

Overview

HPE Apollo 70 System

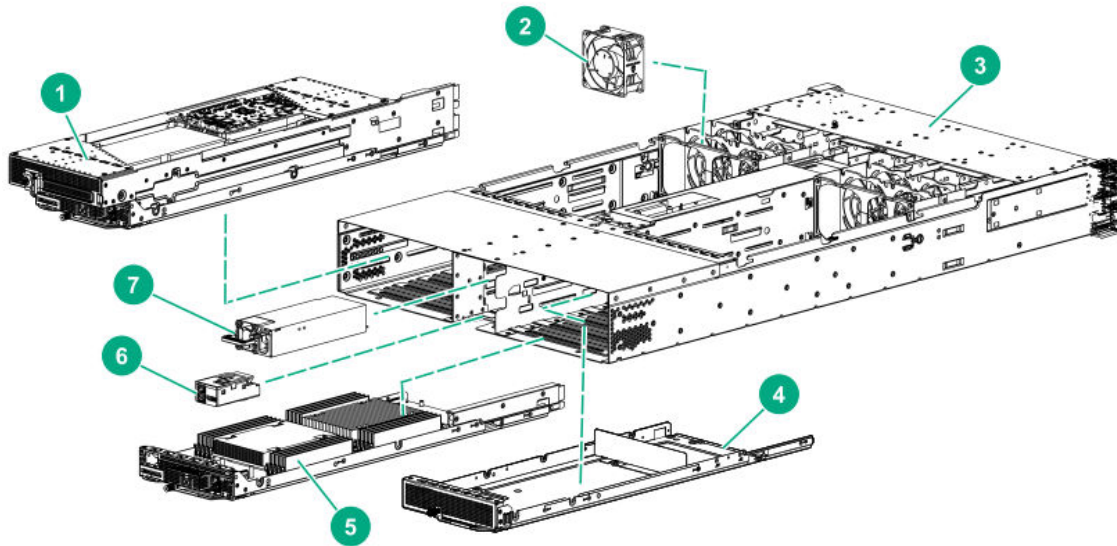
The HPE Apollo 70 System is an ARM-based platform that delivers density and scalability required for large HPC cluster deployments. The system is powered by Cavium Thunder X2 processor with maximum memory bandwidth, Mellanox interconnect fabric options and Apollo management tools in compact 2U form factor.

The Apollo 70 System can be deployed cost-effectively starting with a single 2U chassis to meet the configuration needs of a wide variety of scale-out HPC workloads. The Apollo 70 System is a density-optimized, 2U infrastructure that uses HPE Apollo z70 chassis which supports up to 4 HPE AR44z 1U ARM or up to 2 HPE AR64z 2U ARM independent, hot-plug servers with all the traditional data center attributes – standard racks and cabling and rear-aisle serviceability access. A 42U rack fits up to 20 HPE z70 series chassis accommodating up to 80 ARM-based servers per rack.

The Apollo z70 chassis comes with 8 LFF drive cage and 8 new generation single rotor redundant fans. It supports up to 2 HPE Flexible Slot Power Supplies which provide up to 96% power efficiency with 80 Plus Titanium-certified power supplies that lower server power requirements and reduce power waste in your data center.

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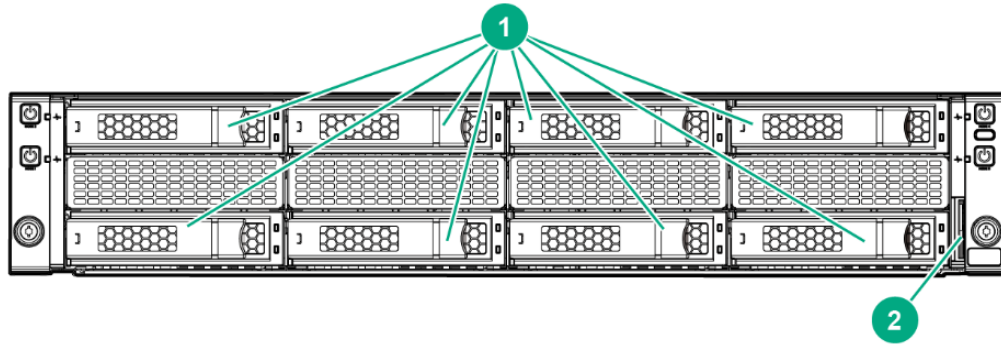
HPE Apollo z70 8 LFF Chassis – 8 LFF



Item	Description
1	HPE AR64z Server (2U server node)
2	Fan
3	Chassis
4	Server blank
5	HPE AR44z (1U server node)
6	RCM module (optional)
7	Power Supply

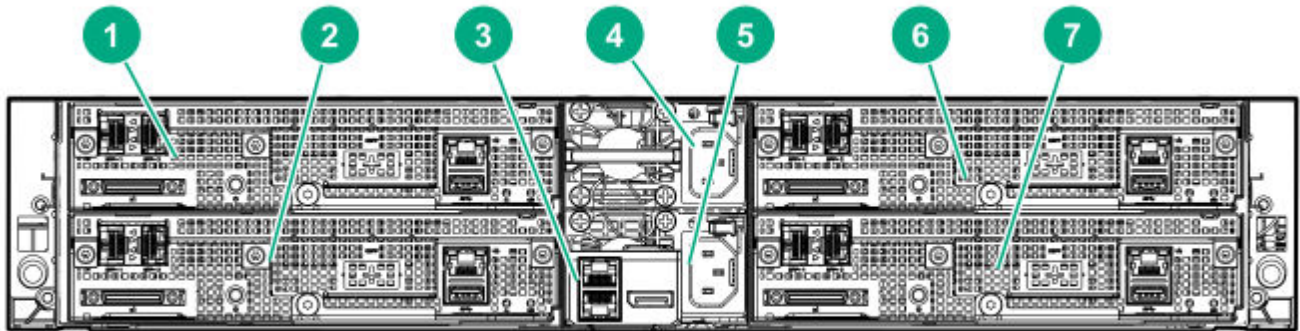
Overview

HPE Apollo z70 Chassis – 8LFF



Item	Description
1	Low-profile LFF hot-plug drives
2	Chassis serial label pull tab

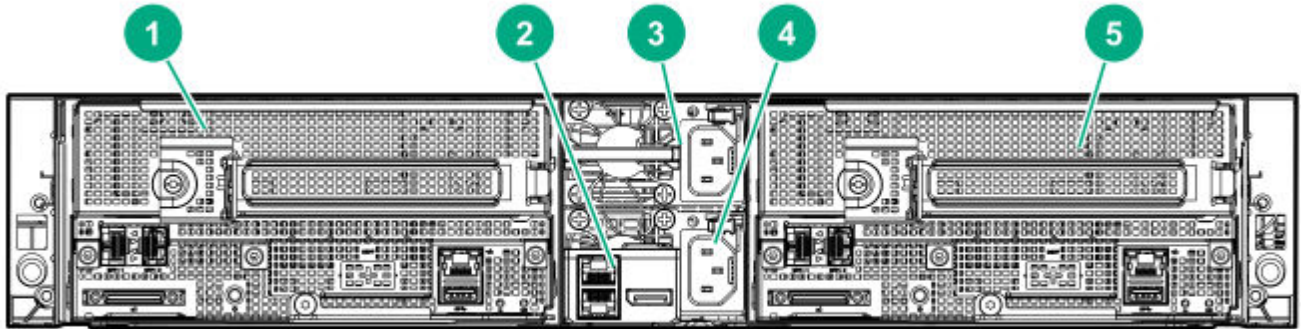
Chassis Rear Panel Components / Four 1U Servers



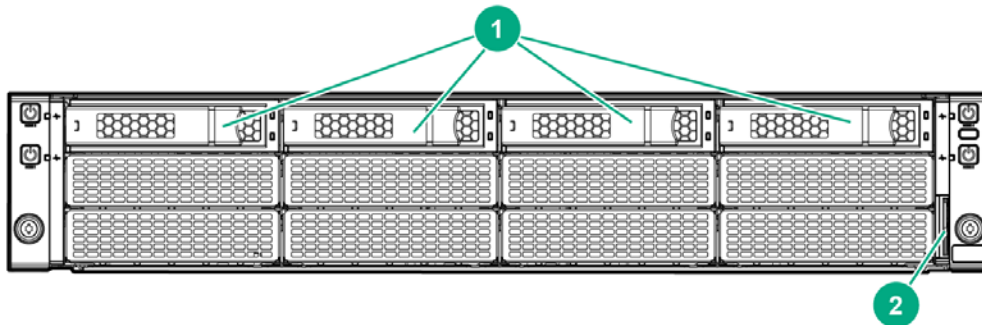
Item	Description
1	Server 4
2	Server 3
3	RCM Module (optional)
4	Power supply 2
5	Power Supply 1
6	Server 2
7	Server 1

Overview

Chassis Rear panel Components / Two 2U Servers



Item	Description
1	Server 3
2	RCM module (optional)
3	Power Supply 2
4	Power Supply 1
5	Server 1



Item	Description
1	Low-profile LFF hot-plug drives
2	Chassis serial label pull tab

Core Features

Chassis

The Apollo z70 chassis provides the following configuration:

- HPE Apollo z70 8LFF Chassis –
 - 8 LFF hot-pluggable SATA HDD/SSD (Direct Attach)

Each HPE Apollo z70 Chassis is built with the following:

- Four 1U server slots
- Up to two (2) 1600W power supply for the chassis
- HPE Thermal Logic technology for lower power consumption and airflow.
- Eight (8) single rotor fans standard

Server

The HPE AR44z and AR64z servers provides the following:

- Dual-port SFP+ 10GbE Mellanox CX4 LOM
- Single Port RJ-45 1GbE NIC – dedicated management NIC port
- 1x USB, 1x VGA, 1x UART

System Fans

The Chassis ships standard with 8 single rotor fan modules.

Server Tray Blank Kit

A chassis requires that four (4) server tray slots be populated with either an HPE AR44z or HPE AR64z or Server Node Blank Kit to allow adequate air flow.

Rack Airflow Requirements

HPE Apollo 70 System

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. For maximum cooling, HPE racks are recommended to allow these racks to be fully loaded with servers using the latest processors. For detail information please see Apollo 70 System User Guide.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment.

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels will result in improper cooling that can lead to thermal damage.

Service and Support

HPE Pointnext – Service and Support

Protect your business beyond warranty with HPE Pointnext Support Services

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

Recommended HPE Pointnext Services for your HPE Apollo 70 System

Operational Support Services are sold separately for the HPE Apollo z70 chassis and the compute nodes. It is recommended that the attached support level be the same for the HPE Apollo z70 chassis and the compute nodes installed into the chassis. The support service for the HPE Apollo z70 chassis only covers the chassis and the included options.

Optimized Recommendation

Proactive Care, 24x7, three-year Support Service

HPE Proactive Care gives customers an enhanced call experience. Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years proactive reporting and advice with our 24x7 coverage, four-hour hardware onsite response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, SUSE, etc.) running on your HPE servers.

<https://www.hpe.com/h20195/v2/getdocument.aspx?docname=4AA5-3259ENW>

Standard Recommendation

Foundation Care 24x7, three-year Support Service

HPE Foundation Care 24x7 gives you access to HPE 24 hours a day, seven days a week for assistance on resolving issues. This service includes Hardware onsite response within four hours if needed and response to software related questions within two hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on supported software running on your HPE server. Simplify your support experience and make HPE your first call to help resolve hardware or software problems.

<https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>

Basic Recommendation

HPE Foundation Care NBD, three-year Support Service

HPE Foundation Care Next Business Day connects you to HPE during business hours for assistance on resolving issues. This service features next business day hardware onsite response if needed and response to software questions within two hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on supported software running on your HPE server. Simplify your support experience and make HPE your first call to help resolve hardware or software problems.

<https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>

Related Services

HPE Datacenter Care service

HPE Datacenter Care helps you improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services “building blocks.” You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with Hewlett Packard Enterprise via a single point of accountability for Hewlett Packard Enterprise and others’ products. For more information, visit <http://www.hpe.com/services/datacentercare>

Service and Support

HPE Flexible Capacity

With Flexible Capacity, you get the speed, scalability, and economics of the public cloud in the privacy of your data center. Gain the advantages of the public cloud—consumption-based payment, rapid scalability without worrying about capacity constraints. Reduce the “heavy lifting” needed to operate a data center. And retain the advantages that IT provides the business (i.e., control, security). Deliver the right user experience, choose the right technology for the business, manage privacy and compliance, and manage the cost of IT. And, you have the option to use the public cloud when needed

Datacenter Care for Hyperscale

Datacenter Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

HPE Installation and Startup Service

Provides for the installation of your HPE hardware according to product specifications including options. Installation and startup services also includes the installation of one supported operating system type (Linux)

Factory Express for servers and storage

HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAXxx3PAR suite, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative.

Data Privacy Services

Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware. [hpe.com/services/lifecycle](http://www.hpe.com/services/lifecycle) event Additional can be found at: <http://www.hpe.com/services>

HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <http://www.hpe.com/ww/learn>

HPE Support Credits

Offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Service and Support

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools, and experts to support HPE business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more <http://www.hpe.com/support/hpesc>

HPE's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalize IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

*HPE Support Center Mobile App is subject to local availability

For More Information

To learn more on services for Hewlett Packard Enterprise Apollo please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: <http://www.hpe.com/services>

Warranty

This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Pointnext Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners (may vary by region). Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty.

NOTE: Server Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: <http://www.hpe.com/support/ProLiantServers-warranties>

Step 1: Choose a Chassis

HPE Apollo z70 8 LFF Configure-to-order Chassis

P00367-B21

Step 2: Choose cooling options

HPE Cooling Options HPE Apollo 2000 Gen10 Server Node Blank Kit

874309-B21

NOTE: Required for any non-populated slots in the chassis to prevent thermal related issues

Step 3: Choose the following rail kit and bracket per chassis

HPE Rail Kits HPE 2U Shelf-Mount Adjustable Rail Kit

822731-B21

HPE t2500 Strap Shipping Bracket

740713-B21

NOTE: Hewlett Packard Enterprise recommends that a minimum of two people are required for all rack installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

Step 4: Choose Base configuration

Configuration Information

Server Trays and options

HPE AR44z 1U Node Configure-to-order Server	881663-B21
HPE AR64z 2U Node Configure-to-order Server	881664-B21
NOTE: Up to 4 single half width server trays (AR44z) can be added to the HPE Apollo z70 Chassis. Up to 2 half width 2U height server trays (AR64z) can be added to the HPE Apollo z70 chassis.	
HPE ARx4z CN9975-2000 Kit	P01145-B21
HPE ARx4z CN9980-2200Kit	P03795-B21
HPE 960GB SATA MU M.2 2280 DS SSD	875492-B2
HPE 8TB SATA 7.2k LFF LP 512e DS HDD	834028-B21
HPE 4TB SATA 7.2k LFF LP 512e DS HDD	861744-B21
HPE 960GB SATA RI LFF LPC DS SSD	877756-B21
HPE 1.92TB SATA RI LFF LPC DS SSD	877762-B21
NOTE: The SATA SSDs LPC stated above comes with converter kit installed.	
HPE LFF HDD Spade Blank Gen9 Kit	807878-B21
HPE Apollo 2000 LFF Bezel Kit	838518-B21
HPE IB EDR/EN 100Gb 1p 8410CP QSFP Adapter	P02012-B21
HPE BLc VC 1G SFP RJ45 Transceiver	453154-B21
HPE ARx4z OCP Air Baffle	P05157-B21
HPE ARx4z GPU Blank Kit	P02428-B21
NOTE Air baffle kit (P05157-B21) should be selected when HPE IB EDR/EN 100Gb 1p adapter is selected in the configuration	
HP 36pin SUV Dongle Cord Kit	676277-B21

Core Options

RCM Module	HP Apollo 2000 Rack Consolidation Module Kit	798211-B2
	NOTE: This is an optional RCM (Rack Consolidation Management) module kit which allows IPMI aggregation at the chassis level. The RCM Module consists of 2 IPMI ports for redundancy. It can also be daisy chained to connect to a Top of the Rack (TOR) management switch.	
Power Supply	HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
	HPE r2x00 Gen10 Power Supply Unit Enablement Kit	880186-B21
Security Hardware	HPE Gen10 2U Bezel Kit	867809-B21
	HPE Bezel Lock Kit	875519-B21
Power Cords	HPE LS25 14AWG 277V 1.37m Jumper Cord	QOJ68A
	HP 1.83m C13-NEMA 6-15P Power Cord	SK792A
	HP C13-C14 WW 250V 10Amp 1.4m Jumper Cord	142257-006
	HP IECC13-C14 0.7m WW cable	142257-B28
	HP 2.0m 10A C13-C14 Black Jumper Cord	A0K02A
	HP 3.6m 15A 250V C13-NEMA6-15P Cord	A0N33A
	HP 1.83m 10A C13 EU Power Cord	AF568A
	HP 1.83m 10A C13 UK Power Cord	AF570A

Technical Specifications

HPE Apollo z70 Chassis – 8 LFF	Dimensions	Height	3.44 in (8.73 cm)
		Width	17.64 in (44.81 cm)
		Depth	35.18 in (89.37 cm)
	Shipping Dimensions	Height	12.5 in (31.75 cm)
		Width	23.63 in (60.02 cm)
		Depth	37.76 in (95.9 cm)
	Chassis Weight	Empty	37.94 lb (17.21 kg)
	Max Enclosure Weight	Approximate	49.93 lb (22.65 kg)
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Non-Operating	-22° to 140° F (-30° to 60° C)
	Relative Humidity	Operating	Minimum to be higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity
		Non-Operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

NOTE: Operating temperature has an altitude derating of 1.8° F (1° C) per 1,000 ft (304.8 m). No direct sunlight. Upper operating limit is 10,000 ft (3,048 m) or 70Kpa/10.1 psia. Upper non-operating limit is 30,000 ft (9,144 m) or 30.3 KPa/4.4 psia. Storage maximum humidity of 95% is based on a maximum temperature of 113° F (45° C). Altitude maximum for storage is 70 KPa.

Environmental-friendly Products and Approach – End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE Directive (2012/19/EU) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site: <http://www.hpe.com/RECYCLE>. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
4-Jun-2018	Version 1	Created	Create QuickSpecs for HPE Apollo 70 System



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