see the symbolic FRU DEVTERM to determine the correct part.
- Terminating plug for 63A0 Tape Unit: See device documentation.
- Terminating plug for 7208 Model 002 tape drive: Part number 91F0721
- Terminating plug for 7208 Model 012 tape drive: Part number 46G2599
- Terminating plug for 7208 Model 222 tape drive: Part number 46G2599
- Terminating plug for 7208 Model 232 tape drive: Part number 79X3795
- Terminating plug for 7208 Model 234 tape drive: Part number 79X3795
- Terminating plug for 9348 Tape Unit: Part number 79X3795

FI00882

FI00882 indicates that the addressed unit is the failing item.

Determine the address and type of the failing unit. See the System reference code format description.

If one of the following device types is the failing item, see the service information for the device model installed on the system: 2440, 3490, 3570, 3590, 3995, 63A0, 7208, 9347, 9348, 9427.

FI00883

FI00883 indicates that an unaddressed unit might be failing.

A unit attached to the same IOP, other than the addressed unit identified by FI00882, is the failing item.

FI00884

FI00884 indicates that any unit attached to the IOP might be the failing item.

See FI00882 for the list of possible units.

FI01040

FI01040 indicates that you have an OptiConnect system, and the error is on an iSeries or System i[®] server that is connected to it.

FI01101

FI01101 indicates that the addressed IOA card on the I/O processor is the failing item.

Complete the following steps:

1. Determine the address of the IOA card. See the System reference code format description.
2. Determine the location of the IOA card.
3. Replace the failing device. Use the device type to determine the part.

FI01103

FI01103 indicates that an attached IOA card is the failing item.

Perform the MABIP55 procedure to isolate the failing IOA.

FI01104

FI01104 indicates that an attached IOA card is the failing item.

Perform the MABIP55 procedure to isolate the failing IOA.

FI01105

FI01105 indicates that the addressed storage device is the failing item.

Complete the following steps:

1. Is the device location information available in the service action log?
 - **No:** Continue with the next step.
 - **Yes:** Replace the failing item. See the disk unit recovery procedures.
2. Find the IOP address and the device address. See the System reference code format description.
3. To determine the location of the I/O processor card, see Part locations and location codes. Then complete the following:
 - Find the IOP card location identified by the direct select address.
 - Find the addressed storage device location identified by the device address.
4. Replace the failing device. Use the device type to determine the part.

FI01106

FI01106 indicates that a storage device other than the addressed storage device is the failing item.

Complete the following steps:

1. To find the addressed device, see FI01105. The failing item could be any device with the same IOP address and I/O (SCSI) bus number but with a different device unit number.
2. If there is no problem analysis procedure associated with the reference code being serviced, perform the IOPIP16 procedure to isolate the possible failing device.

FI01107

FI01107 indicates that any storage device attached to the I/O (SCSI) bus of this IOP might be the failing item.

Complete the following steps:

1. Find the IOP address. See the System reference code format description.
2. To determine the location of the I/O processor card, see Part locations and location codes.
The unit reference code indicates the I/O (SCSI) bus that has the problem:

- URC 3020, 3100 -- I/O bus 0
 - URC 3021, 3101 -- I/O bus 1
 - URC 3022, 3102 -- I/O bus 2
 - URC 3023, 3103 -- I/O bus 3
 - Any other URC -- Any I/O bus on the I/O card
3. See Part locations and location codes to find the diagram of the system unit or the expansion unit and perform the following:
 - Find the IOP card location identified by the direct select address.
 - Find all the storage devices on the same I/O (SCSI) bus.
 4. Replace the failing device. Use the device type to determine the part.
 5. If there is no problem analysis procedure associated with the reference code being serviced, perform the IOPIP16 procedure to isolate the possible failing device.

FI01108

FI01108 indicates that the I/O (SCSI) bus or power cable is the failing item.

See FI01140 and FI01141.

FI01109

FI01109 indicates that the backplane or a connection to the backplane might be failing.

See the symbolic FRU BACKPLN.

FI01110

FI01110 indicates that the diskette unit is the failing item.

Use the diskette device type to determine the part.

Note the device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

FI01112

FI01112 indicates that the active IOP is the failing item.

1. Find the IOP address. See the System reference code format description.
2. To determine the location of the I/O processor card, see Part locations and location codes and get the type from the card in that location or address.
3. Use the IOP type to determine the part to replace.

FI01117

FI01117 indicates that any IOA, card, cable, or device attached to the IOP might be the failing item.

1. Find the IOP address. See the System reference code format description.
2. To determine the location of the I/O processor card, see Part locations and location codes.
3. Identify the IOAs, cards, cables, and devices that are attached to the IOP found in the preceding steps.
4. Replace the IOAs, cards, cables, and devices that are attached to the IOP, one at a time, until you have corrected the problem.

FI01119

FI01119 indicates that the backplane or a connection to the backplane might be failing.

See the symbolic FRU BACKPLN.

FI01121

FI01121 is not supported on these models. Continue with the next FRU in the list.

FI01130

FI01130 indicates that the disk unit is the failing item.

Find the disk unit type number in Finding parts, locations, and addresses to determine the part number.

FI01131

FI01131 is not supported on these models. Continue with the next FRU in the list.

FI01132

FI01132 is not supported on these models. Continue with the next FRU in the list.

FI01140

FI01140 indicates that the I/O (SCSI) bus cable is the failing item.

Complete the following steps:

1. Are there external devices attached?
 - **No:** Continue with the next step.
 - **Yes:** Choose from the following options:
 - For SCSI-attached external devices, see the symbolic FRU EXTSCSI.
 - For external devices that are attached with Fibre Channel cables, see FCCABLE.
2. Find the IOP address. See the System reference code format description.
3. To determine the location of the I/O processor card, see Part locations and location codes and get the type from the card in that location or address.
4. Replace the failing item associated with the IOP address.

Note: Any of the SCSI cables or backplanes between the IOA and the device could be the failing item.

FI01141

FI01141 indicates that a loss of power to an IOP, to an internal device, or to an external device might have occurred.

Complete the following steps:

1. Are 0000 xxxx, 1xxx xxxx, or A6xx 698x SRCs displayed on the control panel?
 - **No:** Continue with the next step.
 - **Yes:** Use the SRC displayed on the control panel to diagnose the problem.
2. Did the SRC that directed you to this FI code involve an externally attached device or an IOP with an externally attached device?
 - **No:** Continue with the next step.
 - **Yes:** Verify that there is no obvious problem with power to the device. If you suspect a power problem with the device, go to the service information for that external device.

3. The power supply cables or connections to internal disk units, tape units, or optical storage units might be the failing item. For part numbers, see Finding parts, locations, and addresses.

FI01201

FI01201 indicates that the disk drive is the failing item.

Use the disk unit type number to determine the part number.

Note the device type and see Finding parts, locations, and addresses to determine the FRU part number to replace.

FI01202

FI01202 indicates that the disk drive is the failing item.

See FI01201.

FI01203

FI01203 indicates that the disk drive is the failing item.

See FI01201.

FI02092

FI02092 indicates that the load source for an alternate IPL or the interface to the load source is the failing item.

See FI00092.

FI02112

FI02112 indicates that the addressed storage device is the failing item.

Complete the following steps:

1. Is the device location information available in the service action log?
 - **No:** Continue with the next step.
 - **Yes:** Replace the failing item.
2. Find the IOP address and the device address. See the System reference code format description.
3. To determine the location of the I/O processor card, see Part locations and location codes. Then complete the following:
 - Find the IOP card location identified by the direct select address.
 - Find the addressed storage device location identified by the device address.
4. Replace the failing device. Possible failing addressed devices include disk, tape, optical, device backplane, or auxiliary cache IOA. Use the device type to determine the part.

Symbolic FRUs

This information is a list of symbolic field replaceable units (FRUs).

The procedures in this topic are listed alphabetically.

ACMODUL

Your server lost power. This procedure helps you determine the source of the power loss condition that brought you here.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

If the system or EMX0 PCIe3 expansion drawer that exhibited the power loss starts normally, or stays powered on after an ac power failure, replacement of parts might not be needed. Power failures can be caused by brown outs, building or room power receptacle power loss, loose or disconnected power cords, or possible hardware conditions.

1. Is the failing unit configured with a redundant power supply option (or dual line cord feature)?
 - **No:** Continue with the next step.
 - **Yes:** A service representative must perform power isolation procedure PWR1911.
2. Are all the units powered on?
 - **Yes:** This error might be caused by an ac power outage. If the system starts without an error, no parts need to be replaced. **This ends the procedure.**
 - **No:** On the unit that does not power on, verify that the power outlet is supplying the correct power for the unit. Also, ensure that both ends of the power cord (from the unit that does not power on) are connected correctly and securely.
If you find a problem, correct the problem. **This ends the procedure..**
If you cannot find the problem, continue with the next step.
3. A trained service representative must verify the voltage at the system end of the power cord with a multimeter to verify that the voltage is correct according to the following table.

Type and Model	Correct voltage
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	100 - 127 V or 200 - 240 V
8408-44E or 8408-E8E	200 - 240 V
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	200 - 240 V
EMX0 PCIe3 expansion drawer	100 - 127 V or 200 - 240 V

Is the voltage correct?

- **Yes:** Continue with the next step.
 - **No:** Go to the step 5.
4. Replace the failing power supply. Use the following table to determine the part number for the field replaceable unit (FRU).

Type and Model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, 9119-MME, or EMX0 PCIe3 expansion drawer	See System parts.	Power supply 1	Un-E1

Type and Model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, 9119-MME, or EMX0 PCIe3 expansion drawer	See System parts.	Power supply 2	Un-E2
8286-41A,8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Power supply 3	Un-E3
8286-41A,8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Power supply 4	Un-E4

5. Complete the following steps:

- a. Disconnect the power cord from the customer's power outlet.
- b. Use a multimeter to measure the voltage at the customer's power outlet.

Is the voltage correct?

- **Yes:** Replace the failing power cord. **This ends the procedure.**
- **No:** Complete the following steps:
 - 1) Inform the customer that the voltage at the power outlet is not correct.
 - 2) After the voltage at the power outlet is correct, reconnect the power cord to the power outlet. **This ends the procedure.**

ADJ_LOG

This symbolic FRU displays the logical location code of the previous failing item in the failing item list. No service action is required for this FRU.

ADJ_PHY

This symbolic FRU displays the physical location code of the previous failing item in the failing item list. No service action is required for this FRU.

AIRMOVR

A fan might be failing. Before replacing any field replaceable units (FRUs), ensure that the fans and fan trays are fully seated into the fan connectors and that all cables are seated correctly.

Replace the FRUs in order, one at a time, starting with the primary unit and then the secondary units. Use the following table to determine the failing fan and location.

Unit reference code, CCIN, or FFC	Type and model	Part number	Description	Location code
7610	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A1

Unit reference code, CCIN, or FFC	Type and model	Part number	Description	Location code
7620	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A2
7630	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A3
7640	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A4
7650	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A5
7660	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan fault	Un-A6
7611	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A1
7621	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A2
7631	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A3
7641	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A4
7651	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A5
7661	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	See System parts.	Cooling fan missing	Un-A6
7610	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan fault	Un-A1
7620	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan fault	Un-A2
7630	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan fault	Un-A3

Unit reference code, CCIN, or FFC	Type and model	Part number	Description	Location code
7640	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan fault	Un-A4
7611	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan missing	Un-A1
7621	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan missing	Un-A2
7631	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan missing	Un-A3
7641	8247-42L, 8286-41A, or 8286-42A	See System parts.	Cooling fan missing	Un-A4
7610	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A1
7620	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A2
7630	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A3
7640	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A4
7650	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A5
7660	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A6
7670	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A7
7680	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A8
7690	8408-44E or 8408-E8E	See System parts.	Cooling fan fault	Un-A9
7611	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A1
7621	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A2
7631	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A3
7641	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A4
7651	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A5
7661	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A6
7671	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A7
7681	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A8
7691	8408-44E or 8408-E8E	See System parts.	Cooling fan missing	Un-A9
7610	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan fault	Un-A1
7620	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan fault	Un-A2
7630	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan fault	Un-A3
7640	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan fault	Un-A4

Unit reference code, CCIN, or FFC	Type and model	Part number	Description	Location code
7650	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan fault	Un-A5
7611	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan missing	Un-A1
7621	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan missing	Un-A2
7631	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan missing	Un-A3
7641	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan missing	Un-A4
7651	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Cooling fan missing	Un-A5

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

AJDG301

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJDGP01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJEDA00

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJEGP01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJ EQU00

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGAM01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGDF01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGFN00

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGJ601

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGJQ01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGLD01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJGW701

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJLAF01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJLAG01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJLYC01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJLYD01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

AJSDJ01

Licensed Internal Code is the failing item. Look for PTFs associated with the reference code and have the customer apply them.

ALTMANL

Symbolic FRU ALTMANL is not supported on these models. Continue with the next FRU in the list.

ALTPERF

The system is located at an altitude that is within the range of the system specification, but the thermal or power management firmware might reduce performance due to the altitude.

ALTITUDE

The air pressure sensor in the control (operator) panel is reporting that the system is at an altitude above 3050 meters (about 10,000 feet).

Complete the following steps:

1. Is the system in operation at an altitude above 3050 meters?
 - **No:** Continue with the next step.
 - **Yes:** The system is being operated outside the range of the system specifications. Move the system to an altitude lower than 3050 meters. **This ends the procedure.**
2. The system is located at an altitude below 3050 meters. Are the environmental control systems in the building in which the system is located functioning correctly?
 - **No:** Fix any problems that are found. **This ends the procedure.**
 - **Yes:** Continue with the next step.
3. Replace the control (operator) panel. See CTLPNL. **This ends the procedure.**

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

AMBBACK

The ambient temperature has returned to a level that is within the operating specifications of this system. No service action is required.

AMBPERF

The ambient temperature is within the range of the system specification, but the thermal or power management firmware might reduce performance due to the current ambient temperature.

AMBTEMP

The system detected a warning or fault due to the ambient room temperature.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

1. Is the room temperature less than 40°C (104°F)?
 - **Note:** Derate the dry-bulb temperature 1°C per 175 m above 950 m. For more information about environmental requirements, see Hardware specification sheets.
 - **No:** Notify the customer. The customer must bring the room temperature within normal range. Continue with the next step.
 - **Yes:** Continue with the next step.
2. Are the system front and rear doors free of obstructions?

- **No:** Notify the customer. The system must be free of obstructions for proper air flow. Continue with the next step.
 - **Yes:** Continue with the next step.
3. Ensure that rack fillers are installed in empty rack slots. Does the problem persist?
 - **No: This ends the procedure.**
 - **Yes:** Continue with the next step.
 4. Are you working with reference code 1xxx7201 or has reference code 1xxx7201 been logged?
 - **Yes:** The room temperature is too high. The customer must fix the room temperature problem identified in step 1. If the customer has fixed the room temperature problem identified in step 1 and a reference code 1xxx7201 is still being logged, continue with the next step.
 - **No:** Replace the FRU listed in the error log for the SRC you are working with and go to step 6.
 5. Replace the control panel. Use the following table to determine the part number for the field replaceable unit (FRU). Then, continue with the next step.

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Control (operator) panel	Un-D1
8408-44E or 8408-E8E	See System parts.	Control (operator) panel	Un-D1
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Control (operator) panel	Un-P1-C13 of the system control unit
EMX0 PCIe3 expansion drawer	See System parts.	Chassis management card	Un-P3-C1

6. After each FRU is replaced, is the error code that sent you to this procedure still reported?
 - **No:** The problem is resolved. **This ends the procedure.**
 - **Yes:** Replace the next failing item in the failing item list. If you replaced all of the items in the failing item list and there is still a problem, contact your next level of support. **This ends the procedure.**

AMBTMP1

Ambient air temperature is too high for optimal performance.

Air used for cooling the unit is above the temperature at which the unit is designed to run at maximum performance. Use the following instructions to help determine the problem:

- If the room temperature is above the specified range for the unit reporting this problem, take steps to lower the room temperature.
- If the air being drawn into the unit is above the specified range, either move the unit to a place where the air is within range, or take steps to reduce the temperature of the air surrounding the unit. This can be accomplished by moving the source of the air that is too warm.
- If the temperature of the air at the unit's air intake is within the range specified, contact your next level of support.

AMBTMP2

Ambient air temperature is back within range.

Ambient air temperature entering the system unit has returned to the nominal operational range for maximum performance. This message or symbolic FRU results when the temperature of the air entering

the unit was previously reported to be above the unit's specified range. This message or symbolic FRU is issued when the unit detects that the ambient air temperature has dropped to within the specified range for maximum performance. No action is necessary.

ANYBRDG

The PCI bus might be failing.

Go to "BACKPLN" on page 194. **This ends the procedure.**

ANYBUS

Any cable, card, or card enclosure might be causing an IOP-detected bus error, although the IOP that is reporting the problem might not be causing the problem.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

ANYFC

Any IOA, hub, gateway, or device that is attached to the same Fibre Channel interface might be failing.

ANYPROC

The failing component might be one of the system processors.

To determine the location of the system processor, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.
 - **No:** Replace each of the system processor modules in the system unit. On multiple-drawer servers, replace the system processor modules in the primary system node and then the secondary system nodes. **This ends the procedure.**
2. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
3. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System processor modules	<ul style="list-style-type: none"> • Un-P1-C32 • Un-P1-C33 	Replace the system processor module at the location that was identified in this procedure. See Part locations and location codes.
8408-44E or 8408-E8E	See System parts.	System processor modules	<ul style="list-style-type: none"> • Un-P2-C2 • Un-P2-C3 • Un-P2-C6 • Un-P2-C7 	Replace the system processor module at the location that was identified in this procedure. See Part locations and location codes.

Type and model	Part number	Description	Location code	Service action
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	System processor modules	<ul style="list-style-type: none"> • Un-P1-C14 • Un-P1-C15 • Un-P1-C18 • Un-P1-C19 	Replace the system processor module at the location that was identified in this procedure. See Part locations and location codes.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

AOCABLE

The expansion drawer cable that connects a system unit to an EMX0 PCIe3 expansion drawer might be failing.

To determine the location of the expansion drawer cable, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Go to step 3.
 - **No:** Continue with the next step.
2. To determine the location of the failing item, complete the following steps:
 - a. Record the Dynamic Reconfiguration Connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the failing item. Then, continue with the next step.
3. Does the location that is identified in this procedure have a port location (the location code ends with a Tx label)?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 5.
4. Is there a failing item in the failing item list of the serviceable event that indicates that a failing item should be replaced at the other port location of the same PCIe3 cable adapter?
 - **Yes:** The cables that are attached to both ports (T1 and T2) must be replaced. Continue with step 6 to replace both cables at the same time.
 - **No:** Continue with step 6 to replace the cable at the location that is identified in this procedure.
5. The cables that are attached to both ports (T1 and T2) of the identified failing item must be replaced. Append each of the port labels T1 and T2 to the location identified in this procedure and replace the cables at both locations. Continue with the next step to replace both cables at the same time.
6. Is the system firmware at level FW860.00, or later?

Note: For instructions about viewing system firmware levels, see Viewing existing firmware levels.

 - **Yes:** Continue with step 8 on page 193.
 - **No:** To determine the part number of the cable, examine the cable. Continue with the next step.
7. Replace the expansion drawer cables at the locations that were identified in this procedure.
 - If the system is managed by a management console, use the management console to replace the cables.
 - If the system is not managed by a management console, go to Removing and replacing an expansion drawer cable in the EMX0 PCIe3 expansion drawer.

This ends the procedure.

8. View PCIe hardware topology.
 - To view PCIe hardware topology by using a management console, go to PCIe Hardware Topology. Then, continue with the next step.
 - To view PCIe hardware topology by using the Advanced System Management Interface (ASMI), log in to ASMI. In the navigation area, expand **System Configuration** and click **PCIe Hardware Topology**. Then, continue with the next step.
9. Select the link with a Local Port Location or Remote Port Location that matches the ports of the cable to be replaced and click **Cable Attributes**. Record the part number that is displayed. Then, continue with the next step.
10. Replace the expansion drawer cables at the locations that were identified in this procedure.
 - If the system is managed by a management console, use the management console to replace the cables.
 - If the system is not managed by a management console, go to Removing and replacing an expansion drawer cable in the EMX0 PCIe3 expansion drawer.

This ends the procedure.

AS4NTDD

Symbolic FRU AS4NTDD is not supported on these models. Continue with the next FRU in the list.

AUXCBL

Replace the SCSI cable that connects the auxiliary cache I/O adapter to the storage I/O adapter.

1. Find the location of the auxiliary cache I/O adapter:
 - a. Determine the address of the auxiliary cache I/O adapter. See the System reference code format description.
 - b. Determine the location of the auxiliary cache I/O adapter. See Part locations and location codes for the model on which you are working.
2. Replace the SCSI cable that connects the auxiliary cache I/O adapter to the storage I/O adapter. See Finding parts, locations, and addresses for cable part number information.

Note: To replace the SCSI cable concurrently, you must use concurrent maintenance to power off the auxiliary cache I/O adapter. Replace the cable and then use concurrent maintenance to power on the auxiliary cache I/O adapter. **Do not replace the cable when both adapters are powered on.**

AUXIOA

Replace the auxiliary I/O adapter.

Complete the following steps:

1. Is the location information available in the service action log?
 - **Yes:** Use the location information found in the service action log to replace the auxiliary I/O adapter. **This ends the procedure.**
 - **No:** Continue with the next step.
2. Complete the following steps:
 - a. Determine the address of the auxiliary cache I/O adapter. See the System reference code format description.
 - b. Use the address to find the location. See Part locations and location codes.

BACKPLN

A backplane or a connection to the backplane might be failing.

Note: Before you replace any parts, verify the connections to the backplane.

Complete the following steps:

1. Were you sent here by a power reference code (1xxxxxx)?
 - **No:** Continue with the next step.
 - **Yes:** Go to SYSBKPL. **This ends the procedure.**
2. Is the system a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME?
 - **Yes:** If the first four digits of the reference code that sent you here represent the CCIN of an I/O adapter, go to PCIEXTN. Otherwise, continue with the next step. **This ends the procedure.**
 - **No:** Continue with the next step.
3. Determine the location of the backplane by completing one of the following steps:
 - Use the location information for the backplane in the serviceable event view if it is available.
 - If there is no location information for the backplane in the serviceable event view, but there is location information for an I/O adapter, device, or other failing item, use the *Un-Px* portion of the location to determine the backplane location.
 - If there is no location information in the serviceable event view, but there is a PCI adapter in the failing item list, find the address of the I/O adapter (see the System reference code format description). Use the address to find the location. See Addresses. Use the *Un-Px* portion of the I/O adapter location to determine the backplane location.
4. Use the location code to determine in which unit the backplane is located. Any backplane that connects the device or I/O adapter might be the cause of the problem. Use the following table to determine the part number for the field replaceable unit (FRU).

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	<ul style="list-style-type: none">• System backplane• Drive backplane	<ul style="list-style-type: none">• <i>Un-P1</i>• <i>Un-P2</i>
8408-44E or 8408-E8E	See System parts.	<ul style="list-style-type: none">• I/O backplane• System backplane	<ul style="list-style-type: none">• <i>Un-P1</i>• <i>Un-P2</i>
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	System backplane	<i>Un-P1</i>
EMX0 PCIe3 expansion drawer	See System parts.	<ul style="list-style-type: none">• I/O module• I/O module• Midplane	<ul style="list-style-type: none">• <i>Un-P1</i>• <i>Un-P2</i>• <i>Un-P3</i>

This ends the procedure.

BATCHGR

Symbolic FRU BATCHGR is not supported on these models. Continue with the next FRU in the list.

BATRY

Symbolic FRU BATRY is not supported on these models. Continue with the next FRU in the list.

BPC

One of the BPCs failed to reach standby.

Use the following table to perform the appropriate action for the SRC that occurred.

SRC	Replace this FRU	Locations information
1xxx8740	BPC A (lower BPC)	Part locations and location codes
1xxx8741	BPC B (upper BPC)	Part locations and location codes

This ends the procedure.

BPCHANG

The system is stopped on one of the base system integrated controller checkpoints.

If the system hangs on one of the base system integrated controller checkpoints, perform the following steps:

1. Remove the ac cord, and then reattach it to the system.
2. Watch the control panel display. If 01 appears in the upper-left corner of the display, power on the system.

If the system continues to hang on a base system controller checkpoint, replace the backplane in the system unit that contains integrated I/O controllers.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

BRDGSET

The PCI controller, PCI bridge, or embedded PCI switch hardware is having a problem with one or more PCI adapter slots or internal connections. The exact card or adapter might not be identified in the serviceable event view.

The problem might be with a PCI card, a PCI card slot, or an embedded PCI adapter. The PCI bus number is indicated by the direct select address (DSA) in word 7 of the reference code. This symbolic FRU appears in the serviceable event view only when the Licensed Internal Code cannot determine which PCI card or PCI bridge set has the problem.

1. Are you working from the serviceable event view of an operating system, service processor, or the management console that is displaying a card position or list of card positions for this failing item in the failing item list?
 - **Yes:** Replace the cards at the locations indicated, one at a time, until the problem is resolved. For more information about locations, see Part locations and location codes. **This ends the procedure.**
 - **No:** Complete the following steps:
 - a. Determine the location of the card that is part of the group of PCI bus connections or PCI card slots by using the DSA. Record the DSA (word 7 of the reference code) from the user interface you are using.
 - b. Locate the cards that are specified in the DSA by completing isolation procedure MABIP53. Return here and continue with the next step after you locate the cards.
2. Did isolation procedure MABIP53 identify a single card location?
 - **Yes:** Replace the card at the location that was identified by isolation procedure MABIP53. For more information about locations, see Part locations and location codes. **This ends the procedure.**

- **No:** The bus number is the 4 leftmost characters of the 8 character DSA identified in step 1 on page 195. If the bus number is of the form 00xx or 0xxy, use the xx portion of the bus number and the tables at the end of this procedure to determine whether the bus controls a single card slot or a PCI bridge set. Then, continue with the next step.
3. Does the bus control a single card slot?
 - **Yes:** Replace the card at the location that was identified in step 2 on page 195. For more information about locations, see Part locations and location codes. **This ends the procedure.**
 - **No:** Use the card slots that were identified in step 2 on page 195 to complete the following steps:
 - a. Remove all of the adapters in the locations that are identified in the given range of card slots. Do not remove any FRUs that have embedded adapters. Remove only FRUs located in PCI card slots.
 - b. Replace each card, one card at a time. Power on the unit after you replace each card until either the problem reappears or all of the cards are replaced. Then, continue with the next step.
 4. Did the problem reappear?
 - **Yes:** The last card that you replaced before the problem reappeared is the failing item. **This ends the procedure.**
 - **No:** Continue with the next step.
 5. Did you identify an embedded adapter for the bus number?
 - **Yes:** Replace the FRU that has the embedded adapter. For more information about locations, see Part locations and location codes. **This ends the procedure.**
 - **No:** The problem might be intermittent. Contact your next level of support. **This ends the procedure.**

Table 1. Card slots and PCI bridge sets for an 8284-21A

Type and model	Bus number in the DSA (hexadecimal/decimal)	Description	Location code	Part number
8284-21A	10/16	Single card slot	Un-P1-C7	See System parts.
8284-21A	12/18	PCI bridge set	Un-P1-C11, Un-P1-C12, Un-P1-C15	See System parts.
8284-21A	18/24	Single card slot	Un-P1-C6	See System parts.
8284-21A	1A/26	PCI bridge set	Un-P1-C9, Un-P1-C10, Un-P1-C14, Un-P1 (embedded USB adapter)	See System parts.

Table 2. Card slots and PCI bridge sets for an 8286-41A or 8286-42A

Type and model	Bus number in the DSA (hexadecimal/decimal)	Description	Location code	Part number
8286-41A or 8286-42A	10/16	Single card slot	Un-P1-C7	See System parts.
8286-41A or 8286-42A	12/18	PCI bridge set	Un-P1-C11, Un-P1-C12, Un-P1-C15	See System parts.
8286-41A or 8286-42A	13/19	Single card slot	Un-P1-C11	See System parts.
8286-41A or 8286-42A	14/20	Single card slot	Un-P1-C12	See System parts.
8286-41A or 8286-42A	15/21	Single card slot	Un-P1-C14	See System parts.

Table 2. Card slots and PCI bridge sets for an 8286-41A or 8286-42A (continued)

Type and model	Bus number in the DSA (hexadecimal/decimal)	Description	Location code	Part number
8286-41A or 8286-42A	18/24	Single card slot	Un-P1-C6	See System parts.
8286-41A or 8286-42A	1A/26	PCI bridge set	Un-P1-C8, Un-P1-C9, Un-P1-C10, Un-P1-C14, Un-P1 (embedded USB adapter)	See System parts.
8286-41A or 8286-42A	1B/27	Embedded USB adapter	Un-P1	See System parts.
8286-41A or 8286-42A	1C/28	Single card slot	Un-P1-C8	See System parts.
8286-41A or 8286-42A	1D/29	Single card slot	Un-P1-C9	See System parts.
8286-41A or 8286-42A	1E/30	Single card slot	Un-P1-C10	See System parts.
8286-41A or 8286-42A	1F/31	Single card slot	Un-P1-C15	See System parts.
8286-42A	20/32	Single card slot	Un-P1-C4	See System parts.
8286-42A	21/33	Single card slot	Un-P1-C5	See System parts.
8286-42A	28/40	Single card slot	Un-P1-C2	See System parts.
8286-42A	29/41	Single card slot	Un-P1-C3	See System parts.

Table 3. Card slots and PCI bridge sets for an 8286-41A or 8286-42A with an EMX0 PCIe3 expansion drawer

Type and model	Bus number in the DSA (hexadecimal)	Bus number in the DSA (decimal)	Description	Location code	Part number
8286-41A or 8286-42A with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	101 - 106	257 - 262	PCI bridge set	Trace the expansion drawer cables from location Un-P1-C7 in the system unit to the I/O module in the EMX0 PCIe3 expansion drawer. Un-Px-C1 through Un-Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.

Table 3. Card slots and PCI bridge sets for an 8286-41A or 8286-42A with an EMX0 PCIe3 expansion drawer (continued)

Type and model	Bus number in the DSA (hexadecimal)	Bus number in the DSA (decimal)	Description	Location code	Part number
8286-41A or 8286-42A with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	181 - 186	385 - 390	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C6 in the system unit to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
8286-42A with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	211 - 216	529 - 534	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C5 in the system unit to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
8286-42A with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	291 - 296	657 - 662	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C3 in the system unit to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.

Table 4. Card slots and PCI bridge sets for a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)

Type and model	Bus number in the DSA (hexadecimal)	Bus number in the DSA (decimal)	Description	Location code	Part number
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 101 - 106 (node 1) • 201 - 206 (node 2) • 301 - 306 (node 3) • 401 - 406 (node 4) 	<ul style="list-style-type: none"> • 257 - 262 (node 1) • 513 - 518 (node 2) • 769 - 774 (node 3) • 1025 - 1030 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C1-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 111 - 116 (node 1) • 211 - 216 (node 2) • 311 - 316 (node 3) • 411 - 416 (node 4) 	<ul style="list-style-type: none"> • 273 - 278 (node 1) • 529 - 534 (node 2) • 785 - 790 (node 3) • 1041 - 1046 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C2-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 121 - 126 (node 1) • 221 - 226 (node 2) • 321 - 326 (node 3) • 421 - 426 (node 4) 	<ul style="list-style-type: none"> • 289 - 294 (node 1) • 545 - 550 (node 2) • 801 - 806 (node 3) • 1057 - 1062 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C3-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.

Table 4. Card slots and PCI bridge sets for a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module) (continued)

Type and model	Bus number in the DSA (hexadecimal)	Bus number in the DSA (decimal)	Description	Location code	Part number
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 131 - 136 (node 1) • 231 - 236 (node 2) • 331 - 336 (node 3) • 431 - 436 (node 4) 	<ul style="list-style-type: none"> • 305 - 310 (node 1) • 561 - 566 (node 2) • 817 - 822 (node 3) • 1073 - 1078 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C4-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 141 - 146 (node 1) • 241 - 246 (node 2) • 341 - 346 (node 3) • 441 - 446 (node 4) 	<ul style="list-style-type: none"> • 321 - 326 (node 1) • 577 - 582 (node 2) • 833 - 838 (node 3) • 1089 - 1094 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C5-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 151 - 156 (node 1) • 251 - 256 (node 2) • 351 - 356 (node 3) • 451 - 456 (node 4) 	<ul style="list-style-type: none"> • 337 - 342 (node 1) • 593 - 598 (node 2) • 849 - 854 (node 3) • 1105 - 1110 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C6-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.

Table 4. Card slots and PCI bridge sets for a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module) (continued)

Type and model	Bus number in the DSA (hexadecimal)	Bus number in the DSA (decimal)	Description	Location code	Part number
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 161 - 166 (node 1) • 261 - 266 (node 2) • 361 - 366 (node 3) • 461 - 466 (node 4) 	<ul style="list-style-type: none"> • 353 - 358 (node 1) • 609 - 614 (node 2) • 865 - 870 (node 3) • 1121 - 1126 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C7-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME with an EMX0 PCIe3 expansion drawer (6-slot I/O module)	<ul style="list-style-type: none"> • 171 - 176 (node 1) • 271 - 276 (node 2) • 371 - 376 (node 3) • 471 - 476 (node 4) 	<ul style="list-style-type: none"> • 369 - 374 (node 1) • 625 - 630 (node 2) • 881 - 886 (node 3) • 1137 - 1142 (node 4) 	PCI bridge set	Trace the expansion drawer cables from location U_n -P1-C8-C1 in the system node to the I/O module in the EMX0 PCIe3 expansion drawer. U_n -Px-C1 through U_n -Px-C6 of the I/O module indicate locations of the cards in the PCI bridge set.	See System parts.

If you need additional information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to find location codes, part numbers, or replacement procedures for your system.

BRDGST1

Symbolic FRU BRDGST1 is not supported on these models. Continue with the next FRU in the list.

BRDGST2

Symbolic FRU BRDGST2 is not supported on these models. Continue with the next FRU in the list.

BRDGST3

Symbolic FRU BRDGST3 is not supported on these models. Continue with the next FRU in the list.

BSTWRPL

This symbolic FRU is no longer supported.

BUSVPD

This is the VPD (vital product data) for a PCI bus.

- Are you working from the serviceable event view and a card location is listed with this failing item?
 - Yes:** Then the error is at that card location. Continue with the next step.
 - No:** Complete the following steps:
 - Record the bus number value (BBBB) from word 7 of the reference code (see Analyzing a PCI bus reference code for help in determining the bus number).
 - Search for the bus number in the resource and configuration interfaces of the management console or operating system, or in the system configuration listing, to determine which unit contains the failing item. Record the frame or unit type and then continue with the next step.
- Use the following table to determine the appropriate service action.

Frame or unit that contains the failing item	Go to this symbolic FRU
System units	SYSBKPL
Expansion units	BACKPLN

CABLEH

Symbolic FRU CABLEH is not supported on these models. Continue with the next FRU in the list.

CACHBAT

The backup power module card might be failing.

- Use the backup power module card location information in the service action log (SAL) if it is available. If the location is not available, use the address of the storage IOA. See the System reference code format description to find the location code for the storage IOA.
Using the location code, see Part locations and location codes to identify the storage IOA.
- Use Table 5 below to determine the service action. If more than one location code is listed in the table for the backup power module card, and the location of the backup power module card is not available in the SAL, continue with step 3 to identify the location.

Table 5. Backup power module card service information

Type and model	Part number	Description	Location code	Replacement procedure
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Using the type number of the storage IOA at the location you found, see PCI adapter information by feature type to determine the part number.	Backup power module card for the PCIe3 x8 cache SAS RAID internal adapter Note: Replace the adapter and its associated backup power module card.	Un-P1-C14-C1	See PCIe3 cache SAS RAID internal adapter 6Gb for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A.
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Using the type number of the storage IOA at the location you found, see PCI adapter information by feature type to determine the part number.	Backup power module card for the PCIe3 x8 cache SAS RAID internal adapter Note: Replace the adapter and its associated backup power module card.	Un-P1-C15-C1	See PCIe3 cache SAS RAID internal adapter 6Gb for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A.

Table 5. Backup power module card service information (continued)

Type and model	Part number	Description	Location code	Replacement procedure
8286-41A or 8286-42A	Using the type number of the storage IOA at the location you found, see PCI adapter information by feature type to determine the part number.	PCIe3 x8 cache SAS RAID internal adapter	Un-P1-C14	See PCIe3 cache SAS RAID internal adapter 6Gb for the 8286-41A or 8286-42A.
8286-41A or 8286-42A	Using the type number of the storage IOA at the location you found, see PCI adapter information by feature type to determine the part number.	PCIe3 x8 cache SAS RAID internal adapter	Un-P1-C15	See PCIe3 cache SAS RAID internal adapter 6Gb for the 8286-41A or 8286-42A.

3. To determine the location of the backup power module card, complete the following actions:
 - a. Record the resource name from the product activity log (PAL) or SAL entry for this error.
 - b. From the **Start a Service Tool** display, select **Hardware service manager > Locate resource by resource name**.
 - c. Enter the resource name of the storage IOA that you recorded from the PAL or SAL entry.
 - d. Select **Display detail**.
 - e. The PCI bus number is shown in decimal.
 - f. Use Table 6 to determine the location of the backup power module card. Then use Table 5 on page 202 to determine the service action.

Table 6. Determining the backup power module card location

Type and model	PCI bus number (decimal)	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	21	Un-P1-C14-C1
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	31	Un-P1-C15-C1
8247-42L, 8286-41A, or 8286-42A	Not applicable	Un-P1-C14
8247-42L, 8286-41A, or 8286-42A	Not applicable	Un-P1-C15

This ends the procedure.

CACHE

This symbolic FRU is no longer supported.

CAPACTY

The VPD card might be the failing item.

After you replace the part and before you power on the system, make sure the system's vital product data (VPD) is restored (see Setting the system identifiers, or see Programming vital product data). The system cannot complete an IPL unless the VPD information is programmed correctly.

Use the following table to determine the part number for the field replaceable unit (FRU).

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	VPD card	Un-P1-C13
8408-44E or 8408-E8E	See System parts.	VPD card	Un-P1-C14
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	VPD card	Un-P1-C12 in the system control unit

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

CARDFLT

Symbolic FRU CARDFLT is not supported on these models. Continue with the next FRU in the list.

CARDTMP

The cryptographic adapter has detected a voltage or temperature change in its physical operating environment.

Correct the voltage or temperature condition. Vary off the cryptographic device description associated with the device resource on the adapter resource and vary it back on.

CBLALL

A cable might be the failing item.

If a location and part number is displayed on the control panel of a system or EMX0 PCIe3 expansion drawer, replace that FRU first.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

- Is the reference code 1xxx2613?
 - No:** Continue with the next step.
 - Yes:** Verify that the power supplies are plugged into the same line voltage (either 110 V ac or 220 V ac, or -48V dc if your system is configured to operate with this voltage). If not, correct it.
This error code can also be posted if the power supplies cannot support the hardware in the system. If the power supplies are plugged into 110 V ac, inform the customer that the power supplies must be plugged into 220 V ac. **This ends the procedure.**
- Is the reference code 1xxx8800, 1xxx8801, 1xxx8802, or 1xxx8803?
 - No:** Continue with step 4.
 - Yes:** Continue with the next step.
- Ensure that the following items are correct:
 - The GFSP interface cards (Un-P1-C9 and Un-P1-C10) are correctly installed in all system nodes that are present.

- The UPIC cables are correctly connected to the system.

This ends the procedure.

4. Is there only one reference code 1xxx26A0, 1xxx26A1, 1xxx26A2, 1xxx26A3, 1xxx26B0, 1xxx26B1, 1xxx26B2, or 1xxx26B3 in the serviceable event view?
 - **No:** Continue with step 6.
 - **Yes:** Continue with the next step.
5. Use the Hardware Management Console (HMC) to replace the following items one at a time until the problem is resolved. For information about replacing failing items by using the HMC, see Exchange FRU.
 - UPIC cables

Note: This item can be replaced with the system power turned on.

- Power interface card

Notes:

- a. For information about which power interface card to replace, see table 1.
 - b. This item can be replaced with the system power turned on.
- GFSP interface card 1 (Un-P1-C9)
 - GFSP interface card 2 (Un-P1-C10)

Table 7. Determining the power interface card to replace by using the reference code

Reference code	Failing item name	Location code
110026A0 or 110026B0	Power interface card 1	Un-P1-C1
110026A1 or 110026B1	Power interface card 2	Un-P1-C2
110026A2 or 110026B2	Power interface card 3	Un-P1-C5
110026A3 or 110026B3	Power interface card 4	Un-P1-C6

This ends the procedure.

6. Is there more than one reference code 1xxx26A0, 1xxx26A1, 1xxx26A2, 1xxx26A3, 1xxx26B0, 1xxx26B1, 1xxx26B2, or 1xxx26B3 in the serviceable event view?
 - **No:** Continue with the next failing item in the failing item list. **This ends the procedure.**
 - **Yes:** Continue with the next step.
7. If the system is not powered on, power on the system. Then, continue with the next step.
8. Power interface cards are grouped in pairs:
 - Power interface card 1 (Un-P1-C1) and power interface card 2 (Un-P1-C2)
 - Power interface card 3 (Un-P1-C5) and power interface card 4 (Un-P1-C6)

You can use the reference codes in the serviceable event view to determine which power interface card pair has the problem.

Table 8. Determining the power interface card pair by using the reference code

Reference code	First power interface card pair	Second power interface card pair
110026A0 or 110026B0	Power interface card 1 (Un-P1-C1)	
110026A1 or 110026B1	Power interface card 2 (Un-P1-C2)	
110026A2 or 110026B2		Power interface card 3 (Un-P1-C5)
110026A3 or 110026B3		Power interface card 4 (Un-P1-C6)

Are the green power LEDs on both power interface cards of a power interface card pair turned off?

- **No:** Contact your next level of support. **This ends the procedure.**

- **Yes:** Continue with the next step.
9. With the system power still turned on, use the Hardware Management Console (HMC) to remove one of the power interface cards in the power interface card pair. For information about replacing failing items by using the HMC, see Exchange FRU. Does the green power LED of the remaining power interface card of the power interface card pair turn on?
 - **Yes:** The power interface card that you removed is failing. Replace the failing power interface card with a new power interface card. **This ends the procedure.**
 - **No:** Continue with the next step.
 10. Use the HMC to reinstall the power interface card that you removed in step 9. Wait for one minute. Then, with system power still turned on, use the HMC to remove the other power interface card of the power interface card pair. Does the green power LED of the power interface card of the power interface card pair turn on?
 - **Yes:** The power interface card that you removed is failing. Replace the failing power interface card with a new power interface card. **This ends the procedure.**
 - **No:** Continue with the next step.
 11. Use the HMC to remove each of the following items in the system control unit, one at a time. For information about replacing failing items by using the HMC, see Exchange FRU. After you remove an item, check the green power LEDs on both power interface cards of the power interface card pair. If the LEDs turn on, the last item that you removed is the failing item and must be replaced. If the LEDs do not turn on, reinstall the item and remove the next item in the list.
 - Fan 1 (*Un-A1*)

Note: This item can be replaced with the system power turned on.
 - Fan 2 (*Un-A2*)

Note: This item can be replaced with the system power turned on.
 - Fan 3 (*Un-A3*)

Note: This item can be replaced with the system power turned on.
 - Fan 4 (*Un-A4*)

Note: This item can be replaced with the system power turned on.
 - Real time clock battery card 1 (*Un-P1-C3*)

Note: This item can be replaced with the system power turned on.
 - Real time clock battery card 2 (*Un-P1-C4*)

Note: This item can be replaced with the system power turned on.
 - Control panel (*Un-P1-C13*)

Note: This item can be replaced with the system power turned on.
 - DVD (*Un-P1-C11*)

Note: Do not replace the DVD for problems that involve power interface card 3 (*Un-P1-C5*) and power interface card 4 (*Un-P1-C6*).
 - Clock card 1 (*Un-P1-C8*)
 - Clock card 2 (*Un-P1-C9*)
 - Service processor card 1 (*Un-P1-C7*)
 - Service processor card 2 (*Un-P1-C10*)
 - System VPD card (*Un-P1-C12*)
 - System backplane (*Un-P1*)

This ends the procedure.

CBLCONT

This symbolic FRU is used to show additional locations for the endpoints of cables.

This FRU appears in the serviceable event user interface of an operating system, service processor, or the management console, and is associated with the cable FRU that precedes it in the list. The location code associated with this FRU is the location of another end of the same cable. Cable FRUs are shown in the display by listing the cable's part number or symbolic FRU first with the location code of one end of the cable. Each additional cable endpoint is represented as a "CBLCONT" FRU with a location code for another endpoint.

Note: If question marks (???) appear at the end of the location code, the port could not be determined. Use the location code associated with the other end of the cable. If question marks appear for both port locations, use the isolation procedures suggested in the service information for this SRC.

CDAWKLD

Too many communications lines are in use.

CDTRAY

This symbolic FRU is not supported.

CHECK

Look here for information about the CHECK symbolic FRU.

If the attached device is an external device, perform the following steps before exchanging any parts:

1. Ensure that the device is powered on.
2. Is there a SCSI interface between the IOA and the device?
 - **No:** Continue with the next step.
 - **Yes:** Complete the following steps:
 - a. If an interposer is required, make sure that it is connected between the I/O adapter and the SCSI cable.
 - b. Ensure that the SCSI cable is seated correctly, and that there are no bent or damaged pins on the SCSI cable.
 - c. Ensure that a terminating plug is attached to the device end of the SCSI cable.
 - d. Continue with the next step.
3. Is there a Fibre Channel interface between the IOA and the device?
 - **No:** Continue with the next step.
 - **Yes:** Complete the following steps:
 - a. Verify that any hub or gateway devices are powered on.
 - b. Verify that the Fibre Channel cable is correctly connected to the ports.
 - c. If a cleaning kit is available, clean the Fibre Channel cable connectors.
 - d. Continue with the next step.
4. Is there a SAS interface between the IOA and the device?
 - **No:** Continue with the next step.
 - **Yes:** Complete the following steps:
 - a. Verify that the SAS cable is correctly connected to the ports.
 - b. Continue with the next step.
5. Is there a USB interface between the IOA and the device?

- **No:** Continue with step 13.
 - **Yes:** Continue with the next step.
6. Is the USB port location to which the device is attached available in the service action log?
 - **No:** To determine the USB port location, go to “USB_DEV” on page 296. Do not replace any failing items. Then, continue with the next step.
 - **Yes:** Continue with the next step.
 7. Is the USB cable connected correctly to the port?
 - **No:** Correct the cabling problem. Then, continue with step 13.
 - **Yes:** Continue with the next step.
 8. Is the device an external RDX drive?
 - **No:** Continue with step 13.
 - **Yes:** Continue with the next step.
 9. Did a power interruption occur, or is the power source not connected correctly to the RDX docking station?
 - **No:** Continue with step 13.
 - **Yes:** Continue with the next step.
 10. Complete the following actions:
 - a. Disconnect the USB cable and the power source from the RDX docking station so that the device can power off completely.
 - b. Connect the RDX docking station to the power source.
 - c. After the power source is connected, connect the USB cable to the RDX docking station.
 - d. Continue with the next step.
 11. Is the device operational?
 - **No:** Continue with the next step.
 - **Yes:** Continue with step 13.
 12. Ensure that the IOA that controls the RDX drive is not using any other devices. Then, complete the following actions:
 - a. Enter **STRSST** on the command line.
 - b. On the **Start Service Tools Sign On** display, type the user ID with QSRV authority and password.
 - c. Select **Start a service tool > Hardware service manager > Logical hardware resources > System bus resources**.
 - d. Move the cursor to the logical IOP that is associated with the IOA that controls the RDX drive, and select **I/O Debug > IPL I/O processor**.
 - e. When the IPL of the I/O processor is complete, continue with the next step.
 13. Perform the verification procedures that are located in the service information for the system unit to check whether the problem was corrected.

This ends the procedure.

CLCKMOD

The logic oscillator is failing.

Replace the system backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

CLNTSRC

The SRC in the error log is not recognized by the error analysis diagnostic component.

Unrecognized SRCs can occur when features or device types are installed that are newer than the level of diagnostic code in the version and release of the operating system or firmware that is running. Look up the SRC in the documentation for the version of the operating system or firmware you are running. If you do not find it, look in the documentation for a newer release of the operating system or firmware and follow the service actions listed there.

If you cannot find the SRC documented, contact your next level of support for assistance.

CLRNVRM

A problem might exist with the service processor nonvolatile random access memory (NVRAM).

Complete the following steps:

1. Is your system managed by a management console?
 - **No:** Continue with the next step.
 - **Yes:** Continue with step 3.
2. Complete the following steps:
 - a. Power off the system.
 - b. Using ASMI, select **System Service Aids > Factory Configuration**.
 - c. Select **Continue** to clear the configuration.

Note: Clearing the configuration causes the loss of all the configured system settings (such as the management console access and ASMI passwords, time of day, network configuration, hardware deconfiguration policies, and so on) that you might have set by using the user interfaces. Also, partition-related information and platform error logs are lost, and the service processor is reset. Before continuing with this operation, make sure that you manually record all settings that you need to preserve.

Ensure that the connection to HMC1 or HMC2 that is not being used to access the ASMI is disconnected from the network. Follow the instructions in the system service publications to configure the network interfaces after the reset.

This ends the procedure.

3. Your system is managed by the management console. Do not replace the battery. Instead, clear the NVRAM by removing the battery for 5 minutes and then reinstalling it.

Note: Clearing the configuration causes the loss of all the configured system settings (such as the management console access and ASMI passwords, time of day, network configuration, hardware deconfiguration policies, and so on) that you might have set by using the user interfaces. Also, partition-related information and platform error logs are lost, and the service processor is reset. Before continuing with this operation, make sure that you manually record all settings that you need to preserve. Ensure that the connection to HMC1 or HMC2 that is not being used to access the ASMI is disconnected from the network. Follow the instructions in the system service publications to configure the network interfaces after the reset.

This ends the procedure.

CMPRES1

The compressed device and the compression IOA are not compatible.

CNVTCRD

The card that converts SATA to IDE might be failing. This procedure will help you determine the failing part.

Use the following table to determine the part number for the field replaceable unit (FRU).

This ends the procedure.

CCIN or FFC	Type and model	Part number	Description	Location code
	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Drive backplane	Un-P2

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

CRYPBAT

The batteries for the cryptographic adapter need to be replaced.

Attention: If you remove any of the batteries without first backing up the power with a fresh battery, the data in the card's protected memory could be lost, which would render the cryptographic adapter useless and require its replacement. Because the 4758-023 adapter contains 4 batteries, and the battery replacement kit contains only 2 batteries, *do not* attempt to remove or replace batteries unless you have two battery replacement kits. All other cryptographic adapters contain only 2 batteries, and therefore require only one battery replacement kit.

1. Use the following table to determine the battery kit (FRU) required.

CCIN or FFC	Type and model	Part number	Description	Location code
4758-001	Any	09J8199	PCI cryptographic coprocessor battery kit	Un-P1-Cx
4758-023	Any	09J8199	PCI cryptographic coprocessor battery kit	Un-P1-Cx
4764-001	Any	41V1061	PCI cryptographic coprocessor battery kit	Un-P1-Cx

This ends the procedure.

CRYPTLP

Cryptographic adapter Licensed Internal Code problem.

The Licensed Internal Code for the cryptographic adapter does not ship with the system.

The Licensed Internal Code is contained within the licensed program 5733-CY3 Cryptographic Device Manager.

Perform one of the following options:

- **If the SRC is B0136615**, ensure that this licensed program is loaded on the system. If it is not, vary off the cryptographic adapter, apply the licensed program to the system, and then vary on the cryptographic adapter. The vary-on process might take up to 15 minutes.
- **If the SRC is B0136619**, vary off the cryptographic adapter, apply the most recent version of the licensed program to the system, and then vary on the cryptographic adapter. The vary-on process might take up to 15 minutes.

This ends the procedure.

CTLPNCD

This symbolic FRU is not supported on the system. Continue with the next FRU in the failing item list.

CTLPNL

A control panel or display panel might be failing.

Use the following table to determine the part number for the field replaceable unit (FRU).

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Control (operator) panel	Un-D1
8408-44E or 8408-E8E	See System parts.	Control (operator) panel	Un-D1
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Control (operator) panel	Un-P1-C13 of the system control unit
EMX0 PCIe3 expansion drawer	See System parts.	Chassis management card	Un-P3-C1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

CTPLPDU

The MAXFRAME value in CRTLINETH command is too large.

The configuration parameter that was identified as a possible problem can be verified by displaying the local area network line description with the DSPLIND command.

Vary off the line. Use the CHGLINETH command to reduce the MAXFRAME value. Then vary the line back on.

CTPNADR

The ADPTADR value in CRTLINETH command is specified incorrectly.

The configuration parameter that was identified as a possible problem can be verified by displaying the local area network line description with the DSPLIND command.

Vary off the line. Use the CHGLINETH command to change the ADPTADR value to *ADPT. Then vary the line back on.

DCA

Symbolic FRU DCA is not supported on these models. Continue with the next FRU in the list.

DEVBPLN

A device backplane might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

- Does the SRC that sent you here begin with a 50B1 or are you working with an attached 5887 disk expansion unit?
 - No:** Continue with the next step.
 - Yes:** Replace the midplane of the 5887 disk expansion unit. See the table at the end of this procedure for location and part number information.
- Does the SRC that sent you here begin with a 78D1 or are you working with an attached 5147-024, ESLL, or ESLS storage enclosure?
 - No:** Continue with the next step.
 - Yes:** Replace the midplane of the 5147-024, ESLL, or ESLS storage enclosure. See the table at the end of this procedure for location and part number information.
- Replace the device backplane. See the following table for location and part number information.

CCIN	Type and model	Part number	Description	Location code
50B1	5887	See System parts.	5887 expansion unit midplane	Un-P1
78D1	5147-024, ESLL, or ESLS	See System parts.	5147-024, ESLL, or ESLS storage enclosure midplane	Un-P1
	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Drive backplane	Un-P2

- Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	5887	See System parts.	5887 expansion unit midplane	Un-P1
	5147-024, ESLL, or ESLS	See System parts.	5147-024, ESLL, or ESLS storage enclosure midplane	Un-P1

DEVICE

The addressed storage device is the failing item.

Complete the following steps.

1. Is the device location information available in the service action log (SAL)?
 - **No:** Continue with the next step.
 - **Yes:** Replace the failing item.
2. Find the IOP address and the device address. For information, see System reference code format description.
3. To determine the location of the I/O processor card, see Part locations and location codes and find the diagram of the system unit or the expansion unit. Then, find:
 - The IOP card location that is identified by the direct select address.
 - The addressed storage device location that is identified by the device address.
4. Replace the failing device. Use the device type to help determine the part number.

This ends the procedure.

DEVTERM

The device terminating plug might be failing.

Complete the following steps:

1. Find the IOA type:
 - a. Find the IOA location information in the service action log if it is available. If the location is not available, find the address of the IOA. See the System reference code format description. Use the address to find the location. See Part locations and location codes.
 - b. Find the IOA card in the system and read the type number of the card at that location.
2. Use the information in the following table to determine the failing terminating plug.

Storage IOA type	Action
5702/571A	Use part number 23R5841.
All others	The terminator is integrated into the backplane and not a separate failing item.

3. Replace the failing item. Note: If the terminating plug is located on a backplane, go to symbolic FRU BACKPLN. Follow the procedure until the terminating plug is accessible and then remove or replace the plug.

This ends the procedure.

DIMM0

Symbolic FRU DIMM0 is not supported on these models. Continue with the next FRU in the list.

DIMM1

Symbolic FRU DIMM1 is not supported on these models. Continue with the next FRU in the list.

DIMM2

Symbolic FRU DIMM2 is not supported on these models. Continue with the next FRU in the list.

DIMM2_3

Symbolic FRU DIMM2_3 is not supported on these models. Continue with the next FRU in the list.

DIMM3

Symbolic FRU DIMM3 is not supported on these models. Continue with the next FRU in the list.

DIMM0_1

Symbolic FRU DIMM0_1 is not supported on these models. Continue with the next FRU in the list.

DISKDRV

This symbolic FRU indicates that the disk drive or solid state drive part number could not be determined.

Complete the following steps:

1. Is the device location information available in the serviceable event view?
 - **No:** Continue with the next step.
 - **Yes:** Replace the failing item. Either remove the drive to determine the part number or use the CCIN of the drive and see System parts to find the part number. To replace the failing item, see Disk drive. **This ends the procedure.**
2. Find the direct select address and the device address. See the System reference code format description.
3. See Part locations and location codes and find the diagram of the system unit or expansion unit. Use the direct select address and the device address to find the location of the disk unit.
4. Is the SRC reported on the control panel?
 - **No:** Continue with the next step.
 - **Yes:** See the System reference code format description. The two rightmost characters of word 2 define the SRC format. Use the correct SRC format to locate the function that contains the characters *tttl lmmm*, where:
 - *tttl* = Type number
 - *l* = Level
 - *mmm* = Model

Then go to step 6.

5. Replace the failing item. Either remove the drive to determine the part number or use the CCIN of the drive and see System parts to find the part number. To replace the failing item, see Disk drive. **This ends the procedure.**
6. Replace the failing item. Use the type (CCIN) of the drive and see System parts to find the part number. If you do not know the type, remove the disk unit to determine the part number. To replace the failing item, see Disk drive. **This ends the procedure.**

DISKFAN

A fan in an expansion unit or storage enclosure might be failing.

Perform one of the following options:

- If the SRC that sent you here is 50B176x4, where *x* is 1 - 8, replace the power supply (internal fan) of the 5887 disk drive enclosure that is located in Un-P1-E1. See the following table to find the part number and location of the item to replace. If the problem persists, replace the power supply that is located in Un-P1-E2. **This ends the procedure.**
- If the SRC that sent you here is 50B176x4, where *x* is 9, A, B, C, D, E, F, or 0, replace the power supply (internal fan) of the 5887 disk drive enclosure that is located in Un-P1-E2. See the following table to

find the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E1$. **This ends the procedure.**

- If the SRC that sent you here is 78D176x4, where x is 1 - 8, replace the power supply (internal fan) of the 5147-024, ESLL, or ESLS storage enclosure that is located in $Un-P1-E1$. See the following table to find the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E2$. **This ends the procedure.**
- If the SRC that sent you here is 78D176x4, where x is 9, A, B, C, D, E, F, or 0, replace the power supply (internal fan) of the 5147-024, ESLL, or ESLS storage enclosure that is located in $Un-P1-E2$. See the following table to find the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E1$. **This ends the procedure.**

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
50B1	5887	See System parts.	Power supply (internal fan)	$Un-P1-E1$
50B1	5887	See System parts.	Power supply (internal fan)	$Un-P1-E2$
78D1	5147-024, ESLL, or ESLS	See System parts.	Power supply (internal fan)	$Un-P1-E1$
78D1	5147-024, ESLL, or ESLS	See System parts.	Power supply (internal fan)	$Un-P1-E2$

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

DISKIMG

There might be a problem with the Network Server Description (NWSA).

First, vary off and then vary back on the NWSA. If this action does not correct the problem, delete and re-create the NWSA, or call your next level of support.

DISKPWR

A power supply in an expansion unit or storage enclosure might be failing.

Perform one of the following options:

- If the SRC that sent you here is 50B1151x, replace the power supply of the 5887 disk drive enclosure that is located in $Un-P1-E1$. See the following table for the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E2$. **This ends the procedure.**
- If the SRC that sent you here is 50B1152x, replace the power supply of the 5887 disk drive enclosure that is located in $Un-P1-E2$. See the following table for the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E1$. **This ends the procedure.**
- If the SRC that sent you here is 78D1151x or 78D1731x, replace the power supply of the 5147-024, ESLL, or ESLS storage enclosure that is located in $Un-P1-E1$. See the following table for the part number and location of the item to replace. If the problem persists, replace the power supply that is located in $Un-P1-E2$. **This ends the procedure.**

- If the SRC that sent you here is 78D1152x or 78D1732x, replace the power supply of the 5147-024, ESLL, or ESLS storage enclosure that is located in Un-P1-E2. See the following table for the part number and location of the item to replace. If the problem persists, replace the power supply that is located in Un-P1-E1. **This ends the procedure.**

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN	Type and model	Part number	Description	Location code
50B1	5887	See System parts.	Power supply 1 (left)	Un-P1-E1
50B1	5887	See System parts.	Power supply 2 (right)	Un-P1-E2
78D1	5147-024, ESLL, or ESLS	See System parts.	Power supply 1 (left)	Un-P1-E1
78D1	5147-024, ESLL, or ESLS	See System parts.	Power supply 2 (right)	Un-P1-E2

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

DISKTRY

This symbolic FRU is no longer supported.

DMPFILE

A Licensed Internal Code error or enclosure firmware error caused a dump to occur.

The enclosure type, model, and serial number information is in the location code field of this failing item in the service action log.

The dump information is in a product activity log entry with the same log ID as the reference code that sent you here.

Send the dump information to your next level of support. **This ends the procedure.**

DPAC

The two-port adapter cable is the failing item.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	Any	21F9345	Two-port adapter cable	Un-P1-Cx-Ty

DRVSWCH

Symbolic FRU DRVSWCH is not supported on these models. Continue with the next FRU in the list.

DRWRMC

The chassis management card in an EMX0 PCIe3 expansion drawer might be failing.

To determine the location of the chassis management card, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 3.
2. The location code in the serviceable event view is either a PCIe3 cable adapter in the system unit or the chassis management card in an EMX0 PCIe3 expansion drawer. For information about locations, see Part locations and location codes. Is the location code in the serviceable event view the location of a PCIe3 cable adapter in the system unit?
 - **Yes:** Go to step 4 to find the location of the chassis management card.
 - **No:** Go to step 5 to replace the chassis management card at this location.
3. To determine the location of the failing item, complete the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the PCIe3 cable adapter that is attached to the EMX0 PCIe3 expansion drawer that contains the failing item. Then, continue with the next step.
4. Trace the expansion drawer cable from the PCIe3 cable adapter that was identified in the previous step to find the EMX0 PCIe3 expansion drawer that contains the failing item. Then, use the table in step 6 to find the location of the failing chassis management card within the EMX0 PCIe3 expansion drawer. After you find the location of the failing chassis management card, continue with the next step.
5. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
6. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
EMX0 PCIe3 expansion drawer	See System parts.	Chassis management card	U n -P3-C1	Replace the chassis management card at the location that was identified in this procedure. For more information about EMX0 PCIe3 expansion drawer location codes and removal and replacement procedures, see EMX0 PCIe Gen3 I/O expansion drawer locations.

This ends the procedure.

DRWRMID

The midplane in an EMX0 PCIe3 expansion drawer might be failing.

To determine the location of the midplane, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.

- **No:** Go to step 3.
2. The location code in the serviceable event view is either a PCIe3 cable adapter in the system unit or the midplane in an EMX0 PCIe3 expansion drawer. For information about locations, see Part locations and location codes. Is the location code in the serviceable event view the location of a PCIe3 cable adapter in the system unit?
 - **Yes:** Go to step 4 to find the location of the midplane.
 - **No:** Go to step 5 to replace the midplane at this location.
 3. To determine the location of the failing item, complete the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the PCIe3 cable adapter that is attached to the EMX0 PCIe3 expansion drawer that contains the failing item. Then, continue with the next step.
 4. Trace the expansion drawer cable from the PCIe3 cable adapter that was identified in the previous step to find the EMX0 PCIe3 expansion drawer that contains the failing item. Then, use the table in step 6 to find the location of the failing midplane within the EMX0 PCIe3 expansion drawer. After you find the location of the failing midplane, continue with the next step.
 5. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
 6. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
EMX0 PCIe3 expansion drawer	See System parts.	Midplane	Un-P3	Replace the midplane at the location that was identified in this procedure. For more information about EMX0 PCIe3 expansion drawer location codes and removal and replacement procedures, see EMX0 PCIe Gen3 I/O expansion drawer locations.

This ends the procedure.

DRWRMOD

The I/O module in an EMX0 PCIe3 expansion drawer might be failing.

To determine the location of the I/O module, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 3.

2. The location code in the serviceable event view is either a PCIe3 cable adapter in the system unit or an I/O module in an EMX0 PCIe3 expansion drawer. For information about locations, see Part locations and location codes. Is the location code in the serviceable event view the location of a PCIe3 cable adapter in the system unit?
 - **Yes:** Go to step 4 to find the location of the I/O module.
 - **No:** Go to step 5 to replace the I/O module at this location.
3. To determine the location of the failing item, complete the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the PCIe3 cable adapter that is attached to the EMX0 PCIe3 expansion drawer that contains the failing item. Then, continue with the next step.
4. Trace the expansion drawer cable from the PCIe3 cable adapter that was identified in the previous step to find the I/O module in the EMX0 PCIe3 expansion drawer. The location of the I/O module is either *Un-P1* or *Un-P2*. Continue with the next step.
5. Is the system managed by a management console?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 9.
6. Use the management console to replace the I/O module at the location that was identified in this procedure. Was the replacement procedure successful?
 - **Yes: This ends the procedure.**
 - **No:** Continue with the next step.
7. Did the replacement procedure fail during the FRU level deactivate step before the hardware was replaced?
 - **Yes:** Continue with the next step.
 - **No:** Contact your next level of support. **This ends the procedure.**
8. To replace the I/O module, complete the following steps:
 - a. Use the management console to start the midplane replacement procedure at location *Un-P3* of the EMX0 PCIe3 expansion drawer. During the procedure, replace the I/O module that was identified in this procedure. Do not replace the other I/O module or the midplane during the procedure.
 - b. Trace the expansion drawer cable from the I/O module that was identified in this procedure to the PCIe3 cable adapter in the system unit. Use the management console to start the PCIe3 cable adapter replacement procedure at the location that you identified in the system unit. During the procedure, do not replace the PCIe3 cable adapter. The procedure recovers the EMX0 PCIe3 expansion drawer. **This ends the procedure.**
9. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
EMX0 PCIe3 expansion drawer	See System parts.	I/O module	Un-P1 or Un-P2	Replace the I/O module at the location that was identified in this procedure. For more information about EMX0 PCIe3 expansion drawer location codes and removal and replacement procedures, see EMX0 PCIe Gen3 I/O expansion drawer locations.

This ends the procedure.

DRWRPWR

The expansion drawer does not have power.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Attention: Verify that the green ac input LED or dc input LED is on solid, and the green dc output LED is blinking.

Note: The following table provides information about power supply LEDs.

LED	Description
The ac input LED or dc input LED	This LED is green and is on (lit) if the ac or dc input voltage is present and off (not lit) if the ac input voltage is not present. For normal system operation, this LED is on solid.
The dc output LED	This LED is green and is on solid if the power supply output voltages are correct. If the power supply control voltage is present and the power supply outputs are not powered on, the power supply is in standby and the dc output LED flashes at a rate of 1-3 times per second. The dc output LED is off if both the power supply control voltage and the output voltages are bad. For normal system operation, this LED is on solid.
The identify LED	The identify LED is amber and will be turned on and off at a 4 second rate, 10 seconds after the application of input power to the supply, if serial communication isn't established with the service processor. For normal system operation, this LED is off.

1. Is the reference code 1xxx7401, 1xxx7402, 1xxx7403, or 1xxx7404?

- **No:** Continue with the next step.
- **Yes:** Complete the following steps:

- a. Ensure that the power cables to the power supply are properly connected and seated. If an additional power supply was recently plugged in, verify that the dc output LED is on for 30 seconds before you unplug this power supply. The green dc output LED on the power supply is turned on when power is correctly connected to the power supply.
 - b. Do you have a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system or an EMX0 PCIe3 expansion drawer?
 - **Yes:** Ensure that the cable that connects the line cord conduit (9080-MHE, 9080-MME, 9119-MHE, or 9119-MME) or the power supply conduit (EMX0 PCIe3 expansion drawer) to the power supply is properly seated. If the problem persists, replace the line cord conduit or the power supply conduit. **This ends the procedure.**
 - **No:** Continue with step 1.c.
 - c. Replace the power supply while the unit is not powered on and the LEDs are off. **This ends the procedure.**
2. Are all the units powered on?
- **Yes:** This error might be caused by an ac power outage. If the system starts without an error, no parts need to be replaced. **This ends the procedure.**
 - **No:** On the unit that does not power on, verify that the power outlet is supplying the correct power for the unit. Also, ensure that both ends of the power cord (from the unit that does not power on) are connected correctly and securely.
If you find a problem, correct the problem. **This ends the procedure..**
If you cannot find the problem, continue with the next step.
3. A trained service representative must verify the voltage at the system end of the power cord with a multimeter to verify that the voltage is correct according to the following table.

Model or expansion unit	Correct voltage
9080-MHE, 9080-MME, 9119-MHE, 9119-MME, or EMX0 PCIe3 expansion drawer	100 - 127 V or 200 - 240 V

- Is the voltage correct?
- **Yes:** Replace both local clock cards in the system node. **This ends the procedure.**
 - **No:** Continue with the next step.
4. Complete the following steps:
- a. Disconnect the power cord from the customer's power outlet.
 - b. Use a multimeter to measure the voltage at the customer's power outlet.
Is the voltage correct?
 - **Yes:** Replace the failing power cord. **This ends the procedure.**
 - **No:** Complete the following steps:
 - 1) Inform the customer that the voltage at the power outlet is not correct.
 - 2) After the voltage at the power outlet is correct, reconnect the power cord to the power outlet. **This ends the procedure.**

DRWRVRM

The voltage regulator module in an EMX0 PCIe3 expansion drawer might be failing.

To determine the location of the voltage regulator module, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 3.

2. The location code in the serviceable event view is either a PCIe3 cable adapter in the system unit or a voltage regulator module in an EMX0 PCIe3 expansion drawer. For information about locations, see Part locations and location codes. Is the location code in the serviceable event view the location of a PCIe3 cable adapter in the system unit?
 - **Yes:** Go to step 4 to find the location of the voltage regulator module.
 - **No:** Go to step 5 to replace the voltage regulator module at this location.
3. To determine the location of the failing item, complete the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the PCIe3 cable adapter that is attached to the EMX0 PCIe3 expansion drawer that contains the failing item. Then, continue with the next step.
4. Trace the expansion drawer cable from the PCIe3 cable adapter that was identified in the previous step to find the I/O module in the EMX0 PCIe3 expansion drawer. The location of the I/O module is either *Un-P1* or *Un-P2*. If the location of the I/O module is *Un-P1*, the location of the voltage regulator module is *Un-P1-E1*. If the location of the I/O module is *Un-P2*, the location of the voltage regulator module is *Un-P2-E1*. Continue with the next step.
5. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
6. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
EMX0 PCIe3 expansion drawer	See System parts.	Voltage regulator module	<i>Un-P1-E1</i> or <i>Un-P2-E1</i>	Replace the voltage regulator module at the location that was identified in this procedure. For more information about EMX0 PCIe3 expansion drawer location codes and removal and replacement procedures, see EMX0 PCIe Gen3 I/O expansion drawer locations.

This ends the procedure.

DSKUNIT

DSKUNIT is similar to the symbolic FRU DISKDRV.

See symbolic FRU DISKDRV.

EACODE

An error occurred in the error analysis Licensed Internal Code.

Contact your next level of support for assistance.

EXTREMD

An external removable media storage device might be failing.

1. Perform symbolic FRU "CHECK" on page 207 before removing or replacing parts. Return here if no problems are identified.
2. Use the device type and see the appropriate service documentation for that device. This documentation will help you determine the part numbers and replacement procedures to use during this repair action.
3. If you are unable to locate the documentation for the specific device, contact your next level of support for assistance.

This ends the procedure.

EXTSCSI

The external signal cable might be failing.

Complete the following steps:

1. Is more than one device attached?
 - **No:** Continue with the next step.
 - **Yes:** See the device documentation for information about setting the device address. **This ends the procedure.**
2. Is the attached device in the system unit?
 - **No:** Continue with the next step.
 - **Yes:** Use symbolic FRU BACKPLN to determine which signal cables to replace. **This ends the procedure.**
3. Is the attached device a 358x device?
 - **No:** Continue with the next step.
 - **Yes:** For specific 358x attachment cable information, refer to the specific device and model service documentation, or contact your next level of support. **This ends the procedure.**
4. See the appropriate service documentation for the device. The service documentation for the device will help you determine the FRU part numbers and replacement procedures you are to use during this repair action. If you are unable to locate the documentation for your specific device, contact your next level of support for assistance.

This ends the procedure.

FCCABLE

The Fibre Channel cable might be failing.

Use the part number on the cable to determine the part number to replace.

FCCODE

An error has been detected in the Fibre Channel gateway device licensed internal code.

See the gateway device service documentation for possible corrective actions.

FCDEV

The attached Fibre Channel device or Fiber Channel gateway device is the failing item.

Is there a Fibre Channel gateway device between the Fiber Channel I/O adapter and the device?

- **No:** See the attached device service documentation to determine the parts to replace. **This ends the procedure.**
- **Yes:** See symbolic FRU FCGATE. **This ends the procedure.**

FCGATE

The Fibre Channel gateway device is the failing item.

Use the gateway device service documentation to determine the parts to replace.

FCINTF

An error has been detected on the Fibre Channel interface.

The failure might be any component between and including the Fibre Channel IOA and the storage device. To continue diagnosis, use existing Fibre Channel service procedures or contact your next level of support.

FCIOA

The Fibre Channel I/O adapter is the failing item.

If the attached device is owned by a Virtual I/O Server partition see Troubleshooting the Virtual I/O Server to determine the parts to replace. Otherwise, replace the Fibre Channel I/O adapter that uses the I/O adapter location information in the service action log if it is available. If the location of the Fibre Channel I/O adapter is not available, determine the address of the I/O adapter. For more information, see System reference code format description. Use the address to determine the location information of the Fibre Channel I/O adapter. For more information, see Part locations and location codes. To determine the part number, use the CCIN of the Fibre Channel I/O adapter at the location you determined and go to PCIe adapter information by feature type. If an I/O Processor SRC sent you here, replace the Fibre Channel I/O adapter that is associated with the I/O processor that logged the SRC.

FCPORT

The Fibre Channel IOA port might be the failing item.

Complete the following steps:

1. If the system has logical partitions, perform this procedure from the logical partition that reported the problem. To determine whether the system has logical partitions, go to Determining whether the system has logical partitions before continuing with this procedure.
2. Access SST/DST by performing one of the following options:
 - If you can enter a command at the console, access system service tools (SST).
 - If you cannot enter a command at the console, perform an IPL to DST. See Performing an IPL to dedicated service tools.
 - If you cannot perform a type A or B IPL, perform a type D IPL from removable media.
3. Is a Fibre Channel IOA URC (last four digits of SRC) 3120 or 3121 logged or been logged within 5 minutes of the SRC that sent you to this symbolic FRU?
 - **Yes:** Continue with the next step.
 - **No:** The Fibre Channel IOA port has not failed. See the next FRU in the FRU list. **This ends the procedure.**
4. Did you perform a D IPL to get to DST?
 - **Yes:** Continue with the next step.
 - **No:** Continue with step 6.

This ends the procedure.

5. Use the product activity log to get the resource name for the 3120 or 3121 SRC. See Using the product activity log. Using the resource name, perform the following steps in DST/SST:
 - a. Click **Start a service tool > Hardware service manager > System bus resources**.
 - b. If the resource is an I/O processor, use "Resources associated with IOP" to find and display detail for the Fibre Channel I/O adapter. If the resource is a Fibre Channel I/O adapter, use "Resources associated with the IOP for all type 2847 I/O processors" to find and display the Fibre Channel I/O adapter.
 - c. Select the **Display additional port information** function key on the Auxiliary Storage Hardware Resource Detail display.

Does the Port status field indicate that the port is active?

Note: If 3120 is logged, check to see if port 0 is active. If 3121 is logged, check to see if port 1 is active.

- **Yes:** Continue with step 7.
- **No:** Continue with step 9.

6. Use the service action log to get the resource name for the 3120 SRC. See Searching the service action log. Using the resource name, perform the following steps in DST/SST:
 - a. Click **Start a service tool > Hardware service manager > Locate resource by resource name**.
 - b. Enter the resource name.
 - c. Click the **Display detail** option for the Fibre Channel I/O adapter on the Logical Hardware Resources display.
 - d. Click the **Display additional port information** function key on the Auxiliary Storage Hardware Resource Detail display.

Does the Port status field indicate that the port is "active"? **Note:** If 3120 is logged, check to see if port 0 is active. If 3121 is logged, check to see if port 1 is active.

- **Yes:** Continue with the next step.
- **No:** Go to step 9.

7. The port is now active. Has a 1750/2105/2107 3002 SRC occurred around the time the problem was first reported?
 - **Yes:** Continue with the next step.
 - **No:** No further service actions are required. **This ends the procedure.**
8. A 1750/2105/2107 3002 has occurred, and the link has gone from not active to active. The Fibre Channel IOA port is functional. Choose from the following options:
 - If the disk units that reported the 1750/2105/2107 3002 SRC are usable, no further service actions are required. **This ends the procedure.**
 - If the disk units that reported the 1750/2105/2107 3002 SRC are not usable, go back to the 1750/2105/2107 3002 FRU list and work with a FRU other than FCPORT. **This ends the procedure.**
9. Clean the Fibre Channel IOA wrap plug using the cleaning kit. Follow the instructions in the *Fiber Optic Cleaning Procedures*, order number SY27-2604. If the wrap plug has been lost, order and clean a new one.

10. Complete the following steps:

- a. Install the wrap plug on the Fibre Channel IOA.
- b. After the wrap plug has been installed, wait 5 seconds.
- c. Choose from the following options:
 - If you are on the Additional Port Information display, use the **Refresh** function key.
 - If you are not already on the Additional Port Information display, use the instructions from step 6

Is the port status now "active"?

- **Yes:** Continue with the next step.
- **No:** Replace the Fibre Channel IOA. See symbolic FRU FCIOA for further instructions and the FRU part number. **This ends the procedure.**

11. Ask the customer whether the Fibre Channel IOA will attach devices now or whether the Fibre Channel IOA is to be used at a later time.

<p>Is the Fibre Channel IOA intended to attach devices at this time?</p> <ul style="list-style-type: none"> • No: The wrap plug remain installed on the Fibre Channel IOA when it is not in use. No further service actions are required. This ends the procedure. • Yes: Complete the following steps: <ol style="list-style-type: none"> 1. Unplug the wrap plug from the Fibre Channel IOA and wait until the port status becomes "Not active" using the Refresh function key on the Additional Port Information display. The failure has been isolated to the first link, which includes any of the cables or junctions between the Fibre Channel IOA port and the first Fibre Channel hub, switch, gateway, or device. 2. Use existing Fibre Channel service procedures to continue diagnosis of this first link until the port status becomes active, or contact your next level of support. This ends the procedure.
--

FEATCRD

Symbolic FRU FEATCRD is not supported on these models. Continue with the next FRU in the list.

FRPORT

Symbolic FRU FRPORT is not supported on these models. Continue with the next FRU in the list.

FMWREXP

The update access key for the system has expired or is about to expire.

Use the following table to determine the action to perform.

Table 9. Action to perform for a reference code that occurred because an update access key expired or is about to expire.

Reference code	Description	Action
A7004760	The update access key expiration date is less than 30 days away. After the update access key expiration date has expired, only firmware updates with a date prior to the expiration date are allowed.	A new update access key is required. To determine the update access key expiration date, see Determining the expiration date of the update access key. To renew the hardware entitlement of this system, obtain a new update access key from the website http://www.ibm.com/servers/eserver/ess . This ends the procedure.
A7004761	The update access key has expired. Only firmware updates with a date prior to the expiration date are allowed.	A new update access key is required. To renew the hardware entitlement of this system, obtain a new update access key from the website http://www.ibm.com/servers/eserver/ess . This ends the procedure.
A7004762	The activation code for the microcode entitlement date could not be found. The system cannot start without an activation code.	An activation code is required to start the system. Contact your next level of support. This ends the procedure.

Table 9. Action to perform for a reference code that occurred because an update access key expired or is about to expire. (continued)

Reference code	Description	Action
B181309D	A firmware update was not allowed because the date of the firmware update is beyond the update access key expiration date.	A new update access key is required. To renew the hardware entitlement of this system, obtain a new update access key from the website http://www.ibm.com/servers/eserver/ess . This ends the procedure.
B7000805	A microcode update was not allowed because the date of the firmware update is beyond the update access key expiration date.	A new update access key is required. To renew the hardware entitlement of this system, obtain a new update access key from the website http://www.ibm.com/servers/eserver/ess . This ends the procedure.

Determining the expiration date of the update access key

An unexpired update access key allows you to update your firmware with the latest fixes available. After the update access key date has expired, only firmware updates with a date prior to the expiration date are allowed.

- Is a location available in the serviceable event view for this failing item?
 - Yes:** Continue with the next step.
 - No:** Contact your next level of support. **This ends the procedure.**
- The location for the failing item FMWREXP in the serviceable event view indicates the update access key expiration date. The location is in the format *Utttt.mmm.ssssssdd/mm/yyyy-hh:MM-DD-HH* where:
 - Utttt.mmm.ssssss* is the unit type, model and serial number of the system.
 - dd/mm/yyyy* is the day, month and year of the expiration date.
 - hh:MM* is the hour and minute of the expiration time (24-hour time).
 - DD* is the number of days remaining until the expiration date (shown only if applicable).
 - HH* is the approximate number of hours remaining until the expiration time (shown only if applicable).

FWADIPL

Look here for information about FWADIPL symbolic FRU.

Complete the following steps:

- Contact your network administrator to verify that the bootp server is correctly configured for this client.
- Check the network connection. If the network connections are OK, try the operation again. If there is no network connection, contact the network administrator.
- If there are no problems with the bootp server or the network connections, replace the adapter from which you are trying to boot. See Managing PCI adapters for the adapter FRU part number.

This ends the procedure.

FWCD1

Look here for information about FWCD1 symbolic FRU.

Complete the following procedure.

1. If the problem persists, the CD in the USB CDROM drive might not be readable. Remove the CD and insert another CD.
2. If the problem persists after replacing the CD, replace the USB CDROM drive.
3. Replace the USB adapter to which the drive is attached.

This ends the procedure.

FWCD2

Look here for information about FWCD2 symbolic FRU.

Complete the following procedure.

1. Check for server firmware updates. Apply if available.
2. If the problem persists, replace the USB CD-ROM drive.

See the following Managing devices topics for device FRU part numbers information for your system:

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

3. Replace the USB adapter to which the drive is attached.

This ends the procedure.

FWCONS

The console display might be failing.

1. If your server has an attached console, but the console display is not working, see the documentation for the display or try substituting a known good display for the one that is failing.
2. If you can see selection screens on the terminals, press the appropriate key on the input device within 60 seconds. If the console does not respond to the keystroke:
 - a. If you are selecting the console with a keyboard attached to the system, replace the keyboard. See the service documentation for the system unit for keyboard part numbers. If the keyboard does not fix the problem, use SVCPROC to replace the service processor.
 - b. If you are selecting the console with an ASCII terminal, suspect the terminal. Use the problem determination procedures for the terminal.

Note: The ASCII terminal settings should be:

- 19,200 baud
- No parity
- 8 data bits
- 1 stop bit

This ends the procedure.

FWENET

This symbolic can help determine a problem with an Ethernet adapter.

Complete the following.

1. Verify that the MAC address is properly programmed in the adapter's EPROM.
2. Replace the adapter specified by the location code. See Managing PCI adapters for PCI adapter FRU part numbers.

This ends the procedure.

FWFLASH

Symbolic FRU FWFLASH indicates that you might need to reload the server's firmware.

Complete the following steps:

1. Reboot the server or partition.
2. Reflash the server firmware. See Updates.
3. Reboot the failing partition.

This ends the procedure.

FWFWPBL

There might be a platform firmware problem.

Complete the following steps:

1. Check for platform firmware updates. See Updates.
2. Contact service support.

This ends the procedure.

FWHANG

Symbolic FRU FWHANG is not supported at this time.

FWHOST

Symbolic FRU FWHOST can help in the event that your server appears hung while booting.

If the system is not connected to an active network or if the target server is inaccessible (this can also result from incorrect IP parameters being supplied), the system will still attempt to boot and, because timeout durations are necessarily long to accommodate retries, the system might appear to be hung.

Complete the following steps:

1. Restart the system and access the SMS utilities.
2. In the utilities menus, check the following items:
 - Is the intended boot device correctly specified in the boot list?
 - Are the IP parameters correct?
 - Verify the network connection (the network could be down).
 - Have the network administrator verify the server configuration for this client.
 - Attempt to "ping" the target server using the SMS Ping utility.

This ends the procedure.

FWIDE1

The media or device might be failing.

Complete the following steps:

1. Replace the media in the device specified by the location code.
2. Replace the device specified by the location code.

See the following Managing devices topics for device FRU part numbers information for your system:

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

This ends the procedure.

FWIDE2

The cables, media or device might be failing.

Complete the following steps:

1. Verify that the signal and power cables are properly attached to the device specified by the location code. After they have been verified and repaired if necessary, try the operation again.
2. If the problem persists, the media in the device might not be readable. Remove the media and try another copy.
3. Replace the device specified by the location code.

See the following Managing devices topics for device FRU part numbers information for your system:

Models	Topic
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Managing devices for 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Managing devices for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Managing devices for 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system.

This ends the procedure.

FWIPIPL

Network address problem.

Complete the following steps:

1. Contact your network administrator to verify that the network addresses on the server and gateway are correct.
2. Use the System Management Services menu to correct the network addresses on the server if necessary.

This ends the procedure.

FWLPAR

Look here for information about FWLPAR symbolic FRU.

Perform one of the following options:

- If a location code was reported with the error, probing failed for the PCI slot connector.
 1. Check for platform firmware updates. Apply the update if there is one available.
 2. Check for adapter firmware updates, apply if available. If there are no updates available, replace the adapter. See *Managing PCI adapters* for PCI adapter FRU part numbers. If this does not resolve the problem, replace the I/O backplane or system backplane on which the slot connector is located.
For more information about failing part numbers, location codes, or removal and replacement procedures, see *Part locations and location codes* (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.
- If no location code was reported with the error, The connector was not found:
 1. Check for platform firmware updates, apply if available.
 2. If no updates are available, contact your next level of support.

This ends the procedure.

FWMBOOT

Look here for information about FWMBOOT symbolic FRU.

This checkpoint appears on the operator panel when partition firmware has entered the boot devices menu in the SMS because the multi-boot flag was turned on.

The firmware is waiting for input from the user. If the firmware console is not open, the user cannot see the boot devices menu. In this case, the user might mistakenly assume that the system is hung. System firmware only progresses past this point when the user provides the required input.

FWNIM

Look here for information about FWNIM symbolic FRU.

If this error occurs during the installation of the AIX[®] operating system using a process called a NIM push, the *set_bootlist* attribute might not have been set correctly on the NIM master.

See the appropriate **AIX 5.x Installation Guide and Reference** for the release level of the AIX operating system that is being installed for more information.

If this error occurs at any other time, check for platform firmware updates and apply them. If there are no platform firmware updates available, contact your next level of support. **This ends the procedure.**

FWNVR1

Look here for information about FWNVR1 symbolic FRU.

An error reported against the nonvolatile random access memory (NVRAM) might be caused by low battery voltage and (more rarely) power outages that occur during normal system usage.

With the exception of the BA170000 error, these errors are warnings that the NVRAM data content had to be reestablished and do not require a FRU replacement unless the error is persistent. When one of these errors occurs, system customization information (the boot list, for example) has been lost, and the system might need to be re-configured.

If the error is persistent, use SVCPROC to replace the service processor. **This ends the procedure.**

FWNVR2

Look here for information about FWNVR2 symbolic FRU.

If the error is persistent, use SVCPROC to replace the service processor. **This ends the procedure.**

FWNVR3

Look here for information about FWNVR3 symbolic FRU.

Execution of a command line within the nonvolatile random access memory (NVRAM) configuration variable **nvrामrc(script)** resulted in a "throw" being executed.

This script can be modified by the system firmware SMS utilities, the operating system, PCI adapter ROM code or utility, or an operator (using the open firmware script editing command *nvedit*).

It might not be possible to resolve the problem without a detailed analysis of the NVRAM script, the current system configuration, and the device tree contents.

1. This problem can be caused by a SCSI adapter whose SCSI bus ID has changed from the default setting and the adapter no longer appears in the system. This can be caused either by removing a SCSI adapter, or a problem with a SCSI adapter.
 - a. On the SMS main menu, select **option 5**, Change SCSI settings.
 - b. On the SCSI utilities menu, select **option 2**, Change SCSI ID.
 - 1) Verify the list of SCSI controllers/adapters. If the list is not correct, suspect a problem with adapters that are installed but not listed.
 - 2) Select the option to "**Save**" the configuration information.
 - 3) Restart the system.
 - c. If the problem persists, boot the operating system and verify the SCSI bus IDs of the SCSI controllers, and correct if necessary.
 - d. Restart the system.
2. Contact your service support representative for further assistance.

This ends the procedure.

FWPCI1

Look here for information about FWPCI1 symbolic FRU.

Perform one of the following options:

- If the location code identifies a slot:
 1. Check for adapter firmware updates. Apply the update if one is available.
 2. Replace the adapter. See Managing PCI adapters for PCI adapter FRU part numbers.
 3. Check for platform firmware updates. Apply the update if one is available.
- If the location code identifies an I/O backplane:
 1. Check for platform firmware updates. Apply the update if one is available.
 2. Replace the I/O backplane. If the system does not have an I/O backplane, replace the system backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

3. Call service support.

This ends the procedure.

FWPCI2

Look here for information about FWPCI2 symbolic FRU.

If you receive FWPCI2 symbolic FRU perform the following procedure.

1. If the location code identifies a slot:
 - a. Check for adapter firmware updates. Apply the update if one is available.
 - b. Check the cabling to the adapter (in particular, the adapters that have serial ports). Serial ports might require null modems or special cabling configurations to avoid connecting driver outputs together. This might create a PCI power problem and force the adapter to be unconfigured.
 - c. Use the hot plug service aid to re-seat the adapter specified by the location code. If re-seating the adapter fixes the problem, perform the repair checkout procedure. If the problem is not resolved, go to the next step.
 - d. Use the hot plug task to move the adapter to another slot.
2. If the adapter is successfully re-configured in the new slot, the slot in which the adapter was originally plugged is bad. Replace the I/O backplane that contains the slot in which the adapter was plugged. If the system does not have an I/O backplane, replace the system backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

3. Replace the adapter if the adapter does not successfully re-configure into the new slot. **This ends the procedure.**

FWPCI3

Look here for information about FWPCI3 symbolic FRU.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

If you receive symbolic FRU FWPCI3, do one of the following procedures.

1. If the location code identifies a PCI card slot:
 - a. Check the cabling to the adapter (in particular, the adapters that have system ports). System ports might require null modems or special cabling configurations to avoid connecting driver outputs together. This might create a PCI power problem and force the adapter to be de-configured.
 - b. Move the adapter to another slot.
 - c. Check for adapter firmware updates. Apply the update if one is available.
 - d. Replace the adapter. See Managing PCI adapters for PCI adapter FRU part numbers.
 - e. Check for platform firmware updates. Apply the update if one is available.
 - f. Replace the I/O backplane. If the system does not have an I/O backplane, replace the system backplane.
2. If the location identifies an I/O backplane:
 - a. Check for platform firmware updates. Apply the update if one is available.
 - b. Replace the I/O backplane. If the system does not have an I/O backplane, replace the system backplane.

This ends the procedure.

FWPCI4

Look here for information about FWPCI4 symbolic FRU.

If you receive the FWPCI4 symbolic FRU, perform the following.

1. If a location code is associated with the checkpoint, replace the adapter identified by the location code.
2. If no location code is specified, go to PFW1542: I/O problem isolation procedure.

This ends the procedure.

FWPCI5

Look here for information about FWPCI5 symbolic FRU.

If you receive symbolic FRU FWPCI5, perform the following procedure:

1. Is a location code associated with the checkpoint?
 - **No:** Go to PFW1548: Memory and processor subsystem problem isolation procedure. **This ends the procedure.**
 - **Yes:** Continue with the next step.
2. Replace the following, one at a time, until the problem is resolved:
 - a. The FRU identified by the location code, see the system unit service information for the FRU part numbers.
 - b. I/O backplane. If the system does not have an I/O backplane, replace the system backplane.
For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

FWPCI6

Look here for information about FWPCI6 symbolic FRU.

The last character of the progress code (checkpoint) in which the system is hanging indicates which PCI slot the system was probing at the time the hang occurred. For example, E251 indicates PCI slot 1, E252 indicates slot 2, and so on.

For the PCI slot identified by the progress code, perform the following procedure:

1. Power off the system.
2. Reseat the adapter in the specified slot, then power on the system. Does the problem occur again?
 - **Yes:** Go to the next step.
 - **No:** This ends the procedure.
3. Power off the system and remove the adapter from the specified slot, then power on the system. Does the problem occur again?
 - **No:** Replace the adapter that you removed. See Managing PCI adapters for PCI adapter FRU part numbers.
 - **Yes:** Replace the backplane that contains the PCI adapter slots.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (<http://www.ibm.com/support/>

knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

FWPTR

Values normally found in nonvolatile storage that point to the location of an operating system were not found.

This can happen for two reasons: either your operating system doesn't support storing the values, or some events occurred that caused the system to lose non-volatile storage information (drainage or replacement of the battery). If you are running the AIX operating system, this information can be reconstructed by running the bootlist command specifying the device that the operating system is installed on. Please see your AIX operating system documentation for the syntax and usage of the bootlist command.

To boot the operating system so that the above-mentioned values can be reconstructed, power the system off and power it back on again. This should cause the system to look for the operating system in the device contained in the custom boot list or in the default boot list, depending on the condition of the system. If this is not successful, modify the boot sequence (also known as the boot list) to include devices that are known to contain a copy of the operating system. This can be accomplished by using the System Management Services menus. For example, select a hard disk known to have a copy of the operating system as the first and only device in the boot sequence (boot list) and boot the system.

This ends the procedure.

FWPWD

Look here for information about FWPWD symbolic FRU.

You should be able to see the system prompt on the hardware console.

If your server has an attached console, but the console display is not functioning correctly, see the documentation for the display. If you cannot adjust the display, replace the display with one that is known to be functional.

This ends the procedure.

FWRIPL

The FWRIPL procedures can help if a system or a partition will not boot.

If a supported adapter is installed, perform the following steps:

1. Replace the adapter. For adapter FRU part numbers, see Managing PCI adapters.
2. Replace the I/O backplane in the unit in which the adapter is plugged. If the system does not have an I/O backplane, replace the system backplane.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

If there are no supported LAN adapters installed in a full system partition, install one and reboot the system. If a supported LAN adapter is not assigned to the partition in a server running multiple partitions, deactivate the partition, assign a supported LAN adapter to the partition, then reactivate the partition.

This ends the procedure.

FWSCSI2

Look here for information about FWSCSI2 symbolic FRU.

Complete the following steps before replacing any system components:

1. Ensure that the controller and each device on the SCSI bus is assigned a unique SCSI ID.
2. Ensure that the SCSI bus is properly terminated.
3. Ensure that the SCSI signal and power cables are securely connected and are not damaged.

The location code information is required to identify the ID of SCSI device failures as well as to indicate the location of the controller to which the device is attached. Check the system error logs to determine the location code information associated with the error code.

1. Replace the media (if it is a device with removable media).
2. Replace the SCSI device. See Finding parts, locations, and addresses for SCSI device FRU part numbers.

This ends the procedure.

FWSCSI3

Look here for information about FWSCSI3 symbolic FRU.

Complete the following steps before replacing any system components:

1. Ensure that the controller and each device on the SCSI bus is assigned a unique SCSI ID.
2. Ensure that the SCSI bus is properly terminated.
3. Ensure that the SCSI signal and power cables are securely connected and are not damaged.

The location code information is required to identify the ID of SCSI device failures as well as to indicate the location of the controller to which the device is attached. Check the system error logs to determine the location code information associated with the error code.

1. Replace the SCSI device. See Finding parts, locations, and addresses for SCSI device FRU part numbers.

This ends the procedure.

FWSCSI4

Look here for information about FWSCSI4 symbolic FRU.

Complete the following steps before replacing any system components:

1. Ensure that the controller and each device on the SCSI bus is assigned a unique SCSI ID.
2. Ensure that the SCSI bus is properly terminated.
3. Ensure that the SCSI signal and power cables are securely connected and are not damaged.

The location code information is required to identify the ID of SCSI device failures as well as to indicate the location of the controller to which the device is attached. Check the system error logs to determine the location code information associated with the error code.

1. Replace the media (if a device with removable media).
2. Replace the SCSI device. See Finding parts, locations, and addresses for SCSI device FRU part numbers.

This ends the procedure.

FWSCSIH

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

FWVTHMC

Look here for information about FWVTHMC symbolic FRU.

If you received symbolic FRU FWVTHMC, complete the following procedure:

1. The partition firmware is waiting for a virtual terminal to be opened on the management console. Open a virtual terminal.
2. If a virtual terminal is open, the user might have entered a CTRL-S key sequence to stop the scrolling of data off the screen. If this is the case, enter a CTRL-Q key sequence to resume scrolling.
3. Check the Ethernet connection between the management console and the managed system.
4. Reboot the management console.
5. There might be a hardware problem with the management console. For the Hardware Management Console (HMC), see Hardware Management Console operations.
6. There might be a hardware problem with the service processor in the managed system. Check the service action event log for error codes that indicate a problem with the Ethernet ports on the service processor. Take the appropriate actions based on the error codes that you find.

This ends the procedure.

GFSPCRD

Global flexible service processor (GFSP) interface cards might be failing.

To determine the location of the GFSP interface cards, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** The location code in the serviceable event view is the location of the service processor. Continue with the next step.
 - **No:** The location of the service processor could not be determined. Continue with the next step.
2. Use the following table to determine the location of the GFSP interface cards to replace. If the location of the service processor was identified in step 1, replace only the GFSP interface cards associated with that service processor. Otherwise, replace the GFSP interface cards associated with both service processors. Use the management console to replace the GFSP interface cards that are indicated in this procedure, one at a time, until the problem is resolved.

Type and model	Location code of the service processor	Location code of the GFSP interface card	Part number	Service action
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C7	Un-P1-C9 in each system node	See System parts.	Replace the GFSP interface cards that are identified in this procedure, one at a time, until the problem is resolved. For more information about location codes, see Part locations and location codes.

Type and model	Location code of the service processor	Location code of the GFSP interface card	Part number	Service action
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C10	Un-P1-C10 in each system node	See System parts.	Replace the GFSP interface cards that are identified in this procedure, one at a time, until the problem is resolved. For more information about location codes, see Part locations and location codes.

This ends the procedure.

HBAINIT

A System x or BladeCenter iSCSI initiator adapter might be the failing item. Contact your next level of support.

HBATARG

The iSCSI target adapter might be the failing item. Contact your next level of support.

HCA

Symbolic FRU HCA is not supported on these models. Continue with the next FRU in the list.

HEA

Symbolic FRU HEA is not supported on these models. Continue with the next FRU in the list.


HMCLIC

Firmware on the management console must be replaced.

To replace the Hardware Management Console (HMC) firmware, see Hardware Management Console operations.

HMCMTWK

Multiple connections to peer management consoles have been lost.


1. Complete the following from the management console that is reporting the connection errors:
 - a. Choose one of the following navigation options depending on the interface type of the Hardware Management Console (HMC):
 - If you are using an HMC Classic or HMC Enhanced interface, complete the following steps:
 - 1) In the navigation area, click **HMC Management**.
 - 2) In the content pane, click **View Network Topology**.
 - If you are using an HMC Enhanced+ interface, complete the following steps:
 - 1) In the navigation area, click the **HMC Management** icon  , and then select **Console Settings**.
 - 2) In the content pane, click **View Network Topology**.
 - b. Are the peer management consoles with the missing connection present in the topology?

- **No:** Continue with the next step.
 - **Yes:** The problem was temporary and has resolved itself. **This ends the procedure.**
2. Is the management console that reported the connection errors also reporting a hardware error with a network adapter?
 - **No:** Continue with the next step.
 - **Yes:** Service this network adapter error. **This ends the procedure.**
 3. Verify that each peer management console with a missing connection is powered on and that its Ethernet connections are secure and functioning. Does the problem persist?
 - **No: This ends the procedure.**
 - **Yes:** Continue with the next step.
 4. Have the customer verify that their network is operating properly. If the problem still persists, contact your next level of support.

This ends the procedure.

HMCNTWK

A connection to a peer management console (indicated in the location code) has been lost.

1. Complete the following from the management console that is reporting the connection error:
 - a. Choose one of the following navigation options depending on the interface type of the Hardware Management Console (HMC):
 - If you are using an HMC Classic or HMC Enhanced interface, complete the following steps:
 - 1) In the navigation area, click **HMC Management**.
 - 2) In the content pane, click **View Network Topology**.
 - If you are using an HMC Enhanced+ interface, complete the following steps:
 - 1) In the navigation area, click the **HMC Management** icon  , and then select **Console Settings**.
 - 2) In the content pane, click **View Network Topology**.
 - b. Is the peer management console with the missing connection present in the topology?
 - **No:** Continue with the next step.
 - **Yes:** The problem was temporary and has resolved itself. **This ends the procedure.**
2. Verify that the peer management console with the missing connection is powered on and that its Ethernet connections are secure and functioning. Does the problem persist?
 - **No: This ends the procedure.**
 - **Yes:** Continue with the next step.
3. Is either the management console that reported the problem or the peer management console with the missing connection reporting a hardware error with a network adapter?
 - **No:** Continue with the next step.
 - **Yes:** Service this network adapter error. **This ends the procedure.**
4. Have the customer verify that their network is operating properly. If the problem still persists, contact your next level of support.

This ends the procedure.

HSL1

Symbolic FRU HSL1 is not supported on these models. Continue with the next FRU in the list.

HSL1_UN

Symbolic FRU HSL1_UN is not supported on these models. Continue with the next FRU in the list.

HSL2

Symbolic FRU HSL2 is not supported on these models. Continue with the next FRU in the list.

HSL2_01

Symbolic FRU HSL2_01 is not supported on these models. Continue with the next FRU in the list.

HSL2_03

Symbolic FRU HSL2_03 is not supported on these models. Continue with the next FRU in the list.

HSL2_08

Symbolic FRU HSL2_08 is not supported on these models. Continue with the next FRU in the list.

HSL2_10

Symbolic FRU HSL2_10 is not supported on these models. Continue with the next FRU in the list.

HSL2_15

Symbolic FRU HSL2_15 is not supported on these models. Continue with the next FRU in the list.

HSL2_17

Symbolic FRU HSL2_17 is not supported on these models. Continue with the next FRU in the list.

HSL2_25

Symbolic FRU HSL2_25 is not supported on these models. Continue with the next FRU in the list.

HSL2_xx

Symbolic FRU HSL2_xx is not supported on these models. Continue with the next FRU in the list.

HSL_I2

Symbolic FRU HSL_I2 is not supported on these models. Continue with the next FRU in the list.

HSL_I3

Symbolic FRU HSL_I3 is not supported on these models. Continue with the next FRU in the list.

HSL_I4

Symbolic FRU HSL_I4 is not supported on these models. Continue with the next FRU in the list.

HSL_I5

Symbolic FRU HSL_I5 is not supported on these models. Continue with the next FRU in the list.

HSL_I

Symbolic FRU HSL_I is not supported on these models. Continue with the next FRU in the list.

HSL_IB

Symbolic FRU HSL_IB is not supported on these models. Continue with the next FRU in the list.

HSL_Ix

Symbolic FRU HSL_Ix is not supported on these models. Continue with the next FRU in the list.

HSL_LNK

Symbolic FRU HSL_LNK is not supported on these models. Continue with the next FRU in the list.

HSL_OPT

Symbolic FRU HSL_OPT is not supported on these models. Continue with the next FRU in the list.

HSLH

Symbolic FRU HSLH is not supported on these models. Continue with the next FRU in the list.

HSLH_06

Symbolic FRU HSLH_06 is not supported on these models. Continue with the next FRU in the list.

HSLH_15

Symbolic FRU HSLH_15 is not supported on these models. Continue with the next FRU in the list.

HSLH_xx

Symbolic FRU HSLH_xx is not supported on these models. Continue with the next FRU in the list.

I2CBUS

Symbolic FRU I2CBUS is not supported on these models. Continue with the next FRU in the list.

IDPART

Symbolic FRU IDPART is not supported on these models. Continue with the next FRU in the list.

IH_HUB

Symbolic FRU IH_HUB is not supported on these models. Continue with the next FRU in the list.

INT_12X

Symbolic FRU INT_12X is not supported on these models. Continue with the next FRU in the list.

IO_DEV

A storage device is the failing item.

Complete the following steps:

1. Is device location information available in the serviceable event view for this FRU?
 - **Yes:** Continue with the next step.
 - **No:** If the adapter controlling this device is listed in the FRU list then use that location code and continue with the next step. Otherwise work with the customer or your next level of support to determine the location of the device or its adapter by using SRC information, failing resource information, device tree or error message information. Then continue with the next step.
2. Replace the failing device. For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system. **This ends the procedure.**

IO_HUB

Symbolic FRU IO_HUB is not supported on these models. Continue with the next FRU in the list.

IOA

The I/O adapter might be failing.

Go to "FI00719" on page 174 to determine the field replaceable unit (FRU) part number.

This ends the procedure.

IOACNFG

There is an IOA configuration problem.

Too many communications lines or IOAs are configured using the same IOP.

IOADPTR

The failing component is the adapter in the location specified in the SRC.

1. Are you working from the serviceable event view and is there a card location listed with this FRU?
 - **Yes:** Use Table 1 to replace the adapter identified by this location code. **This ends the procedure.**
 - **No:** Determine the location of the adapter by working with the customer or your next level of support. If you cannot determine the location of the failing adapter by using SRC or resource information or the device tree, determine the adapter type from the SRC, SRC description, failing resources, or error message you are working with. Make a list of all the adapter locations of that type assigned to the partition. Continue with the next step.
2. Have you identified a single FRU location?
 - **Yes:** Use Table 1 to replace the FRU you have identified. **This ends the procedure.**
 - **No:** Continue with the next step.
3. Using the location codes you have identified, determine which system unit and expansion units have PCI adapters of this type assigned to the partition you are working with. Starting with the expansion units first, remove all of the PCI adapters of this type from one of the units (use Table 1 to guide you to the correct locations information).

Attention:

- Remove the PCI adapters from the system unit only after you have tried all of the expansion units first.
- Do **not** remove any FRUs with embedded adapters, only FRUs in PCI card slots.

Continue with the next step.

4. Reinstall one of the adapters and power on the unit. Continue with the next step.
5. Does the problem recur?
 - **Yes:** The adapter you just reinstalled is the failing item and needs to be replaced (use Table 1 to guide you to the correct locations information). **This ends the procedure.**
 - **No:** Continue with the next step.
6. Have you reinstalled all of the adapters on the unit you're currently working with?
 - **Yes:** Continue with the next step.
 - **No:** Return to step 4 and reinstall the next adapter on this unit.
7. Are there any units (including the system unit) on which you have not yet removed and reinstalled the PCI adapters?
 - **No:** Continue with the next step.
 - **Yes:** Return to step 3 and work with another unit.

8. See Card positions to determine whether the system unit or any of the expansion units have an embedded adapter of the type you are working with. Is there such an embedded adapter?
- **No:** The problem might be intermittent. Contact your next level of support. **This ends the procedure.**
 - **Yes:** The FRU with the embedded adapter is the failing item and needs to be replaced. Use Table 1 to replace the FRU at the location specified in the card position table. Repeat this step for each expansion unit with an embedded adapter assigned to the partition, and then for the system unit. **This ends the procedure.**

Table 10. Failing items for symbolic FRU IOADPTR

FRU name (replace FRUs in order, one at a time, starting with the primary unit and then the secondary units if applicable)	Type and model	Location
PCIe embedded USB controller	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1
PCIe3 x8 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C2
PCIe3 x16 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C3
PCIe3 x16 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C5
PCIe3 x16 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C6
PCIe3 x16 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C7
PCIe3 x8 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C9
PCIe3 x8 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C10
PCIe3 x8 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C11
PCIe3 x8 IOA card	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C12
PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C14
PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Un-P1-C15
PCIe embedded USB controller	8247-42L, 8286-41A, or 8286-42A	Un-P1
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C2
PCIe3 x16 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C3
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C4
PCIe3 x16 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C5
PCIe3 x16 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C6
PCIe3 x16 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C7
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C8
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C9

Table 10. Failing items for symbolic FRU IOADPTR (continued)

FRU name (replace FRUs in order, one at a time, starting with the primary unit and then the secondary units if applicable)	Type and model	Location
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C10
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C11
PCIe3 x8 IOA card	8247-42L, 8286-41A, or 8286-42A	Un-P1-C12
PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	8247-42L, 8286-41A, or 8286-42A	Un-P1-C14
PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	8247-42L, 8286-41A, or 8286-42A	Un-P1-C15

For PCI adapter FRU part numbers, see Managing PCI adapters. For embedded controller FRU part numbers, see System parts.

IOBRDG

The failing component is on the IPL path.

Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FFC	Type and model	Part number	Description	Location code
	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System backplane	Un-P1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

IOP

Symbolic FRU IOP is not supported on these models. Continue with the next FRU in the list.

LBSADP1

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LBSADP2

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LBSADP3

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LBSADP4

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LBSADP5

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LBUSADP

This symbolic FRU is not supported on the system.

Continue with the next FRU in the failing item list.

LDSWTCH

Verify that the system's top cover is installed correctly and the thumbscrews holding it down are tight.

The system will not power on if the top cover is not installed correctly. If the top cover is removed while the system is powered on, the system will power off automatically.

LIB3494

The 3494 tape library might be failing.

Refer to the IBM 3494 maintenance information to determine the parts to replace.

LICCODE

This symbolic FRU helps determine the preferred method of updating server firmware or Licensed Internal Code.

Note: In this procedure, server firmware is synonymous with Licensed Internal Code.

1. Check the level of the firmware on which the server is running. For information about checking firmware levels, see *Viewing existing firmware levels*.

Is the server firmware at the latest available level?

- **No:** Continue with the next step.
- **Yes: This ends the procedure.**

2. Is this the first time you are trying to update the server firmware while working on this problem?

- **No:** Choose from the following options:

- If you are a customer, contact your next level of support.
- If you are a service provider, use a USB flash drive to update the server firmware. See *Installing firmware using the USB port on the service processor on a system that is not managed by a management console*. If a USB flash drive is not available, go to symbolic FRU SVCPROC to update the server firmware by replacing the service processor. **This ends the procedure.**

- **Yes:** Continue with the next step.

3. Is the system managed by a Hardware Management Console (HMC)?

- **No:** Go to step 5.
 - **Yes:** Continue with the next step.
4. For HMC, see Managed system updates. **This ends the procedure.**
 5. Is the operating system running or is Integrated Virtualization Manager (IVM) available?
 - **No:** Continue with the next step.
 - **Yes:** Go to step 8.
 6. Attempt to perform a system IPL from the side of the service processor from which you are currently booting, and start the operating system or IVM.

Note: For information about how to see from which side of the service processor you are booting, and to find out how to switch to the other side if necessary, see Working with the temporary and permanent side of the service processor.

Were you successful?

- **No:** Continue with the next step.
 - **Yes:** Go to step 8.
7. Attempt to boot the system from the other side of the service processor, and start the operating system or IVM. Were you successful?
 - **No:** Choose from the following options:
 - If you are a customer, contact your next level of support.
 - If you are a service provider, use a USB flash drive to update the server firmware. See Installing firmware using the USB port on the service processor on a system that is not managed by a management console. If a USB flash drive is not available, go to symbolic FRU SVCPROC to update the server firmware by replacing the service processor. **This ends the procedure.**
 - **Yes:** Go to step 8.
 8. Use the following table to determine the action to take.

Type of partition on which you are working	Action
Integrated Virtualization Manager (IVM) managed system	Update the server firmware. See Installing firmware using the USB port on the service processor on a system that is not managed by a management console.
AIX or Linux operating system	Update the server firmware. See Getting server firmware fixes through AIX or Linux without a management console.
IBM i operating system	Update the server firmware. See Getting server firmware fixes through IBM i for a system not managed by a management console.

If you are still unable to update the server firmware, contact your next level of support.

Attention: Be aware that a newer level of server firmware might already have been downloaded before this problem occurred or when the problem was reported.

This ends the procedure.

LITSTRP

Look here for information about LITSTRP symbolic FRU.

Use the following table to perform the appropriate action for the SRC you are working with.

SRC	Replace this FRU	Locations information
1xxx1D04	Light strip (front)	Part locations and location codes
1xxx1D05	Light strip (back)	Part locations and location codes

LNUXOVR

The number of processor cores used by general-purpose workloads has exceeded the number of entitled general-purpose processor cores.

For more information about processor core compliance, see Power® Integrated Facility for Linux (IFL).

LOADCY1

A cryptographic adapter Licensed Internal Code problem occurred.

The Licensed Internal Code for the cryptographic adapter does not ship with the system. The licensed program 5733-CY1 Cryptographic Device Manager contains the Licensed Internal Code for the cryptographic adapter.

- If the SRC is B0136615, perform the following steps:
 1. Vary off the cryptographic adapter.
 2. Apply the licensed program to the system.
 3. Vary on the cryptographic adapter.

Note: The vary on might take up to 15 minutes.

This ends the procedure.

- If the SRC is B0136619, perform the following steps:
 1. Vary off the cryptographic adapter.
 2. Apply the most recent version of the licensed program to the system.
 3. Vary on the cryptographic adapter.

Note: The vary on might take up to 15 minutes.

This ends the procedure.

LOC_SYS

Symbolic FRU LOC_SYS is not supported on these models. Continue with the next FRU in the list.

LPARCFG

There is a configuration problem with the system or a logical partition.

Perform any actions listed in the "Description/Action" column in the unit reference code table for the reference code.

Have the customer check processor and memory allocations of the system or to the partition. The customer must ensure that there are enough functioning processor and memory resources in the system for all the partitions. Processor or memory resources that failed during the system IPL could have caused the IPL problem in the partition.

Have the customer check the bus and I/O processor allocations for the partition. The customer must ensure that the partition has load source and console I/O resources.

Have the customer check the IPL mode of the system or failing partition.

For further assistance, the customer should contact their software service provider, or see Logical partitioning for additional support.

This ends the procedure.

LPARSUP

There is either an IPL problem, a main storage dump problem, or a software error with a partition.

Perform any actions listed in the Description/Action column in the SRC table.

During the IPL or main storage dump of a partition, a complex problem was detected. The serviceable event view on the management console has to be searched or the SRC history list on the management console for the partition with the problem has to be analyzed in sequence. If the partition is a "Guest" partition, the SRC history list of the "Hosting" partition must be analyzed.

Contact your next level of hardware support.

LSERROR

An error occurred when the platform Licensed Internal Code attempted to locate the partition's load source.

Choose from the following options:

- If the load source is a tape or optical device, replace the media. If replacing the media does not work, look in the serviceable event view for other errors.
- If the load source is a disk drive, perform a D-mode IPL. Correct any errors found.

This ends the procedure.

MA_BRDG

Symbolic FRU MA_BRDG is not supported on these models. Continue with the next FRU in the list.

MABRCFG

Symbolic FRU MABRCFG is not supported on these models. Continue with the next FRU in the list.

MAILBOX

Connection monitoring errors have been detected, indicating mailbox failures.

1. Are there any B1xxxxxx or B7xxxxxx SRCs from the system?
 - **No:** Continue with the next step.
 - **Yes:** Follow the service action for the first SRC that is listed. **This ends the procedure.**
2. There might be firmware fixes for this problem. Load and apply any platform firmware fixes or new levels of firmware using symbolic FRU "LICCODE" on page 245. Does the problem persist after updating the firmware?
 - **No:** **This ends the procedure.**
 - **Yes:** Continue to the next FRU in the list. **This ends the procedure.**

MASBUS

Symbolic FRU MASBUS is not supported on these models. Continue with the next FRU in the list.

MEDIA

The drive or media might be dirty, or the media might be defective.

1. Is the drive in a 3995 or 3996 optical library?
 - **Yes:** Try a different media. **This ends the procedure.**
 - **No:** Continue with the next step.
2. If the drive is a 6330 DVD-RAM, clean the drive. The part number for the DVD cleaning kit is 19P0489.
3. If it is a tape media, clean the recording head in the tape unit. If there is a cleaning cartridge supported for the tape drive, clean the drive with the cleaning cartridge. If the cleaning LED remains on or the cleaning cartridge is ejected immediately, replace the cleaning cartridge and clean the tape drive again.
4. Attempt the failing operation again. Does the operation complete successfully?
 - **No:** Clean the drive three times and replace the media. **This ends the procedure.**
 - **Yes:** The problem has been corrected. **This ends the procedure.**

MEMBRD

Symbolic FRU MEMBRD is not supported on these models. Continue with the next FRU in the list.

MEMCTLR

Symbolic FRU MEMCTLR is not supported on these models. Continue with the next FRU in the list.

MEMDIMM

The failing component might be one of the memory DIMMs.

To determine the location of the memory DIMM, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Continue with the next step.
 - **No:** Replace the memory DIMMs for each processor module (starting with processor module 1) in the system unit. On multiple-drawer servers, replace the memory DIMMs in the primary system node and then the secondary system nodes. **This ends the procedure.**
2. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
3. Use the following table to determine the service action to perform.

Type and model	Part number	Description	Location code	Service action
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Memory DIMM	U _n -P1-C16 through U _n -P1-C31	Replace the memory DIMM at the location that was identified in this procedure. See Part locations and location codes.
8408-44E or 8408-E8E	See System parts.	Memory DIMM	U _n -P2-C10 through U _n -P2-C41	Replace the memory DIMM at the location that was identified in this procedure. See Part locations and location codes.

Type and model	Part number	Description	Location code	Service action
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Memory DIMM	U n -P1-C21 through U n -P1-C52	Replace the memory DIMM at the location that was identified in this procedure. See Part locations and location codes.

If you need additional information for failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system.

MEMORY

Symbolic FRU MEMORY is not supported on these models. Continue with the next FRU in the list.

MESSAGE

Messages provided with this symbolic FRU's description appear in the service action log (SAL).

If the word MESSAGE is listed in the SAL as a part number, the description field provides information regarding proper handling of the error.

This ends the procedure.

MOVEIOA

An incorrect hardware configuration was detected.

To correct the hardware configuration, the I/O adapter must be moved to a new card location.

MSG0001

Resolve all B6006906 (or B7006906) errors before this one.

MSG0002

Symbolic FRU MSG0002 is not supported on these models. Continue with the next FRU in the list.

MSG0003

Replace the FRUs one at a time.

MSG0005

The operating system that controls these card locations does not support I/O processors.

NETSERV

Symbolic FRU NETSERV is not supported on these models. Continue with the next FRU in the list.

NEXTLVL

Contact your next level of support.

NO_PNUM

Diagnostic firmware could not determine a part number for the FRU.

To determine the part number, replace procedure, and other service information, perform the following steps:

1. Record the location of the FRU from the user interface with which you are working.
2. Go to Part locations and location codes.
3. Use the location information to identify the name of the part in the "Locations" information.
4. Go to the Finding parts, locations, and addresses and determine the Field Replaceable Unit (FRU) part number for the part.

This ends the procedure.

NODECR

Symbolic FRU NODECR is not supported on these models. Continue with the next FRU in the list.

NODEPL

The system processor backplane might be failing.

For an 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, 8286-42A, 8408-44E, or 8408-E8E, replace the system backplane.

For a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME, use the management console to replace the system backplane in each of the system nodes, one at a time, until the problem is resolved.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

NOFRUS

No failing items are identified for the reference code.

NSCABLE

Symbolic FRU NSCABLE is not supported on these models. Continue with the next FRU in the list.

NTDEVDR

Symbolic FRU NTDEVDR is not supported on these models. Continue with the next FRU in the list.

NTLANDD

Symbolic FRU NTLANDD is not supported on these models. Continue with the next FRU in the list.

NTOPSYS

Symbolic FRU NTOPSYS is not supported on these models. Continue with the next FRU in the list.

NTUSER

Symbolic FRU NTUSER is not supported on these models. Continue with the next FRU in the list.

NTVSCSI

Symbolic FRU NTVSCSI is not supported on these models. Continue with the next FRU in the list.

OPT_CLN

The fiber channel connections need to be cleaned.

Use the fiber optic cleaning kit (part number 46G6844) and the fiber optic cleaning procedures in "SY27-2604 Fiber Optic Cleaning Procedures" for all fiber channel connections.

OPTD005

The USB attached optical storage device or the USB to SATA converter might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

1. Use the USB cable port location code of the I/O adapter in the serviceable event view to find the USB cable. Then, trace the USB cable to identify the location of the USB attached SATA converter and storage device.
2. Is the USB attached storage device in a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system control unit?

Yes: Replace the DVD assembly at location *Un-P1-C11* of the 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system control unit. If the problem persists, continue with the next failing item in the failing item list. **This ends the procedure.**

No: Contact your next level of support. **This ends the procedure.**

OPTLCBL

Symbolic FRU OPTLCBL is not supported on these models. Continue with the next FRU in the list.

OPTLDRV

Symbolic FRU OPTLDRV is not supported on these models. Continue with the next FRU in the list.

OPUSER

Symbolic FRU OPUSER is not supported on these models. Continue with the next FRU in the list.

OSLIC

An operating system has experienced a fatal error.

If the SRC that sent you here is of the form B6xx xxxx, check for an IBM i PTF to correct the problem. If the SRC that sent you here is of the form BAxx xxxx, check for an AIX or Linux code patch to correct the problem.

If you need help, or if this does not correct the problem, contact your next level of support.

OSTERM

The operating system in a partition has terminated abnormally.

Use the management console to look for a partition that has failed. It should have the same SRC in the SRC display history for the failed partition. Use the SRC given in this error to resolve the problem.

Note: This error has not been automatically sent to your service provider.

If problems continue, call your next level of support.

OVERTMP

The system detected a warning or fault due to an over temperature condition.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

1. Is the room temperature less than 35°C (95°F)?
 - **Yes:** Continue with the next step.
 - **No:** Notify the customer. The customer must bring the room temperature within normal range. Continue with the next step.
2. Are the system front and rear doors free of obstructions?
 - **Yes:** Continue with the next step.
 - **No:** Notify the customer. The system must be free of obstructions for proper air flow. Continue with the next step.
3. Is the system an 8247-22L or 8284-22A with water-cooled processors?
 - **Yes:** Continue with the next step.
 - **No:** Continue with step 5.
4. Go to Water cooling system specification and requirements. Are all of the requirements for water-cooled systems met?
 - **Yes:** Continue with the next step.
 - **No:** Work with the customer to ensure that all of the requirements for water-cooled systems are met. **This ends the procedure.**
5. If applicable, do all the positions in the processor subsystem contain processors or fillers?
 - **Yes:** Continue with the next step.
 - **No:** Fill any open positions with processors or fillers. **This ends the procedure.**
6. Do all the power supply positions contain power supplies or fillers?
 - **Yes:** Continue with the next step.
 - **No:** Fill any open positions with supplies or fan books. **This ends the procedure.**
7. Are you working with reference code 11007201 or has reference code 11007201 been logged?
 - **Yes:** The room temperature is too high. The customer must bring the room temperature to less than 35°C (95°F). If the room temperature is less than 35°C (95°F), continue with the next step.
 - **No:** Replace the failing item that is listed in the serviceable event view for the reference code you are working with and go to step 9.
8. Replace the control panel. Use the following table to determine the part number for the failing item. Then, continue with the next step.

CCIN or FFC	Type and model	Part number	Description	Location code
	Any	See System parts.	Control (operator) panel	Un-D1

9. After each failing item is replaced, is the reference code that sent you to this procedure still reported?
 - **Yes:** Replace the next failing item in the failing item list. If all of the failing items in the failing item list have been replaced, contact your next level of support. **This ends the procedure.**
 - **No:** The problem has been corrected. **This ends the procedure.**

PCI_IOV

The single root I/O virtualization (SR-IOV) adapter might be failing.

To determine the location of the SR-IOV adapter, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - Yes:** Go to step 3.

- No:** Continue to the next step.
2. To determine the location of the failing item, complete the following steps:
 - a. Record the Dynamic Reconfiguration Connector (DRC) index, which is word 4 of the reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Go to Card Positions and use the hexadecimal bus number to find the location of the failing item. Then continue with the next step.
 3. Is the system managed by a management console?

Yes: Use the management console to replace the failing item at the location identified in this procedure.

No: Use the following table to identify the description, part number, and location of the failing item to be replaced. Replace the failing item by using the replacement procedures found in the location information.

Table 11. Failing items for symbolic FRU PCI_IOV

Type and Model	Location code	Description	Part number	Location information
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Un-P1-Cx	PCIe adapter	Remove the adapter to determine the part number or use the CCIN of the adapter and go to Managing PCI adapters to determine the part number.	See Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm).

This ends the procedure.

PCICARD

The hardware that controls PCI adapters and PCI card slots detected an error.

To determine the location of the PCI adapter, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Go to step 3.
 - **No:** Continue with the next step.
2. To determine the location of the failing item, complete the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 4 of a B400xxxx reference code and word 7 of a B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location of the failing item. Then, continue with the next step.
3. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
4. Use the following table to determine the service action to perform.

Type and model	Part number	Service action
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A to determine the part number.	Replace the PCI adapter at the location that was identified in this procedure. See Removing and replacing PCIe adapters in the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A system.
8247-42L, 8286-41A, or 8286-42A	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 8247-42L, 8286-41A, or 8286-42A to determine the part number.	Replace the PCI adapter at the location that was identified in this procedure. See Removing and replacing PCIe adapters in the 8247-42L, 8286-41A, or 8286-42A system.
8408-44E or 8408-E8E	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 8408-44E or 8408-E8E to determine the part number.	Replace the PCI adapter at the location that was identified in this procedure. See Installing, removing, and replacing PCIe adapters for the 8408-44E or 8408-E8E system.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME to determine the part number.	Use the management console to replace the failing item at the location that was identified in this procedure.
EMX0 PCIe3 expansion drawer	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the EMX0 PCIe Gen3 I/O expansion drawer to determine the part number.	Use the management console to replace the failing item at the location that was identified in this procedure.

This ends the procedure.

PCIEAD1

Symbolic FRU PCIEAD1 is not supported on these models. Continue with the next FRU in the list.

PCIEBUS

Symbolic FRU PCIEBUS is not supported on these models. Continue with the next FRU in the list.

PCIECB1

Symbolic FRU PCIECB1 is not supported on these models. Continue with the next FRU in the list.

PCIEFW1

Symbolic FRU PCIEFW1 is not supported on these models. Continue with the next FRU in the list.

PCIEHB1

Symbolic FRU PCIEHB1 is not supported on these models. Continue with the next FRU in the list.

PCIERE1

Symbolic FRU PCIERE1 is not supported on these models. Continue with the next FRU in the list.

PCIEXTN

The PCIe extender card might be the failing item.

Use the following table to determine the part number for the field-replaceable unit (FRU).

Type and model	Part number	Description	Location code
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	PCIe extender card	Un-P1-Cx

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to see applicable procedures for your system.

PCIE_SW

The field-replaceable unit that contains the PCIe switch might be the failing item.

To determine the location of the failing item that contains the PCIe switch, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Go to step 4.
 - **No:** Continue with the next step.
2. To determine the location of the failing item, complete the following steps:
 - a. Record the Dynamic Reconfiguration Connector (DRC) index, which is word 7 of the B700xxxx reference code.
 - b. The DRC index is of the form *xxxxyyyy*, where *yyyy* is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location that is associated with this bus number. Then, continue with the next step.
3. Does the location that was identified in the previous step contain a PCIe3 cable adapter that is used to connect the system unit to an EMX0 PCIe3 expansion drawer?
 - **Yes:** Trace the expansion drawer cable from the PCIe3 cable adapter that was identified in the previous step to find the I/O module in the EMX0 PCIe3 expansion drawer. The I/O module contains the failing PCIe switch and is either in location *Un-P1* or *Un-P2* of the EMX0 PCIe3 expansion drawer. Continue with the next step.
 - **No:** If the location code obtained in the previous step ends with one or more card labels (-Cx), remove these card labels from the location code to find the field-replaceable unit that contains the failing PCIe switch. Continue with the next step.
4. Is the system managed by a management console?
 - **Yes:** Use the management console to replace the failing item at the location that was identified in this procedure.
 - **No:** Continue with the next step.
5. Use the following table to determine the service action to perform.

Type and model	Description	Location code	Part number	Service action
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	System backplane	Un-P1	See System parts.	Replace the system backplane at the location that was identified in this procedure.

Type and model	Description	Location code	Part number	Service action
8408-44E or 8408-E8E	I/O backplane	Un-P1	See System parts.	Replace the I/O backplane at the location that was identified in this procedure.
EMX0 PCIe3 expansion drawer	I/O module	Un-P1 or Un-P2	See System parts.	Replace the I/O module at the location that was identified in this procedure.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

PGDPART

Look here for information about PGDPART symbolic FRU.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

1. Power off the system. See Powering on and powering off the system.
2. Verify that the power supplies are connected and seated properly. See PWRSPPLY.
3. Power on the system. See Powering on and powering off the system.
4. Is the reference code 1xxx2600?
 - **No:** Continue with the next step.
 - **Yes:** Replace the system backplane. For more information, see System parts. **This ends the procedure.**
5. Is the reference code 1xxx2610 or 1xxx2620?
 - **No:** Continue with step 7 on page 258.
 - **Yes:** Continue with the next step.
6. Perform the action indicated for your system in the following table:

System:	Action:
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Replace the following items, one at a time, until the problem is resolved: <ol style="list-style-type: none"> 1. Power supplies at locations Un-Ex. 2. System backplane at location Un-P1. <p>This ends the procedure.</p>
8408-44E or 8408-E8E	Replace the following items, one at a time, until the problem is resolved: <ol style="list-style-type: none"> 1. Power supplies at locations Un-Ex. 2. System backplane at location Un-P2. <p>This ends the procedure.</p>

System:	Action:
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Replace the following items, one at a time, until the problem is resolved: <ol style="list-style-type: none"> 1. Voltage regulator module at location $U_{n-P1-C62}$. 2. Power supplies at locations U_{n-Ex}. 3. System backplane at location U_{n-P1}. <p>This ends the procedure.</p>

7. Is the reference code 1xxx1BFF?

- **No:** Continue with the next FRU in the failing item list. **This ends the procedure.**
- **Yes:** Continue with the next step.

8. Perform the action indicated for your system in the following table:

System:	Action:
8408-44E or 8408-E8E	Replace the following items, one at a time, until the problem is resolved: <ol style="list-style-type: none"> 1. Power supplies at locations U_{n-Ex}. 2. System backplane at location U_{n-P2}. 3. RAID card at location U_{n-P3}. 4. Power midplane at location U_{n-P5}. <p>This ends the procedure.</p>

PIOCARD

The hardware that controls PCI adapters and PCI card slots detected an error.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

The failing component is the adapter in the location specified by the direct select address (DSA) in the reference code. When possible, the diagnostic code will determine the FRU location for the serviceable event view.

1. Are you working from the serviceable event view and a PCI adapter location is listed with this FRU?
 - **No:** Complete the following steps:
 - a. Record the DSA, which is word 7 of the reference code.
 - b. Locate the card specified in the DSA by performing the DSA translation procedure. Use the DSA translation procedure to determine a card position when no location is given for a PCI adapter FRU. Return here after locating the FRU and continue with the next step.
 - **Yes:** There is a location code for the PCI adapter in the serviceable event view. Continue with the next step.
2. Were you sent to this procedure from another procedure in order to obtain the PCI adapter location?
 - **No:** Continue with the next step.
 - **Yes:** Return to the procedure that sent you here. **This ends the procedure.**
3. Use the table below to determine the service action to perform.

Type and model	Part number	Service action
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A to determine the part number.	Replace the PCI adapter at the location identified in this procedure. See Removing and replacing PCIe adapters in the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A system.
8247-42L, 8286-41A, or 8286-42A	Remove the adapter to determine the part number or use the CCIN of the adapter and go to PCI adapter information by feature type for the 8247-42L, 8286-41A, or 8286-42A to determine the part number.	Replace the PCI adapter at the location identified in this procedure. See Removing and replacing PCIe adapters in the 8247-42L, 8286-41A, or 8286-42A.

This ends the procedure.

PLDUMP

A platform dump occurred.

1. Find the SRC that occurred with the platform dump.
 - a. On the command line, enter the Start System Service Tools command STRSST. If you cannot get to SST, use function 21 to get to the dedicated service tools (DST). Go to Dedicated service tools in the Service functions section of the system's service information.
 - b. On the **Start Service Tools Sign On** display, type in a user ID with QSRV authority and password.
 - c. Select **Start a service tool > Main storage dump manager > Work with copies of main storage dumps**.
 - d. Display the platform dump summary for the time that the platform dump occurred.
 - e. The SRC is the value in the "SRC word 1" field of the Platform Dump Summary screen.
2. Use the SRC from the Platform Dump Summary screen and find the SRC in the service action log. See Searching the service action log. Using the service action log is also available in the service information for the system unit. Search for an entry in the service action log (SAL) that matches the time, reference code, or resource of the reported problem. The SRC occurred at or before the time that the platform dump occurred.
3. Did you find the SRC in the service action log?
 - **Yes:** Use the SRC to service the system. **This ends the procedure.**
 - **No:** The dump should be sent back to development for analysis, if it has not already been sent. **This ends the procedure.**

PLUS

The list of possible failing items that are displayed online is not complete.

There is not enough space to display all of the failing items. See the complete list of possible failing items in the appropriate unit reference code table in Reference codes.

PPCIMIN

Symbolic FRU PPCIMIN is not supported on these models. Continue with the next FRU in the list.

PPCISYS

Symbolic FRU PPCISYS is not supported on these models. Continue with the next FRU in the list.

PPCITWR

Symbolic FRU PPCITWR is not supported on these models. Continue with the next FRU in the list.

PRI_PCI

Symbolic FRU PRI_PCI is not supported on these models. Continue with the next FRU in the list.

PRMIOA

Replace the storage I/O adapter to which the auxiliary cache I/O adapter is connected.

1. Find the location of the auxiliary cache I/O adapter:
 - a. Determine the address of the auxiliary cache I/O adapter. See the System reference code format description.
 - b. Determine the location of the auxiliary cache I/O adapter. See Part locations and location codes.
2. Trace the SCSI cable from the auxiliary cache I/O adapter to the storage I/O adapter. This is the storage I/O adapter that you should replace.
3. Replace the storage I/O adapter that you just identified.

This ends the procedure.

PROCPHB

The failing item might be the PCI Host Bridge (PHB) on a system processor.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Perform the following steps to determine the location of the system processor module:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** Use the location to find and replace the failing system processor. **This ends the procedure.**
 - **No:** Continue with the next step.
2. To determine the location of the failing item, perform the following steps:
 - a. Record the dynamic reconfiguration connector (DRC) index, which is word 7 of the reference code.
 - b. If the DRC is of the form 2000yyyy or 210xyyyy, continue with the next step. If the DRC is of the form 2300yyyy, 2400yyyy, or 2B00yyyy go step 4.
3. The DRC index from the previous step is of the form xxxxyyyy, where yyyy is the hexadecimal bus number. Using the hexadecimal bus number, go to Card positions to find the location code that is associated with the bus number. If your system type and model is 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME, find the system node number that is associated with the bus number also. Use the location code and the following table to determine the location code of the failing system processor module to replace.

Table 12. Locating the failing item by using the bus location code

Type and model	Bus location code	Description	Failing item location
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	Un-P1, Un-P1-C6 through Un-P1-C15	System processor module	Un-P1-C32

Table 12. Locating the failing item by using the bus location code (continued)

Type and model	Bus location code	Description	Failing item location
5148-22L, 8247-22L, 8247-42L, 8284-22A, or 8286-42A	Un-P1-C2 through Un-P1-C5	System processor module	Un-P1-C33
8408-44E or 8408-E8E	Un-P1-C1, Un-P1-C2	System processor module	Un-P2-C7
8408-44E or 8408-E8E	Un-P1-C3, Un-P1-C4	System processor module	Un-P2-C6
8408-44E or 8408-E8E	Un-P1, Un-P1-C6 through Un-P1-C9	System processor module	Un-P2-C3
8408-44E or 8408-E8E	Un-P1-C10 through Un-P1-C12	System processor module	Un-P2-C2
8408-44E or 8408-E8E	Un-P3	System processor module	Un-P2-C2 and Un-P2-C3
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C1-C1 or Un-P1-C2-C1	System processor module	Un-P1-C19
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C3-C1 or Un-P1-C4-C1	System processor module	Un-P1-C18
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C5-C1 or Un-P1-C6-C1	System processor module	Un-P1-C15
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C7-C1 or Un-P1-C8-C1	System processor module	Un-P1-C14

4. Use the DRC index from step 2 and the following table to find the location code of the failing system processor module to replace.

Table 13. Locating the failing item by using the DRC index

Type and model	DRC index	Description	Location
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	<ul style="list-style-type: none"> • 23000000 • 23000001 • 24000000 • 24001000 	System processor module	Un-P1-C32
5148-22L, 8247-22L, 8247-42L, 8284-22A, or 8286-42A	<ul style="list-style-type: none"> • 23000002 • 23000003 • 24002000 • 24003000 	System processor module	Un-P1-C33
8408-44E or 8408-E8E	<ul style="list-style-type: none"> • 23000000 • 23000001 	System processor module	Un-P2-C2
8408-44E or 8408-E8E	<ul style="list-style-type: none"> • 23000002 • 23000003 	System processor module	Un-P2-C3
8408-44E or 8408-E8E	<ul style="list-style-type: none"> • 23000004 • 23000005 	System processor module	Un-P2-C6
8408-44E or 8408-E8E	<ul style="list-style-type: none"> • 23000006 • 23000007 	System processor module	Un-P2-C7
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000000 • 24000000 • 2B000400 	System processor module	System node 0, location Un-P1-C19

Table 13. Locating the failing item by using the DRC index (continued)

Type and model	DRC index	Description	Location
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000001 • 24001000 • 2B001400 	System processor module	System node 0, location Un-P1-C14
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000002 • 24002000 • 2B002400 	System processor module	System node 0, location Un-P1-C18
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000003 • 24003000 • 2B003400 	System processor module	System node 0, location Un-P1-C15
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000004 • 24004000 • 2B004400 	System processor module	System node 1, location Un-P1-C19
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000005 • 24005000 • 2B005400 	System processor module	System node 1, location Un-P1-C14
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000006 • 24006000 • 2B006400 	System processor module	System node 1, location Un-P1-C18
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	<ul style="list-style-type: none"> • 23000007 • 24007000 • 2B007400 	System processor module	System node 1, location Un-P1-C15

This ends the procedure.

PSI_LNK

The path to the service processor might be the failing item.

1. Are there any B1xxxxxx system reference codes in the serviceable event view that were logged at approximately the same time as this error?
 - **Yes:** Close this problem and resolve the B1xxxxxx system reference codes. **This ends the procedure.**
 - **No:** Continue with the next step.
2. Use the following table to determine the failing items. Replace the failing items in the order that they are listed until the problem is resolved. If the problem is not resolved by replacing the failing items, contact your next level of support.

Type and model	Failing items
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	BACKPLN ANYPROC
8408-44E or 8408-E8E	SVCPROC BACKPLN ANYPROC

Type and model	Failing items
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	SPCABLE GFSPCRD and SVCPROC Note: Replace the failing items indicated by GFSPCRD and SVCPROC at the same time. ANYPROC BACKPLN NODEPL

This ends the procedure.

PTFSRCH

Licensed Internal Code is the failing item.

Look for fixes (PTFs) associated with the reference code and have the customer apply them.

PTNNTWK

One or more connections to a partition have been lost.

1. Is the management console reporting any other reference codes that indicate a loss of communication with other partitions?

- **No:** Choose from the following options:
 - If the partition is running IBM i, go to step 2.
 - If the partition is running AIX or Linux, go to step 3.
- **Yes:** Resolve the first of these reference codes. **This ends the procedure.**

2. Open a 5250 console to the partition. There should be seven jobs running:

- 4 of these jobs start with QCST*
- 2 of these jobs start with QYUS*
- 1 of these jobs start with QSVRM*

Are all seven of these jobs running?

- **Yes:** Go to step 4.
- **No:** End all of those jobs that are still running and then issue the following command:

```
SBMJOB CMD(CALL PGM(QSYS/QCSTCTSRCD)) JOBD(QSYS/QCSTSRCD)
PRTDEV(*JOBDD) OUTQ(*JOBDD)
USER(*JOBDD) PRTTXT(*JOBDD) RTGDTA(RUNPTY50)
```

This ends the procedure.

3. Complete the following steps:

- a. Open a virtual terminal console to the partition.
- b. Verify that Service Resource Manager (SRM) is running properly by entering the following command:

```
lssrc -a |grep ServiceRM
```

If the state given for SRM is inactive, SRM is not running and needs to be restarted. If the state given is active, go to step 4.

4. Has the partition logged any LAN adapter or other LAN reference codes?

- **No:** Work with the customer to find and resolve any network problems between the management console and the partition. **This ends the procedure.**

- **Yes:** Resolve these reference codes. **This ends the procedure.**

PWRCBL

Symbolic FRU PWRCBL is not supported on these models. Continue with the next FRU in the list.

PWRCORD

A power supply detected a loss of input power. An ac power loss occurred or a connection to input power was unplugged or broken.

The location code of the power supply with the problem is in the location code field of this failing item in the service action log. Restore power to the power supply. **This ends the procedure.**

PWROC

This is not a valid symbolic FRU for this machine type.

PWRSPLY

A power supply might be the failing item.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Attention: In a system with redundant power supplies, verify that the green ac input LED or dc input LED, and the green dc output LED on the power supply that is not being replaced is on solid for 30 seconds before you replace the failing power supply.

Attention: When you replace a redundant power supply, a 1xxx15x0 or 1xxx15x4 reference code might surface in the error log. If you removed and replaced the power supply in the location that is associated with this reference code, and the power supply became ready (ac input LED or dc input LED is on solid, and the dc output LED is on solid or flashing) after installation, disregard this reference code. If you did not previously remove and replace a power supply, the power supply did not become ready after installation, or there are repeated fan fault errors after the power supply replacement, continue to follow this procedure.

Note: The following table provides information about power supply LEDs.

LED	Description
The ac input LED or dc input LED	This LED is green and is on (lit) if the ac or dc input voltage is present and off (not lit) if the ac or dc input voltage is not present. For normal system operation, this LED is on solid.
The dc output LED	This LED is green and is on solid if the power supply output voltages are correct. If the power supply control voltage is present and the power supply outputs are not powered on, the power supply is in standby and the dc output LED flashes at a rate of 1-3 times per second. The dc output LED is off if both the power supply control voltage and the output voltages are bad. For normal system operation, this LED is on solid.

LED	Description
The identify LED	The identify LED is amber and will be turned on and off at a 4 second rate, 10 seconds after the application of input power to the supply, if serial communication isn't established with the service processor. For normal system operation, this LED is off.

1. Is the reference code 1xxx15xx or 1xxx71xx?

- **No:** Continue with the next step.
- **Yes:** Complete the following steps:
 - a. Find the unit reference code in the following table to determine the FRU part number and location for the failing power supply.
 - b. Ensure that the power cables to the power supply are properly connected and seated. If an additional power supply was recently plugged in, verify that the dc output LED is on for 30 seconds before you unplug this power supply. The green dc output LED on the power supply is turned on when power is correctly connected to the power supply.
 - c. Verify that the ac input LEDs or dc input LEDs on all of the power supplies within the enclosure are turned on.
 - If the LED is off on any of the power supplies, ensure that the power cable is properly connected to the power supply.
 - If you have a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system or an EMX0 PCIe3 expansion drawer and if a power supply has an ac input LED or dc input LED turned off, ensure that the cable that connects the line cord conduit (9080-MHE, 9080-MME, 9119-MHE, or 9119-MME) or the power supply conduit (EMX0 PCIe3 expansion drawer) to the power supply is properly seated. If the problem persists, replace the line cord conduit or the power supply conduit.

Does the problem persist?

- **Yes:** Continue with step 1.d.
 - **No: This ends the procedure.**
- d. Is the reference code 1xxx15x0?
 - **Yes:** Before you replace any parts, complete isolation procedure PWR1911.
 - **No:** Continue with step 1.e.
 - e. Replace the failing power supply (see the following table to determine which power supply to replace and its location).
 - f. Complete the following steps if the new power supply does not fix the problem:
 - 1) Reinstall the original power supply.
 - 2) Try the new power supply in each of the other positions that are listed in the table.
 - 3) If the problem still is not fixed, reinstall the original power supply and go to the next FRU in the list.
 - 4) For reference codes 1xxx15x0, replace the system backplane if a problem persists after you replace the power supply. If that does not resolve the problem, contact your next level of support.
 - g. Use the following table to determine the part number for the field replaceable unit (FRU).

Unit reference code	Type-model or feature code	Part number	Description	Location code
1510, 1511, 1512, 1513, 1514, 7110	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, 9119-MME, or EMX0 PCIe3 expansion drawer	See System parts.	Power supply, ac	Un-E1
1520, 1521, 1522, 1523, 1524, 7120	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, 9119-MME, or EMX0 PCIe3 expansion drawer	See System parts.	Power supply, ac	Un-E2
1530, 1531, 1532, 1533, 1534, 7130	8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Power supply, ac	Un-E3
1540, 1541, 1542, 1543, 1544, 7140	8286-41A, 8286-42A, 8408-44E, 8408-E8E, 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Power supply, ac	Un-E4

This ends the procedure.

2. Is the reference code 1xxx8455, 1xxx8456, 1xxx8457, or 1xxx8458?
- **No:** Continue with the next step.
 - **Yes:** One of the power supplies might be missing. Use the following table to determine the location of the power supply and the service action to complete.

Reference code	Missing power supply	Service action
1xxx8455	Un-E1	Install the missing power supply.
1xxx8456	Un-E2	Install the missing power supply.
1xxx8457	Un-E3	Install the missing power supply.
1xxx8458	Un-E4	Install the missing power supply.

This ends the procedure.

3. Is the reference code 1xxx16Ax?
- **No:** Continue with the next step.
 - **Yes:** Complete the following steps:
 - a. Using the reference code and the following table, find the location of the failing card slot:

Reference code	Type-model or feature code	Part number	Location code
1xxx16A0	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C1 in the system control unit
1xxx16A1	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C2 in the system control unit
1xxx16A2	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C5 in the system control unit
1xxx16A3	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C6 in the system control unit

- b. Is a card present in the location that was identified in the previous step?
 - **Yes:** Continue with step 3.c.
 - **No:** Install a card in the location and attach cables as necessary. If the problem is not resolved, contact your next level of support. **This ends the procedure.**
- c. Ensure that the cables that are connected to the card are properly routed and seated. Fix any cable problems. Does the problem persist?
 - **Yes:** Replace the card at the location that was identified in this procedure. **This ends the procedure.**
 - **No:** **This ends the procedure.**

4. Is the reference code 1xxx16Bx?

- **No:** Continue with the next step.
- **Yes:** Complete the following steps:

- a. Using the reference code and the following table, find the location of the failing card slot:

Reference code	Type-model or feature code	Part number	Location code
1xxx16B0	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C9 in the system node
1xxx16B1	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	U _n -P1-C10 in the system node

- b. Is a card present in the location that was identified in the previous step?
 - **Yes:** Continue with step 4.c.
 - **No:** Install a card in the location and attach cables as necessary. If the problem is not resolved, contact your next level of support. **This ends the procedure.**
- c. Ensure that the cables that are connected to the card are properly routed and seated. Fix any cable problems. Does the problem persist?
 - **Yes:** Replace the card at the location that was identified in this procedure. **This ends the procedure.**
 - **No:** **This ends the procedure.**

5. Is the reference code 1xxx16F1?

- **No:** Continue with the next step.
- **Yes:** All of the power supplies might be missing. If the power supplies are missing, install them. If the power supplies are installed, ensure that the power cables to the power supplies are properly connected and seated. The green ac input LED or dc input LED on the power supply is turned on when the power is correctly connected to the power supply. If the power cables to the power supplies are properly connected and seated, and the green ac input LED or dc input LED is on, but the SRC is still being logged, replace all power supplies. **This ends the procedure.**

6. Is the reference code 1xxx2614?

- **No:** Return to Starting a repair action. **This ends the procedure.**
- **Yes:** Are the power supplies plugged into the same -48 V dc power source?
 - **No:** Correct the problem. **This ends the procedure.**
 - **Yes:** This reference code can occur if the power supplies cannot support the hardware in the system. Contact your next level of support. **This ends the procedure.**

PWRVPD

Use ASMI to set the EMX0 PCIe3 expansion drawer MTMS value.

Before you use ASMI to set the EMX0 PCIe3 expansion drawer MTMS value, verify that the following prerequisites are met:

- The server must be powered on to firmware standby or firmware running state.
- The EMX0 PCIe3 expansion drawer must be correctly installed in the system configuration and have ac power.
- Your authority level must be one of the following levels:
 - Administrator
 - Authorized service provider

1. Log in to the Advanced System Management Interface (ASMI).
2. Expand **System Configuration**.
3. Select **Configure I/O Enclosures**.
4. Select **Clear inactive enclosures**.
5. If you were directed here from a FRU replacement procedure, the FRU that was replaced contained non-volatile storage where information about the machine type-model-serial (MTMS) was stored. It is necessary to restore the MTMS now.

The non-volatile storage in which the MTMS value is stored in a new replacement FRU is uninitialized. When power is first applied, the system detects the uninitialized value and assigns an obvious, temporary unique value of the form TMP *x.xxx.xxxxxxx*, where *x* can be any character 0-9 and A-Z. As a result, the initial location code of the EMX0 PCIe3 expansion drawer is set to UTMP *x.xxx.xxxxxxx*. To perform power off procedures or to change settings for an EMX0 PCIe3 expansion drawer that contains uninitialized non-volatile storage, you must first use the new UTMP *x.xxx.xxxxxxx* location code when you select the EMX0 PCIe3 expansion drawer in the ASMI menus.

6. From the ASMI utility, expand **System Configuration**.
 7. Select **Configure I/O Enclosures**.
 8. Compare the type-model and serial number values that are shown for the EMX0 PCIe3 expansion drawer you are working with to the type, model, and serial values on the label on the EMX0 PCIe3 expansion drawer. If any changes must be made, go to step 9. Otherwise, go to step 19.
- Note:** Serial numbers are case sensitive. (All alpha characters that are contained in the serial number must be entered as a capital letter.)
9. If the server is powered on to firmware running state, go to the next step. If the server is powered on to firmware standby state, go to step 11.
 10. See the following note, then see Powering off an EMX0 PCIe3 expansion drawer. Then, continue with step 11.

Note:

- a. Do not disconnect the ac power cables after you power off the EMX0 PCIe3 expansion drawer.
- b. If the EMX0 PCIe3 expansion drawer does not immediately appear on the service utility that was used to power off the EMX0 PCIe3 expansion drawer, refresh the utility periodically for up to 10 minutes until it does. If it still does not appear, go step 1 and repeat this procedure.

- c. Remember to use the new UTMP *x.xxx.xxxxxxx* location code when you select the EMX0 PCIe3 expansion drawer to power off if you were directed here from a replacement procedure.
 - d. If you were instructed by the procedure that sent you here when you were powering off the EMX0 PCIe3 expansion drawer to use panel function 69 to power on the EMX0 PCIe3 expansion drawer, perform panel function 69 now (with the control panel set to manual mode) from the system unit control panel (even though the EMX0 PCIe3 expansion drawer is already on).
11. From the ASMI utility, expand **System Configuration**.
 12. Select **Configure I/O Enclosure**.
 13. Select the EMX0 PCIe3 expansion drawer with which you are working.
 14. Select **Change settings**.
 15. If in step 8 you determined that the type-model and serial number values are not correct, enter the correct values now.

Note: Serial numbers are case sensitive. (All alpha characters that are contained in the serial number must be entered as a capital letter.)

16. Click **Save settings** to complete the operation
17. Verify that the values you just entered are reflected in the type-model, serial number, and location code columns for the EMX0 PCIe3 expansion drawer with which you are working. Do not use the browser back button to do this. Rather, expand **System Configuration**. Then, select **Configure I/O Enclosures**.

Note: Serial numbers are case sensitive. All alpha characters that are contained in the serial number must be entered as a capital letter.

18. Power on the EMX0 PCIe3 expansion drawer.
 - If the system is not managed by a management console, disconnect all ac power to the EMX0 PCIe3 expansion drawer by disconnecting the ac cables from the power supplies on the EMX0 PCIe3 expansion drawer. Wait for 2 minutes, and then reconnect the ac power cables. The EMX0 PCIe3 expansion drawer will power on automatically.
 - If the system is managed by a management console, power on the EMX0 PCIe3 expansion drawer by using the Power On/Off unit utility. If the values you just entered are not immediately reflected in the location code of the EMX0 PCIe3 expansion drawer in the Power On/Off unit utility, restart the utility periodically for up to 10 minutes until the values you entered are reflected. For information about powering on an EMX0 PCIe3 expansion drawer, see Powering on an EMX0 PCIe3 expansion drawer. Then, continue with the next step.
19. Log off and close ASMI.
20. Return to the procedure that sent you here.

QDCCRLS

Licensed Internal Code is the failing item.

Look for PTFs associated with the reference code and have the customer apply them.

QSYSOPR

Look here for information about QSYSOPR symbolic FRU.

Look in the System Operator message queue for a message with the same date and time as the problem. Perform any actions defined in the message.

REFER

Look here for information about REFER symbolic FRU.

If the first 4 characters of the SRC are 3996, see the 3996 Maintenance Information included with the 3996 Optical Library.

REM_NIC

Symbolic FRU REM_NIC is not supported on these models. Continue with the next FRU in the list.

REM_SYS

Symbolic FRU REM_SYS is not supported on these models. Continue with the next FRU in the list.

RI_SSD

A mainstream (previously called read intensive) solid-state drive (SSD) might be reporting a change in status for the number of write operations that are available.

To determine the service action, complete the following steps:

1. If the system has logical partitions, complete this procedure from the logical partition that reported the problem.
2. Sign on to an IBM i session with the QSECOFR user profile.
3. To create a mainstream SSD report in a spool file, type the following command at the XPF command line and press Enter:

```
CALL PGM(QSMGSSTD) PARM('SSDGAUGE' X'00000008' 'SSTD0100' X'00000000')
```

Display the contents of the spool file. The spool file contains a report for mainstream SSDs. Then, continue with the next step.
4. Use the resource name and part location from the serviceable event view to locate the mainstream SSD in the report. Are you able to locate the mainstream SSD in the report?
 - **Yes:** Continue with the next step.
 - **No:** Continue with the next failing item in the failing item list. **This ends the procedure.**
5. Does the report for the mainstream SSD indicate that an error occurred in the collection of status information for the drive?
 - **Yes:** The status for the number of write operations that are available could not be determined. Continue with the next failing item in the failing item list. **This ends the procedure.**
 - **No:** Continue with the next step.
6. Is the value in the **Life Remaining Gauge** field less than or equal to 2 percent?
 - **Yes:** Continue with the next step.
 - **No:** The mainstream SSD is not reporting a change in status for the number of write operations available. Continue with the next failing item in the failing item list. **This ends the procedure.**
7. Is the value in the **Life Remaining Gauge** field 0 percent?
 - **Yes:** Continue with the next step.
 - **No:** Continue with step 9.
8. The mainstream SSD reached the limit for the number of write operations that are supported. Write operations to the SSD become slower over time, and at some point the SSD becomes a read-only drive. When the operating system writes to a read-only drive, the write operations are rejected, and the operating system considers the drive as if a failure occurred. For example, if the operating system writes to a drive that is in a RAID array and if the write operations are rejected, the array becomes exposed. To support normal write operations, the drive must be replaced.
Replacement of the mainstream SSD might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about mainstream SSDs, see Mainstream solid-state drives. **This ends the procedure.**
9. The mainstream SSD is nearing the limit for the number of write operations that are supported. The reference code that sent you here is logged several times before the write operation limit is reached. No service action is required at this time.

Note: After the mainstream SSD reaches the limit for the number of write operations that are supported, write operations to the SSD become slower over time, and at some point the SSD becomes a read-only drive. To support normal write operations, the drive must be replaced. Replacement of the mainstream SSD might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about mainstream SSDs, see Mainstream solid-state drives. **This ends the procedure.**

ROUTER

Any network switch that iSCSI data might pass through between the IBM i iSCSI target adapter and a System x or BladeCenter iSCSI initiator adapter might be the failing item.

SASCABL

The SAS device cable might be failing.

If the device is an internal device (not in an external disk expansion unit), there is no cable. Continue with the next failing item in the failing item list. **This ends the procedure.**

Use the following table to determine the SAS device cables that might be failing. Ensure the cables are connected correctly. If they are not connected correctly, fix the cable connection problem. If they are already connected correctly, replace the cables. See "Planning for serial-attached SCSI cables," in Planning for cables for cable FRU part numbers.

Note: Power off the system, partition, or card slot before connecting and disconnecting cables, as appropriate, to prevent hardware damage.

Table 14. SAS device cables for system units and expansion units

System unit or expansion unit	SAS device cables
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	Front SAS cable for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A.
Disk expansion unit attached to an 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	<ul style="list-style-type: none"> • Rear SAS cable for the 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A. • SAS cable from system unit to expansion unit.
8247-42L, 8286-41A, or 8286-42A	Front SAS cable for the 8247-42L, 8286-41A, or 8286-42A.
Disk expansion unit attached to an 8286-41A or 8286-42A	<ul style="list-style-type: none"> • Rear SAS cable for the 8286-41A or 8286-42A. • SAS cable from system unit to expansion unit.

This ends the procedure.

SASEXP

The expander or ESM (Enclosure Services Manager) might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

1. Does the SRC that sent you here begin with 50B1 or 78D1?
 - **No:** Go to step step 3.
 - **Yes:** Continue with the next step.

2. Find the resource name that this error was logged against. The resource name can be obtained from the service action log (see Searching the service action log). Then, using the resource name, perform the following steps:
 - a. Access SST or DST.
 - b. Select **Start a Service Tool**.
 - c. Select **Hardware Service Manager**.
 - d. Select **Locate resource by resource name**.
 - e. Enter the resource name that this error was logged against.
 - f. Select the **Associated packaging resources option for the expander**.
 - g. Select the **Display detail for the expander/ESM** option to display its location code.

Replace the expander/ESM at the location displayed. For information on how to match location code to physical location and removal and replacement procedure, see Part locations and location codes.

CCIN	Type and model	Part number	Description	Location code
50B1	5887	See System parts.	Enclosure Services Manager (ESM)	Un-P1-C1, Un-P1-C2
78D1	5147-024, ESLL, or ESLS	See System parts.	Enclosure Services Manager (ESM)	Un-P1-C1, Un-P1-C2

This ends the procedure.

3. Is the device an internal device (not in an external expansion unit or a storage enclosure)?
 - **No:** Replace the expanders/ESMs in the external expansion unit or in the storage enclosure, one at a time until the problem is resolved. **This ends the procedure.**

CCIN	Type and model	Part number	Description	Location code
50B1	5887	See System parts.	Enclosure Services Manager (ESM)	Un-P1-C1, Un-P1-C2
78D1	5147-024, ESLL, or ESLS	See System parts.	Enclosure Services Manager (ESM)	Un-P1-C1, Un-P1-C2

- **Yes:** The expander is integrated into the device backplane.

If you have not replaced the device backplane, replace it. Use the following table to determine the part number for the field replaceable unit (FRU). If you have already replaced the device backplane, continue with the next failing item in the failing item list. **This ends the procedure.**

CCIN	Type and model	Part number	Description	Location code
	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	Drive backplane	Un-P2

SI_CARD

Symbolic FRU SI_CARD is not supported on these models. Continue with the next FRU in the list.

SI_PHB

Symbolic FRU SI_PHB is not supported on these models. Continue with the next FRU in the list.

SIADPCD

Symbolic FRU SIADPCD is not supported on these models. Continue with the next FRU in the list.

SICNTRL

Symbolic FRU SICNTRL is not supported on these models. Continue with the next FRU in the list.

SIIOADP

Symbolic FRU SIIOADP is not supported on these models. Continue with the next FRU in the list.

SIRGCBL

This symbolic FRU is not supported on the system. Continue with the next FRU in the failing item list.

SIRGCFG

Symbolic FRU SIRGCFG is not supported on these models. Continue with the next FRU in the list.

SIRSTAT

Symbolic FRU SIRSTAT is not supported on these models. Continue with the next FRU in the list.

SLOTERR

The PCI host bridge detected a problem with a PCI card location that it controls.

The problem is in the controls for the card slot. The card location might or might not have an installed card. If there is a card installed in that location, it might be the source of the problem.

Use the following table to match the symbolic FRU description in the Service Action Log (SAL) to the meaning or corrective action.

Table 15. Card slot errors

Problem or message	Meaning or corrective action
LED control failure, do not use slot.	System code has detected a problem with the controls for the LED at the card location. Do not use that card location.
Power control failure, do not use slot.	System code has detected a problem with the power controls at the card location. Do not use that card location.
PCI host bridge card slot error, do not use card slot.	System code has detected a problem with the controls at the card location. Do not use that card location.

This ends the procedure.

SLOTUSE

The card in the given slot is not available for use.

1. Is the SRC B2002250 or B2002300?
 - **No:** Continue with step 3.
 - **Yes:** The first two characters in word 4 of the reference code will identify the platform Licensed Internal Code component that has control of the slot. Continue with the next step.
2. What is the value of the first two characters of word 4 of the reference code?
 - **81:** The concurrent maintenance component has control of the slot. The concurrent maintenance procedure must complete before the partition will be able to perform an IPL. **This ends the procedure.**
 - **02 or 03:** The component that has control of the slot is management console service or management console configuration. Make sure that management console functions are not using the slot. **This ends the procedure.**

- **Other:** Contact your next level of support. **This ends the procedure.**
3. Is the SRC B2002475?
 - **No:** Contact your next level of support. **This ends the procedure.**
 - **Yes:** Continue with the next step.
 4. Look in the serviceable event view for part numbers and location codes associated with the card slot.

Note: There will not be a part number if the card slot is empty.

If the reference code is on the control panel, look in the FRU section of the reference code for the location of the card slot. Check the server to see if a card is physically present in the card slot. Is a card physically present?

- **No:** Use symbolic FRU LPARCFG to reconfigure the card slot so that it is not a required resource to perform a partition IPL. **This ends the procedure.**
- **Yes:** Replace the failing card. **This ends the procedure.**

SNSDATA

Look here for information about SNSDATA symbolic FRU.

This is a portion of the SCSI sense data associated with the unit reference code (URC); it is not a failing item in and of itself. This data is referenced by certain failure isolation procedures within the 3996 Maintenance Information included with the 3996 Optical Library.

SPBUS

The path to the service processor might be the failing item.

Look in the serviceable event view. Fix all B700 697x errors that occurred at approximately the same time. One of them will implicate the hardware that communicates with the service processor.

SPCABLE

The service processor cables might be failing.

To determine the location of the service processor cables, complete the following steps:

1. Is a location code available in the serviceable event view for this failing item?
 - **Yes:** The location code in the serviceable event view is the location of the service processor. Continue with the next step.
 - **No:** The location of the service processor could not be determined. Continue with the next step.
2. Use the following table to determine the location of the service processor cables to replace. If the location of the service processor was identified in step 1, replace only the service processor cables associated with that service processor. Otherwise, replace the service processor cables associated with both service processors. Use the management console to replace the service processor cables. If no service processor cable exists at the port location that is identified, continue with the port location of the next service processor cable.

Type and model	Location code of the service processor	Location code of the service processor cable port	Part number	Service action
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C7	<ul style="list-style-type: none"> • Un-P1-C7-T1 • Un-P1-C7-T2 • Un-P1-C7-T4 • Un-P1-C7-T5 	See System parts.	Replace the service processor cables that are identified in this procedure. For more information about location codes, see Part locations and location codes.
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	Un-P1-C10	<ul style="list-style-type: none"> • Un-P1-C10-T1 • Un-P1-C10-T2 • Un-P1-C10-T4 • Un-P1-C10-T5 	See System parts.	Replace the service processor cables that are identified in this procedure. For more information about location codes, see Part locations and location codes.

This ends the procedure.

SPNETWK

A connection between a management console and a service processor has been lost.

The location code will identify the unit to which contact was lost.

1. Is the system receiving power?
 - **No:** Take the necessary action to restore power to the system. **This ends the procedure.**
 - **Yes:** Continue with the next step.
2. Verify the network connection between the service processor and the management console.
3. Does the problem persist?
 - **No:** **This ends the procedure.**
 - **Yes:** Continue with the next step.
4. Shut down the operating system for the server in preparation to reboot the server. Reapply the power and boot the server. Does the problem persist?
 - **No:** **This ends the procedure.**
 - **Yes:** Continue with the next step.
5. Use SVCPROC to replace the service processor. If the problem persists, contact your next level of support. **This ends the procedure.**

SPNLCRD

This symbolic FRU is no longer supported.

SRCTB1X

There is a failure detected by the power subsystem.

The complete FRU part number, procedure ID, or symbolic FRU could not be determined by the power subsystem firmware. This FRU in the serviceable event view might have a partial or complete location code that will assist you in the repair action. Go to Reference codes and look up the SRC.

Read the SRC description and perform any actions indicated.

STGCART

The USB removable storage cartridge might be failing.

Complete the following steps:

1. Is a location code available in the serviceable event view for this field-replaceable unit (FRU)?
 - **Yes:** Determine the location of the port by removing -Lx from the location code. Replace the USB removable storage cartridge at the port location. For more information, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**
 - **No:** Continue with the next step.
2. Is "STGDOCK" one of the failing items listed in the serviceable event view for this error, and is a location available for that failing item?
 - **Yes:** Determine the location of the port by removing -Lx from the location code. Replace the USB removable storage cartridge at the port location. For more information, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**
 - **No:** Contact your next level of support. **This ends the procedure.**

STGDOCK

The USB docking station might be failing.

Complete the following steps:

1. Is the system an 8286-41A with feature code EUA3 (internal USB docking station) installed?

Note: If you do not know whether the system is an 8286-41A with feature code EUA3 installed, go to step 5.

 - **Yes:** Go to step 6.
 - **No:** Continue with the next step.
2. Is a location code available in the serviceable event view for this field-replaceable unit (FRU)?
 - **Yes:** Go to step 5.
 - **No:** Continue with the next step.
3. Is the secondary code 00009913?
 - **Yes:** Go to step 6.
 - **No:** Continue with the next step.
4. To determine the location of the USB port to which the external USB docking station is attached, go to "USB_DEV" on page 296 symbolic FRU. Replace the USB docking station at the other end of the USB cable that is connected to the port location that you identified. For more information, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**
5. Does the location code end with "-INTERNAL" or is the secondary code 00009913?
 - **Yes:** The docking station is an internal USB docking station that is located in the front of the system unit. Continue with the next step.
 - **No:** Determine the location of the USB port to which the device is attached by removing -Lx from the location code. Replace the USB docking station at the other end of the USB cable that is connected to the port location that you identified. For more information, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**
6. The docking station is connected to the USB adapter with an internal USB connection. Replace the internal USB docking station that is located in the front of the system unit. **This ends the procedure.**

STORIOA

This symbolic FRU indicates that the storage I/O adapter part number could not be determined.

Use the I/O adapter location information in the serviceable event view if it is available. If the location is not available, find the address of the I/O adapter. See the System reference code format description. Use the address to find the location. See Addresses. For part number information, see PCI adapter information by feature type. To replace the failing item, see PCI adapter.

SVCDOSCS

Look here for information about SVCDOSCS symbolic FRU.

This symbolic FRU means that the service action is to read the description of the system reference code (SRC) and perform any actions indicated there. If you have already read and performed the actions in the description, go to the next failing item in the failing item list.

If you cannot return to the SRC description, go to Reference codes and look up the SRC.

Read the SRC description and perform any actions indicated.

SVCPROC

The service processor might be failing.

Use the following table to determine the FRU part number for the service processor. Some units have a service processor that is built into the system backplane.

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System backplane (service processor is part of the system backplane)	Un-P1
8408-44E or 8408-E8E	See System parts.	I/O backplane	Un-P1
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Service processor card	Un-P1-C7 or Un-P1-C10 in the system control unit

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

SYSBKP2

The failing component is the system backplane.

Replace the system backplane.

After you have replaced the part, set the enclosure serial number before powering on, otherwise the machine will not perform an IPL. See the system unit service information for more information regarding setting the enclosure serial number.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

SYSBKPL

The backplane might be failing.

Use the table below to find the service information for the specified FRU.

Note: After you have replaced the part, make sure to set the enclosure serial number before powering on, otherwise the machine will not perform an IPL. For more information, see Setting the system enclosure type.

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	<ul style="list-style-type: none"> System backplane Drive backplane 	<ul style="list-style-type: none"> Un-P1 Un-P2
8408-44E or 8408-E8E	See System parts.	<ul style="list-style-type: none"> I/O backplane System backplane 	<ul style="list-style-type: none"> Un-P1 Un-P2
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	System backplane	Un-P1

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

SYSBP

SYSBP symbolic FRU is not supported on these models. Continue with the next FRU in the list.

SYSNTWK

There has been a network adapter failure on this management console.

- Check the amber port LEDs. Are all of the amber LEDs blinking?
 - Yes:** One of the ports is not properly configured. For the Hardware Management Console, go to Configuring the HMC. **This ends the procedure.**
 - No:** The port with the unlit amber LED is experiencing the problem. Continue with the next step.
- Ensure that the port is properly defined.
- Run PC Doctor diagnostics to determine which resource is failing, and then replace that failing resource. For Hardware Management Console (HMC) diagnostic and parts information, see Hardware Management Console operations.

This ends the procedure.

TAPCLN

Clean the tape unit.

TAPCNFG

Look here for information about TAPCNFG symbolic FRU.

One of the following configuration problems was detected:

- Tape and disk devices are attached to an I/O processor or IOA that does not support tape and disk devices at the same time.
- An unsupported device type or model is attached.

Correct the configuration problem before exchanging any parts.

TAPMLB

The tape library device might be failing.

To determine the parts to replace, see the maintenance information for the tape library device.

TOD

The battery for the time-of-day battery is low or failing.

See symbolic FRU TOD_BAT.

TOD_BAT

The time-of-day battery is low or failing.

Replace the time-of-day battery.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

This ends the procedure.

TOPORT

Symbolic FRU TOPORT is not supported on these models. Continue with the next FRU in the list.

TPMD_OV

The thermal power management firmware detected that the system is operating without power supply redundancy.

The maximum power limit for the operational power supply was reached and action was taken to reduce power consumption. A power-related SRC might or might not have been logged.

If you need additional information for failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system.

Complete the following steps.

1. Check the error log for power-related SRCs (1xxx yyyy). Did you find a power-related SRC?

- **No:** Continue with the next step.
 - **Yes:** Resolve the problem by using the power-related SRC. **This ends the procedure.**
2. Are any of the power supplies missing?
 - **No:** Continue with the next step.
 - **Yes:** Install the missing power supply. **This ends the procedure.**
 3. Check the LEDs on the power supplies (see PWRSPPLY for descriptions of the LEDs and their meaning). If the LEDs indicate that one of the power supplies is failing, replace it first. If the LEDs do not indicate a failure, replace the power supplies one at a time. Did replacing the power supplies resolve the problem?
 - **No:** Continue with the next step.
 - **Yes:** **This ends the procedure.**
 4. Check the system frequency by using standard performance tools. Is the system running at the expected frequency?
 - **No:** Contact your next level of support. **This ends the procedure.**
 - **Yes:** A temporary power loss occurred. No service action is required. **This ends the procedure.**

TWRBKPL

Symbolic FRU TWRBKPL is not supported on these models. Continue with the next FRU in the list.

TWRCARD

An SPCN card might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

The SPCN card can be on either an adapter style card or integrated on the system backplane or an I/O backplane in an attached EMX0 PCIe3 expansion drawer.

Complete the following steps:

1. Is the system reference code (SRC) 1xxx00AD?
 - **No:** Continue with the next step.
 - **Yes:** The 1xxx00AD SRC might be caused by an intentional reset of the service processor. An intentional reset is caused by an action such as a pin hole reset, ASMI menu selection, or part replacement. An intentional reset requires no service action. If your system produced the 1xxx00AD SRC and an intentional reset was not the cause, use the following table to determine the part number of the field-replaceable unit (FRU). **This ends the procedure.**

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System backplane	Un-P1
8408-44E or 8408-E8E	See System parts.	I/O backplane	Un-P1
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Service processor card	Un-P1-C7 or Un-P1-C10 in the system control unit

2. The failing SPCN component is in an EMX0 PCIe3 expansion drawer. Use the following table to determine the part number of the field-replaceable unit (FRU).

Type and model	Part number	Description	Location code
EMX0 PCIe3 expansion drawer	See System parts.	Chassis management card	U11-P3-C1

This ends the procedure.

TWRPLNR

Symbolic FRU TWRPLNR is not supported on these models. Continue with the next FRU in the list.

UC235

The problem might be that the card (a resource) was removed from the card enclosure without updating the system configuration records.

Note: If the system has OptiConnect, verify that the remote system was powered on at the time of the failure.

To update the system configuration records select **Hardware System Manager > Logical Hardware Resources > System Bus Resources > Non-reporting Resources > Remove.**

This ends the procedure.

UC236

The problem might be that the card (a resource) is not correctly plugged into the card enclosure.

Use the location information associated with this failing component in the service action log entry and verify that the card is installed properly.

UG3LB

Communications problem analysis has completed successfully.

The results have been recorded in the problem log. You can keep this information for future reference, or you can delete the problem record using the delete problem (DLTPRB) command. The problem record can also be deleted by selecting option 4 from the work with problem display for the problem.

If you choose to keep the problem information, you can run the procedure again by selecting option 8 to work with the problem.

This ends the procedure.

UG3AS

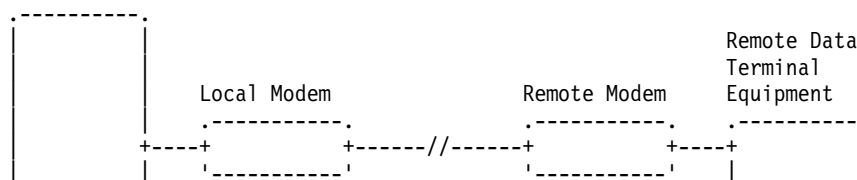
An error has been detected in the licensed internal code.

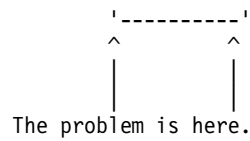
Contact your next level of support for possible corrective actions.

UJ0E2

The problem has been isolated to the remote data terminal equipment.

Local System

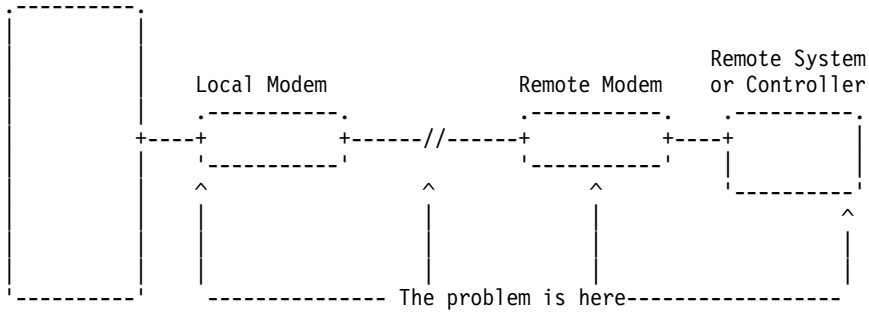




UJ0E3

The problem has been isolated to the local modem or the hardware that links to the remote end.

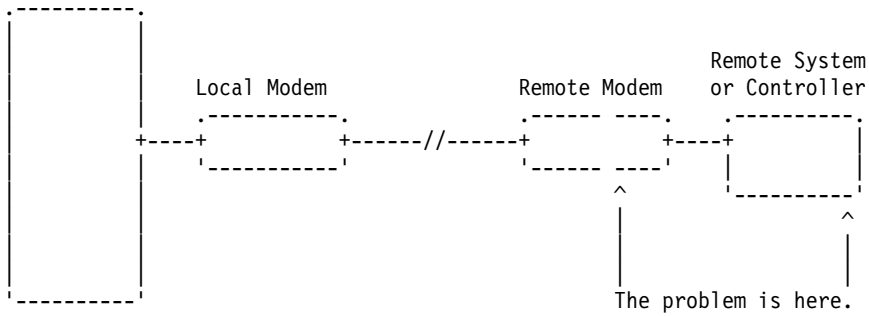
Local System



UJ0E6

The problem has been isolated to the remote modem, or the remote system or controller.

Local System

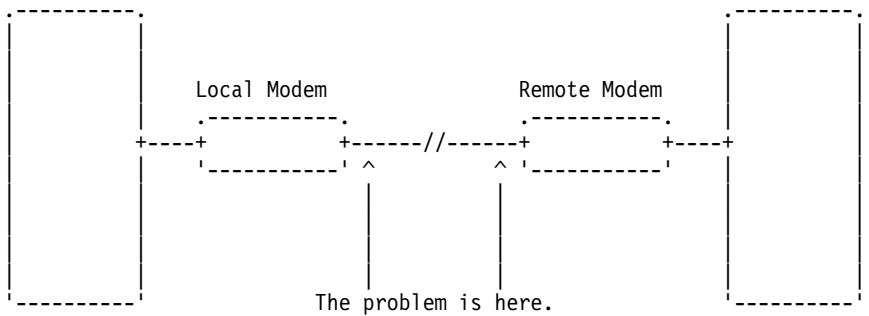


UJ0E7

The problem has been isolated to the telephone line equipment that links the local and the remote equipment.

Local System

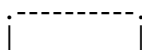
Remote System or Controller

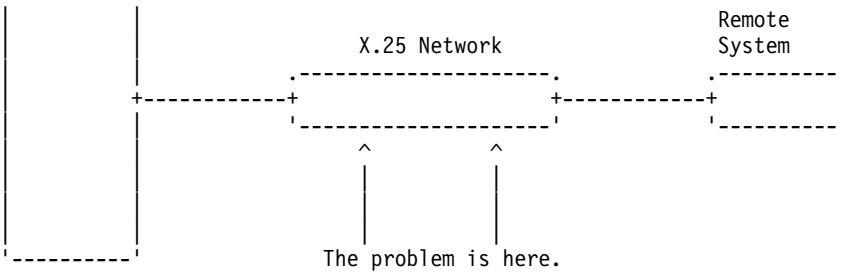


UJ0E9

The problem has been isolated to the X.25 network.

Local System





UJ6P3

An error occurred in the Facsimile Support/400 licensed program.

Please contact your next level of support for possible corrective actions.

Find additional information on Facsimile Support for iSeries in the Facsimile Support for AS/400 User's Guide.

UJ9GC

The configuration for the wireless network has been identified as a cause of the problem.

The following parameters must be the same for the entire network:

- Frequency
- Data rate
- Radio system identifier

The configuration for one or more of the following will need to be changed:

- IBM i line description
- Access points
- Remote devices

UJA32

The communication line or the automatic call unit is already being used.

Complete the following actions:

1. Use the documentation that came with your automatic call unit to verify that the unit is configured correctly.
2. Make sure that the telephone line attached to your automatic call unit is not being used by another job.

This ends the procedure.

UJA33

The problem can be caused by too many active lines using the same input/output processor (IOP) or by setting the line speed too high.

Complete the following to find which active lines use the same IOP, and to correct the problem:

1. Vary off the failing line using the VRYCFG command.
2. Vary the line on again, with the reset option of the VRYCFG command set to **Yes**. The active lines that use the IOP will be displayed with their line speeds.
3. Determine whether there are too many lines using the IOP, or whether the line speeds are too high.
4. Correct the configuration as needed.

This ends the procedure.

UJA34

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The line configuration parameter that was identified as a possible problem can be changed by using the WRKLIND command. Determine whether the suspected configuration parameter is wrong and change if necessary.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJA35

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the synchronous data link control (SDLC) controller description with the DSPCTLD command.

The controller description was created by the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJA36

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the X.25 line description with the DSPLIND command.

The line description was created by the CRTLINX25 command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJB35

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the binary synchronous line description with the DSPLIND command.

The line description was created by the CRTLINBSC command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJB36

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the binary synchronous control unit description with the DSPCTLD command.

The controller description was created by the CRTCTLBSC command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJB37

A configuration problem occurred.

The problem might be caused by too many jobs running at the same time.

To display all active jobs, and the system resources being used by the jobs, use the display active job command (WRKACTJOB).

To display how the system is being used and how the system memory is allocated, use the display system status command (WRKSYSSTS).

You might need to cancel some jobs or wait until some jobs complete before you run your communications job.

This ends the procedure.

UJC35

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the IDLC line description with the DSPLINID command.

The line description was created by the CRTLINASC command. You might need to review the CRTLINASC command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you see this temporary change.

UJC36

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the asynchronous control unit description with the DSPCTLD command.

The control unit description was created by the CRTCTLASC command. You might need to review the CRTCTLASC command information to determine whether the suspected configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you see this temporary change.

UJC37

A configuration problem occurred.

Verify that the configuration parameters for your asynchronous equipment are correct by performing the following actions:

- Display the line description with the DSPLIND command (created by the CRTLINASC command).
- Display the controller description with the DSPCTLD command (created by the CRTCTLASC command).
- Display the remote device description with the DSPDEVVD command (created by the CRTDEVASC command).

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct.

Report this problem to your service representative if you use this temporary change.

This ends the procedure.

UJC38

The communications line or the automatic call unit is already being used.

Complete the following actions:

- Use the documentation that came with your automatic call unit to verify that the unit is configured correctly.
- Make sure that the telephone line attached to your automatic call unit is not being used by another job.

This ends the procedure.

UJE31

There might be a problem with the Token-Ring Network Manager program.

Contact the token-ring administrator responsible for your network.

UJE32

There might be a problem with the Token-Ring Network Management function.

Contact the token-ring administrator responsible for your network.

UJE33

The token-ring adapter returned status information because it has received a beacon frame from the token-ring network.

The line is still operational; however, if this problem occurs often it could be because of electrical noise on the network. To learn more about electrical requirements and noise problem considerations, see Site preparation and physical planning.

UJE34

The error message might have been logged from a temporary error that is not caused by equipment failure.

This type of error message sometimes contains information about system performance. See the original system message for cause and recovery information about the error.

UJE35

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the local area network line description with the DSPLIND command.

The line description was created by the CRTLINTRN, CRTLINETH, or CRTLINDDI command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily resolved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJE36

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the local area network control unit description with the DSPCTLD command.

The controller description was created by the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJE37

The problem might be at the remote site.

Complete the following steps:

1. Ask the remote site operator to verify the following items:
 - The remote equipment is powered on and ready.
 - The configuration values are correct.
 - The local area network cables are securely connected and are not damaged.
2. If the problem continues, run all available diagnostic tests on the remote equipment and perform the repair action specified.

This ends the procedure.

UJE38

Too many jobs are running that use the communications controller.

Before you can run your communications job, you must perform one or more of the following actions:

- End any diagnostic program that might be running, such as the Communications Trace Program.
- Vary off a line that is using the controller.
- Lower the speed of a line that uses the controller.

Complete the following steps to determine which lines are using the controller:

1. Vary off the failing line using the VRYCFG command.
2. Vary the line on again, with the reset option of the VRYCFG command set to **Yes**. The names of the lines using the controller will be displayed.

This ends the procedure.

UJE39

The problem might be at the remote site.

Complete the following steps:

1. Ask the remote site operator to verify the following items:
 - The remote equipment is powered on and ready.
 - The configuration values are correct.
2. If the problem continues, run all available diagnostic tests on the remote equipment and perform the repair action specified.

This ends the procedure.

UJE40

The problem might be at the remote site or on the network media.

Complete the following steps:

1. Ask the remote site operator to verify the following items:
 - The remote equipment is powered on and ready.
 - The configuration values are correct.
 - The local area network cables are securely connected and are not damaged.
2. If the problem continues, run all available diagnostic tests on the remote equipment and perform the repair action specified.

This ends the procedure.

UJJ35

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the X.25 line description with the DSPLIND command.

The line description was created by the CRTLINX25 command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJJ36

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the X.25 control unit description with the DSPCTLD command.

The controller description was created by the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRWS, or CRTCTLASC command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UJJ37

The error message might have been logged from a temporary error that is not caused by equipment failure.

This type of error message sometimes contains information about system performance. See the original system message for cause and recovery information about the error.

UJJ38

A user specified X.25 facility, such as packet size, window size, reverse charging, or closed user group, might not have been correctly assigned.

UJJ39

Look here for information about UJJ39 symbolic FRU.

Refer to the "Configure your iSeries server for communications" information.

UJP37

A configuration problem occurred.

The problem might be caused by one of the following items:

- Too many active lines are using the same I/O processor (IOP).
- The line speeds are set too high.

To find the lines using the same IOP, perform the following steps:

1. Vary off the failing line (VRYCFG command).
2. Vary the line back on, with the reset option of the VRYCFG command set to Yes.
3. The active lines using that IOP will be displayed with their line speeds. Determine whether there are too many lines using the IOP, or whether the line speeds are set too high. Correct the configuration as needed.

This ends the procedure.

UKN572F

This symbolic FRU is not supported on the system.

UKN58B0

Symbolic FRU UKN58B0 is not supported on these models. Continue with the next FRU in the list.

ULNZ3

The problem might be a communications line problem.

When a workstation is attached to the system through modems, it might fail or lose communication with the system for various lengths of time. This is due to a communications line problem. Refer to the modem service information to determine how to test the modems and verify that the communications line between the modems is working correctly.

ULNZ4

Independent workstation and SDLC support.

The system considers an independent workstation to be an attached remote system when it is attached using PC Support asynchronous communications on an ASCII workstation controller. See the *ASCII Work Station Reference*, SA41-3130-00 information for instructions on how to verify that the remote system (independent workstation) that is attached to the failing port is a supported device. See the device hardware maintenance and service information for instructions on how to verify that the device is working correctly.

UNM31

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the ISDN network interface description with the DSPNWIISDN command.

The line description was created by the CRTNWIISDN command. You might need to review the appropriate command information to determine whether the configuration parameter is wrong.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UNM32

The licensed internal code of the communications I/O card cannot obtain a necessary resource because of a heavy workload.

This can be caused by too many configured stations, too many users, maximum inbound or outbound data sizes, as well as other considerations.

Try to reduce the total workload on the communications I/O controller card by performing one of the following options:

- Change the communications configuration
- Vary off any unused lines
- End any service functions that are not needed

UNM35

There could be a problem at the remote U interface, between the NT1 node and the Integrated Services Digital Network (ISDN).

This interface is a 2-wire connection between the NT1 node and the ISDN. Contact your ISDN provider and have them verify the proper operation of the interface.

UNM36

There might be a problem in the Integrated Services Digital Network (ISDN).

Contact your ISDN service provider and report the problem

UNM38

The required program temporary fix (PTF) is not installed.

To use the specified network type, you must first install a PTF. If the PTF has not been previously installed, install it and try the operation again.

UNP20

The internal code of the I/O card that detected the error might be defective.

Complete the following steps:

1. Replace the suspected card.
2. If the failure occurs again, contact your next level of support and report the problem.

This ends the procedure.

UNU01

Electrical noise in the local environment can cause performance degradation or loss of an ISDN communications link.

Motors, electrical devices, power cables, communications cables, radio transmitters, and magnetic devices can cause noise or electrical interference.

Complete the following steps:

1. Inspect ISDN cables or wiring located near a source of possible noise or electrical interference.
2. Inspect ISDN cables for damage, incorrect connections, or loose connections.
3. Consult your local ISDN network provider or service representative for assistance in correcting the problem.

This ends the procedure.

UNU02

The problem might be at the remote location.

Complete the following steps:

1. Have the remote site operator verify that the remote equipment is powered on and ready, and that the remote configuration values are correct and compatible with the local configuration.
2. If the problem continues, determine whether data is being transferred over the remote ISDN interface. This can be done by either using a communications trace (STRSST), or attaching a protocol analyzer to the line.
 - If a line trace reveals that no data is being transferred, run hardware and diagnostic tests on the remote equipment.
 - If data is crossing the ISDN interface, analyze the failing protocol procedures to determine which configuration parameters to change. Consult your service representative for help with this analysis.

This ends the procedure.

UNU31

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the IDLC line description with the DSPLINIDLC command.

The line description was created by the CRTLINIDLC command. You might need to review the appropriate command information to determine whether the configuration parameter is incorrect.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UNU32

A configuration parameter might be incorrect.

To determine the configuration parameter that was identified as a possible problem, search for the error in the service action log and display the failing item information for the error. The failing item description associated with this symbolic FRU identifies the parameter that might be the problem.

The configuration parameter that was identified as a possible problem can be verified by displaying the IDLC controller description with the DSPCTLD command.

The controller description was created by the CRTCTLHOST, CRTCTLAPPC, or CRTCLRWS command. You might need to review the appropriate command information to determine whether the configuration parameter is incorrect.

Some software problems can be temporarily solved by changing the configuration parameter, even if the original value was correct. Report this problem to your service representative if you use this temporary change.

UPLF1

The system might not have been able to complete the Advanced Peer-to-Peer Networking (APPN) session initiation due to the number of jobs that were active when the timeout occurred.

The timeout condition could have been caused by a system performance problem. System performance could be impacted by the capacity of the system. System performance can also be impacted by processing requests from other systems in the network.

UPLF2

A request was sent to one or more systems in the network, but the local system did not receive the response in the allotted time.

The timeout might be caused by a network performance problem. Possible causes for network performance problems are:

- Network congestion
- Capacity of some systems in the network exceeded
- Software problem in one or more systems might have caused the requests to be lost

Contact the remote operators to determine whether any software problems related to Advanced Peer-to-Peer Networking (APPN) have been reported. Take any steps necessary to correct the problem.

This ends the procedure.

UPLF3

A timeout condition might have occurred because the system was not able to activate a switched link to a remote control point.

A possible cause is that a message was issued to the QSYSOPR message queue that pertains to the controller description selected by Advanced Peer-to-Peer Networking (APPN). However, no response to the message was provided.

This timeout also might have occurred because a previous session initiation request for the same local location, remote location, and mode name failed during the switched link activation.

This ends the procedure.

UPLF4

The session initiation attempt might have failed because of a route selection problem.

Advanced Peer-to-Peer Networking (APPN) transmission groups and nodes with acceptable class-of-service characteristics might need to be activated in the intermediate routing portion of the network.

If the operating systems involved are IBM i operating systems, this might require varying on line descriptions and controller descriptions in the network. It might also indicate that one or more communication lines between some of the systems in the network are not operating.

This ends the procedure.

UPLF5

The session initiation attempt might have failed because of a route selection problem.

The available nodes and transmission groups in the Advanced Peer-to-Peer Networking (APPN) topology might be unacceptable for the class-of-service being requested. A possible solution is to select a different class-of-service for the session initiation request so that the existing network topology is considered acceptable.

The class-of-service used for the session initiation requests in an IBM i operating system is specified in the mode description. Have the user select a mode description that specifies an acceptable class-of-service, or change the mode description so that it specifies an acceptable class-of-service.

This ends the procedure.

UPLF6

The session initiation attempt might have failed because of a route selection problem.

Transmission groups and nodes with acceptable class-of-service characteristics might need to be defined in the intermediate routing portion of the network. It is suggested that the correct documentation be referenced to determine how to define nodes and transmission groups with acceptable class-of-service characteristics.

This ends the procedure.

UPSUNIT

The uninterruptible power supply (UPS) might be the failing component.

Complete the following steps:

1. Is the problem that the system has a UPS reference code, but the UPS does not have a fault code?
 - **Yes:** Continue with the next step.
 - **No:** Go to step 3.
2. Remove the UPS signal cable from the system connector. Does the system report a UPS reference code now?
 - **No:** Continue with the next step.
 - **Yes:** Replace the following, one at a time, until the problem is resolved. Use the following table to determine the part number for the field replaceable unit (FRU).

CCIN or FCC	Type and model	Part number	Description	Location code
	Any	See System parts.	System backplane	Un-P1

CCIN or FCC	Type and model	Part number	Description	Location code
	UPS		Remote power controller (RPC)	

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system. **This ends the procedure.**

3. Complete the following steps:
 - a. Verify the UPS signal cable, between the UPS and the system, is connected and seated properly.
 - b. Have the customer call the UPS provider for service if a problem is found.
 - c. Call service support if the problem is not resolved after the UPS is verified as working correctly.

This ends the procedure.

USB_CBL

The USB cable or the USB connection between the I/O adapter (IOA) and the device might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

1. Is a location code available in the serviceable event view for this field-replaceable unit (FRU)?
 - Yes:** Determine the location of the port by removing -Lx from the location code. Replace any USB cables or extension cables at the port location. If there are no USB cables or extension cables, replace any hardware that connects the IOA to the device. Then, continue with step 3.
 - No:** Continue with the next step.
2. Use the "USB_DEV" on page 296 symbolic FRU to determine the location of the USB port that the external USB device is attached to. Replace any USB cables or extension cables at the port location. If there are no USB cables or extension cables, replace any hardware that connects the IOA to the device. Then, continue with the next step.
3. Has the problem been resolved?
 - Yes: This ends the procedure.**
 - No:** Continue with the next step.
4. Is the system a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME, or is the problem in an EMX0 PCIe3 expansion drawer?
 - Yes:** Continue with the next failing item in the failing item list. **This ends the procedure.**
 - No:** Continue with the next step.
5. Use the following table to determine the internal USB cable that might be failing. Ensure that the cables are connected correctly. If they are not connected correctly, fix the cable connection problem. If they are already connected correctly, replace the cables.

System unit	Location code	Service action	Part number
8247-21L or 8284-21A	<ul style="list-style-type: none"> • Un-P1-T3 • Un-P1-T4 	Perform Rear USB cable for the 8247-21L or 8284-21A.	See 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A system parts.

System unit	Location code	Service action	Part number
8247-21L, 8247-22L, 8284-21A, or 8284-22A	<ul style="list-style-type: none"> • Un-P1-T5 • Un-P1-T6 	Perform Front USB cable for the 8247-21L, 8247-22L, 8284-21A, or 8284-22A.	See 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A system parts.
8247-42L, 8286-41A, or 8286-42A	<ul style="list-style-type: none"> • Un-P1-T1 • Un-P1-T2 	Perform Rear USB cable for the 8247-42L, 8286-41A, or 8286-42A.	See 8247-42L, 8286-41A, or 8286-42A system parts.
8247-42L, 8286-41A, or 8286-42A	<ul style="list-style-type: none"> • Un-P1-T5 • Un-P1-T6 	Perform Front USB cable for the 8247-42L, 8286-41A, or 8286-42A.	See 8247-42L, 8286-41A, or 8286-42A system parts.

USB_DEV

The USB device might be failing.

Complete the following steps:

1. Does the location in the service action log for this field-replaceable unit end with -Cx or -Dx?

Yes: Replace the USB device at the location indicated. For more information, see Part locations and location codes. Select your machine type and model number to find more location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**

No: Continue with the next step.

2. Was the serviceable event logged by the adapter resource?

Yes: Determine the location of the port by removing -Lx from the location code. Use the "USBPORT" on page 299 symbolic FRU to determine the location of the USB port that the device is attached to. Replace the device at the port location. If there is no device at the port location, trace the USB cable at the port location to the device and replace the device. For more information, see Part locations and location codes. Select your machine type and model number to find more location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**

No: Continue with the next step.

3. Find the product activity log for the system reference code (SRC) by completing the following steps:

- a. Select System Service Tools (SST).

If you cannot get to SST, select DST.

Note: Do not perform an IPL of the system to get to DST.

- b. In the Service Tools display, select **Start a service tool**.
- c. In the Start a Service Tool display, select **Product activity log**.
- d. In the Product Activity Log display, select **Analyze log**.
- e. In the Select Subsystem Data display, select **All Logs**.

Note: If the SRC you are using occurred more than 24 hours ago, change the from and to dates and times from the 24-hour default.

- f. Use the defaults on the Select Analysis Report Options display by pressing Enter.
- g. Find the entry in the product activity log that matches the SRC.

4. Select the **Display Detail Report** on the Resource display.
5. Press F6 (Hexadecimal report) to display the hexadecimal information of the product activity log.
6. Look for the first occurrence of 0A77 in the hexadecimal data between offset 00019E and the end of the hexadecimal data.

7. Record the hexadecimal digit that immediately follows the 0A77 digits. This hexadecimal digit is the logical USB port number.
8. Use the following table to determine the physical USB port location. Replace the device at the port location. For more information, see Part locations and location codes. Select your machine type and model number to find more location codes, part numbers, or replacement procedures for your system.

USB adapter type	Type and model	Logical USB port number	Physical USB port location
USB I/O adapter that is embedded on the system backplane	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	01 or 05	Un-P1-T3 (rear on 5148-21L, 8247-21L, and 8284-21A only)
		02 or 06	Un-P1-T4 (rear on 5148-21L, 8247-21L, and 8284-21A only)
		03 or 07	Un-P1-T6 (front)
		04 or 08	Un-P1-T5 (front)
USB I/O adapter that is embedded on the system backplane	8247-42L, 8286-41A, or 8286-42A	01 or 05	Un-P1-T2 (rear)
		02 or 06	Un-P1-T1 (rear)
		03 or 07	Un-P1-T6 (front)
		04 or 08	Un-P1-T5 (front)
PCIe3 USB I/O adapter card (CCIN 58F9)	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	01 or 05	Un-P1-Cx-T3
		02 or 06	Un-P1-Cx-T2
		03 or 07	Un-P1-Cx-T4
		04 or 08	Un-P1-Cx-T1
PCIe3 USB I/O adapter card (CCIN 58F9)	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	01 or 05	Un-P1-Cx-C1-T3
		02 or 06	Un-P1-Cx-C1-T2
		03 or 07	Un-P1-Cx-C1-T4
		04 or 08	Un-P1-Cx-C1-T1
PCIe3 USB I/O adapter card (CCIN 58F9)	EMX0 PCIe3 expansion drawer	01 or 05	Un-Px-Cy-T3
		02 or 06	Un-Px-Cy-T2
		03 or 07	Un-Px-Cy-T4
		04 or 08	Un-Px-Cy-T1

This ends the procedure.

USB_IOA

The USB I/O adapter (IOA) might be failing.

Complete the following steps to determine the location of the USB I/O adapter:

Note: In some cases, the USB I/O adapter is integrated on the system backplane. If the location indicated is the system backplane location, replace the system backplane.

1. Is the IOA location available in the service action log?

Yes: Replace the USB IOA at the location indicated. For more information, see Part locations and location codes. Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**

No: Continue with the next step.

2. Record the first 4 characters of word 7 in the service action log. This is the bus number. Go to Card positions and use the bus number to determine the IOA location.

Replace the USB IOA at the location indicated. For more information, see Part locations and location codes.

Select your machine type and model number to find additional location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**

USBCNVT

The USB attached optical storage device or the USB to SATA converter might be failing.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes. Select your machine type and model number to see applicable procedures for your system.

Complete the following steps:

1. Use the USB cable port location code of the I/O adapter in the serviceable event view to find the USB cable. Then, trace the USB cable to identify the location of the USB attached SATA converter and storage device.
2. Is the USB attached storage device in a 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system control unit?

Yes: Replace the DVD assembly at location U_n -P1-C11 of the 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME system control unit. If the problem persists, continue with the next failing item in the failing item list. **This ends the procedure.**

No: Contact your next level of support. **This ends the procedure.**

USBPGD

The device that is connected to a system I/O card might be failing.

Complete the following steps:

1. Is the reference code 11002610 and is the system an 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A?
 - **Yes:** Continue with the next step.
 - **No:** Continue with the next failing item in the failing item list. **This ends the procedure.**
2. Use word 3 of the reference code to determine the failing item to replace.
 - If word 3 is $xxxx2699$, there is a problem with a device connected to port location U_n -P1-C1-T3. This port is used only for firmware update and uninterruptible power supply (UPS). This port is not available for host operating systems. Remove any unsupported devices or replace any failing supported devices that are connected to port location U_n -P1-C1-T3. If this service action does not resolve the problem, replace the system I/O card at location U_n -P1-C1. **This ends the procedure.**
 - If word 3 is $xxxx269A$, there is a problem with a device connected to port location U_n -P1-C1-T2. This port is used only for firmware update and uninterruptible power supply (UPS). This port is not available for host operating systems. Remove any unsupported devices or replace any failing supported devices that are connected to port location U_n -P1-C1-T2. If this service action does not resolve the problem, replace the system I/O card at location U_n -P1-C1. **This ends the procedure.**

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8ecs/p8ecs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

USBPORT

A problem that is associated with the USB port occurred.

Complete the following steps:

1. Is a location code available in the serviceable event view for this field-replaceable unit (FRU)?
 - Yes:** Move or replace USB devices at the location indicated. For more information, see Part locations and location codes. Select your machine type and model number to find more location codes, part numbers, or replacement procedures for your system. **This ends the procedure.**
 - No:** Continue with the next step.
2. Was the serviceable event logged by the adapter resource?
 - Yes:** Continue with the next step.
 - No:** Contact your next level of support. **This ends the procedure.**
3. Find the product activity log for the system reference code (SRC) by completing the following steps:
 - a. Select System Service Tools (SST).
If you cannot get to SST, select DST.

Note: Do not perform an IPL of the system to get to DST.
 - b. In the Service Tools display, select **Start a service tool**.
 - c. In the Start a Service Tool display, select **Product activity log**.
 - d. In the Product Activity Log display, select **Analyze log**.
 - e. In the Select Subsystem Data display, select **All Logs**.

Note: If the SRC you are using occurred more than 24 hours ago, change the from and to dates and times from the 24-hour default.
 - f. Use the defaults on the Select Analysis Report Options display by pressing Enter.
 - g. Find the entry in the product activity log that matches the SRC.
4. Select **Display Detail Report** on the Resource display.
5. Press F6 (Hexadecimal report) to display the hexadecimal information of the product activity log.
6. Look for the first occurrence of D7C1E3C8 in the hexadecimal data between offset 000180 and the end of the hexadecimal data. D7C1E3C8 is displayed as PATH in the EBCDIC text column.
7. Record the two hexadecimal digits that immediately follow the D7C1E3C8 digits. These hexadecimal digits are the logical USB port number.
8. Use the following table to determine the physical USB port location. Move or replace USB devices at the location indicated. For more information, see Part locations and location codes. Select your machine type and model number to find more location codes, part numbers, or replacement procedures for your system.

USB adapter type	Type and model	Logical USB port number	Physical USB port location
USB I/O adapter that is embedded on the system backplane	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8284-21A, or 8284-22A	01 or 05	Un-P1-T3 (rear on 5148-21L, 8247-21L, and 8284-21A only)
		02 or 06	Un-P1-T4 (rear on 5148-21L, 8247-21L, and 8284-21A only)
		03 or 07	Un-P1-T6 (front)
		04 or 08	Un-P1-T5 (front)

USB adapter type	Type and model	Logical USB port number	Physical USB port location
USB I/O adapter that is embedded on the system backplane	8247-42L, 8286-41A, or 8286-42A	01 or 05	Un-P1-T2 (rear)
		02 or 06	Un-P1-T1 (rear)
		03 or 07	Un-P1-T6 (front)
		04 or 08	Un-P1-T5 (front)
PCIe3 USB I/O adapter card (CCIN 58F9)	5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	01 or 05	Un-P1-Cx-T3
		02 or 06	Un-P1-Cx-T2
		03 or 07	Un-P1-Cx-T4
		04 or 08	Un-P1-Cx-T1
PCIe3 USB I/O adapter card (CCIN 58F9)	9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	01 or 05	Un-P1-Cx-C1-T3
		02 or 06	Un-P1-Cx-C1-T2
		03 or 07	Un-P1-Cx-C1-T4
		04 or 08	Un-P1-Cx-C1-T1
PCIe3 USB I/O adapter card (CCIN 58F9)	EMX0 PCIe3 expansion drawer	01 or 05	Un-Px-Cy-T3
		02 or 06	Un-Px-Cy-T2
		03 or 07	Un-Px-Cy-T4
		04 or 08	Un-Px-Cy-T1

This ends the procedure.

USER

A system operator error or user error occurred.

See the system operator information.

UX201

The printer definition table might be causing the problem.

See the original system message for cause and recovery information about the error.

UX202

A problem was detected while downloading a device Licensed Internal Code change to the device.

See the original system message for cause and recovery information about the error.

UY1Z1

There might be a cable problem.

Problems that are associated with noise might cause a workstation to fail or lose communication with the system for various lengths of time. A motor or any device that is a source of electrical radiation might cause noise or electrical interference. The following are common causes for noise problems:

- The cables are located near a source of electrical interference.
- The cables are loose, damaged, or not correctly connected.

UY1Z2

This error might occur if you attempted to activate more workstations than the amount allowed.

Perform one of the following to correct the problem:

- Turn off the power for the workstation that caused the error, or connect the workstation to a different controller.
- Turn off the power for a different workstation that is connected to the same workstation controller.

See the local workstation diagrams for the physical location of workstations.

This ends the procedure.

UY1Z3

This error might be caused by a workstation that is connected to the port.

1. Complete the following steps:
 - a. Turn off the power for one workstation on the port
 - b. Check if the other workstations operate correctly.
 - c. Repeat this for each workstation on the port.
 - d. The workstation that causes the problem is the one that is turned off when the others are working correctly.
 - e. If you did not find the problem, continue with the next step.
2. Complete the following steps:
 - a. Turn off the power for all workstations on the port.
 - b. Turn on one workstation to check if it works when all other workstations are turned off.
 - c. Repeat this for each workstation on the port. The workstation that causes the problem is the one that works when all other workstations are turned off.

This ends the procedure.

UY1Z4

An error occurred with the pass-through command between the workstation controller and the workstation.

A failure in the Licensed Internal Code in either the workstation or the workstation controller causes this type of error.

UY1Z5

The communication between the workstation controller and a workstation was interrupted during an active session.

Possible causes include:

- The power for the workstation was turned off and then turned on.
- A temporary loss of power to the workstation occurred.

VIOSLOG

Correct any serviceable events in the Virtual I/O Server (VIOS) logical partition that is hosting the I/O devices that reported the problem. If the problem in the client logical partition persists, continue with the next failing item in the failing item list.

VIRTDRV

A virtual device problem was detected in the guest partition. Resolve any storage errors that are reported in the serviceable event view of the host partition.

VPDPART

Look here for information about VPDPART symbolic FRU.

For more information about failing part numbers, location codes, or removal and replacement procedures, see Part locations and location codes (http://www.ibm.com/support/knowledgecenter/POWER8/p8secs/p8secs_locations.htm). Select your machine type and model number to see applicable procedures for your system.

1. Is the reference code 1xxx8402?

- **No:** Continue with the next step.
- **Yes:** Before you exchange any parts, verify that the processors cards are installed. If you are in test mode and you removed all of the processor cards, disregard this reference code. Otherwise, verify that the processor cards are installed correctly. If the processor cards are installed correctly, replace the service processor card (in certain systems, the service processor function is built into the system backplane). Use the following table to determine the part number for the field replaceable unit (FRU).

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System backplane	Un-P1
8408-44E or 8408-E8E	See System parts.	I/O backplane	Un-P1
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	Service processor card	Un-P1-C7 or Un-P1-C10 in the system control unit

This ends the procedure.

2. Is the reference code 1xxx8409?

- **No:** Continue with the next step.
- **Yes:** The system did not detect any processors or memory DIMMs installed. If you are in test mode and you removed all of the processors or memory DIMMs, disregard this reference code. If the processor modules and memory DIMMs are installed correctly, replace the processor modules. See System parts to determine the part number for the field replaceable unit. **This ends the procedure.**

3. Is the reference code 1xxx8413, 1xxx8414, 1xxx8415, or 1xxx8416?

- **No:** Continue with the next step.
- **Yes:** Use the reference code in the following table to find the FRU.
 - 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A

Reference code	Action
1xxx8413	Replace processor module 1 at location Un-P1-C32. See System parts to determine the part number for the field replaceable unit.
1xxx8414	Replace processor module 2 at location Un-P1-C33. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

- 8408-44E or 8408-E8E

Reference code	Action
1xxx8413	Replace processor module 1 at location Un -P2-C2. See System parts to determine the part number for the field replaceable unit.
1xxx8414	Replace processor module 2 at location Un -P2-C3. See System parts to determine the part number for the field replaceable unit.
1xxx8415	Replace processor module 3 at location Un -P2-C6. See System parts to determine the part number for the field replaceable unit.
1xxx8416	Replace processor module 4 at location Un -P2-C7. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

- 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME

Reference code	Action
1xxx8413	Replace processor module 1 at location Un -P1-C14. See System parts to determine the part number for the field replaceable unit.
1xxx8414	Replace processor module 2 at location Un -P1-C15. See System parts to determine the part number for the field replaceable unit.
1xxx8415	Replace processor module 3 at location Un -P1-C18. See System parts to determine the part number for the field replaceable unit.
1xxx8416	Replace processor module 4 at location Un -P1-C19. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

4. Is the reference code 1xxx8423?

- **No:** Continue with the next step.
- **Yes:** Use the reference code in the following table to find the FRU part number.
 - 5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A

Reference code	Action
1xxx8423	Replace processor module 1 at location Un -P1-C32. If this replacement does not fix the problem, replace the system backplane at location Un -P1. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

- 8408-44E or 8408-E8E

Reference code	Action
1xxx8423	Replace processor module 1 at location Un -P2-C2. If this replacement does not fix the problem, replace the system backplane at location Un -P2. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

– 9080-MHE, 9080-MME, 9119-MHE, or 9119-MME

Reference code	Action
1xxx8423	Replace processor module 1 at location Un-P1-C14. If this replacement does not fix the problem, replace the system backplane at location Un-P1. See System parts to determine the part number for the field replaceable unit.

This ends the procedure.

5. Is the reference code 1xxx8442, 1xxx8443, or 1xxx8444?

- **No:** Continue with the next step.
- **Yes:** Use the reference code in the following table to find the FRU part number.

Reference code	Action
1xxx8442	An attempt was made to enable the enhanced cache option, but one or more processor cards in the system are not capable of supporting the enhanced cache option. Use the serviceable event view to determine which processors are not capable of supporting the enhanced cache option. Replace the processor cards that are identified in the serviceable event view with processor cards that support the enhanced cache option.
1xxx8443	A drawer was added to a system that has the enhanced cache option enabled, but it is not capable of supporting the enhanced cache option. Replace the processor card with a card that supports the enhanced cache option.
1xxx8444	An enhanced cache option register failed. Look for a registry failure in the serviceable event view and follow the service actions for that error to resolve the problem.

6. Is the reference code 1xxx84A1?

- **No:** Continue with the next step.
- **Yes:** The power distribution backplane VPD is not valid. Use the following table to determine the part number for the field replaceable unit (FRU).

Type and model	Part number	Description	Location code
5148-21L, 5148-22L, 8247-21L, 8247-22L, 8247-42L, 8284-21A, 8284-22A, 8286-41A, or 8286-42A	See System parts.	System backplane	Un-P1
8408-44E or 8408-E8E	See System parts.	Power midplane	Un-P5
9080-MHE, 9080-MME, 9119-MHE, or 9119-MME	See System parts.	System VPD card of the system control unit Note: If the problem persists, replace the system backplane (Un-P1) of each system node.	Un-P1-C12

This ends the procedure.

7. Is the reference code 1xxx8410, 1xxx8420, 1xxx8470, 1xxx84C0, 1xxx84D0, 1xxx84E0, or 1xxx84F0?

- **No:** Continue with the next step.
- **Yes:** If the system is an 8408-44E or 8408-E8E, replace the system backplane at location Un-P2. Otherwise, replace the system backplane at location Un-P1. **This ends the procedure.**

8. Is the reference code 1xx911C

- **No:** Return to Starting a repair action and look for a 1xxxyyyy SRC. Follow the actions for that SRC. **This ends the procedure.**
- **Yes:** Two of the drawers in the multiple drawer server have the same VPD information. Reset the system unique identifier in one of the drawers to resolve the problem. **This ends the procedure.**

VRMOD

Symbolic FRU VRMOD is not supported on these models. Continue with the next FRU in the list.

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Overview

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- Keyboard-only operation
- Operations that use a screen reader

The IBM Power Systems servers use the latest W3C Standard, WAI-ARIA 1.0 (www.w3.org/TR/wai-aria/), to ensure compliance with US Section 508 (www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards) and Web Content Accessibility Guidelines (WCAG) 2.0 (www.w3.org/TR/WCAG20/). To take advantage of accessibility features, use the latest release of your screen reader and the latest web browser that is supported by the IBM Power Systems servers.

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Keyboard navigation

This product uses standard navigation keys.

Interface information

The IBM Power Systems servers user interfaces do not have content that flashes 2 - 55 times per second.

The IBM Power Systems servers web user interface relies on cascading style sheets to render content properly and to provide a usable experience. The application provides an equivalent way for low-vision users to use system display settings, including high-contrast mode. You can control font size by using the device or web browser settings.

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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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Industry Canada Compliance Statement

CAN ICES-3 (A)/NMB-3(A)

European Community Compliance Statement

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Tel: +49 800 225 5426
email: halloibm@de.ibm.com

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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The following is a summary of the VCCI Japanese statement in the box above:

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Japan Electronics and Information Technology Industries Association Statement

This statement explains the Japan JIS C 61000-3-2 product wattage compliance.

(一社) 電子情報技術産業協会 高調波電流抑制対策実施
要領に基づく定格入力電力値： Knowledge Centerの各製品の
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This statement explains the Japan Electronics and Information Technology Industries Association (JEITA) statement for products less than or equal to 20 A per phase.

高調波電流規格 JIS C 61000-3-2 適合品

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This statement explains the JEITA statement for products greater than 20 A per phase, three-phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。

- 回路分類 : 5 (3相、PFC回路付)
- 換算係数 : 0

Electromagnetic Interference (EMI) Statement - People's Republic of China

声 明

此为 A 级产品,在生活环境
中,该产品可能会造成无线电干
扰。在这种情况下,可能需要用
户对其干扰采取切实可行的措
施。

Declaration: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may need to perform practical action.

Electromagnetic Interference (EMI) Statement - Taiwan

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

The following is a summary of the EMI Taiwan statement above.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

Electromagnetic Interference (EMI) Statement - Korea

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 / EN 55032 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

EN 55022 / EN 55032 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden: "Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC Richtlinie 2014/30/EU) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road

Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Relations Europe, Abteilung M456
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 (0) 800 225 5426
email: HalloIBM@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 / EN 55032 Klasse A.

Electromagnetic Interference (EMI) Statement - Russia

ВНИМАНИЕ! Настоящее изделие относится к классу А.
В жилых помещениях оно может создавать
радиопомехи, для снижения которых необходимы
дополнительные меры

Class B Notices

The following Class B statements apply to features designated as electromagnetic compatibility (EMC) Class B in the feature installation information.

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM-authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM-authorized dealers. IBM is not responsible for any radio or television interference caused by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Compliance Statement

CAN ICES-3 (B)/NMB-3(B)

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

European Community contact:
IBM Deutschland GmbH
Technical Regulations, Abteilung M456
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 800 225 5426
email: halloibm@de.ibm.com

VCCI Statement - Japan

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。 VCCI-B

Japan Electronics and Information Technology Industries Association Statement

This statement explains the Japan JIS C 61000-3-2 product wattage compliance.

(一社) 電子情報技術産業協会 高調波電流抑制対策実施
要領に基づく定格入力電力値 : Knowledge Centerの各製品の
仕様ページ参照

This statement explains the Japan Electronics and Information Technology Industries Association (JEITA) statement for products less than or equal to 20 A per phase.

高調波電流規格 JIS C 61000-3-2 適合品

This statement explains the JEITA statement for products greater than 20 A, single phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。

- 回路分類 : 6 (単相、PFC回路付)
- 換算係数 : 0

This statement explains the JEITA statement for products greater than 20 A per phase, three-phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。

- 回路分類 : 5 (3相、PFC回路付)
- 換算係数 : 0

IBM Taiwan Contact Information

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022/ EN 55032 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC Richtlinie 2014/30/EU) für Geräte der Klasse B

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Relations Europe, Abteilung M456
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 (0) 800 225 5426
email: HalloIBM@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022/ EN 55032 Klasse B.

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