Service Description

Dell ProDeploy Enterprise Suite:

ProDeploy for Enterprise

Introduction

This document outlines the Service Description ("Service Description") for ProDeploy for Enterprise (the "Service" or "Services").

This Service is part of Dell's ProDeploy Enterprise Suite ("ProDeploy Suite") which is available in multiple tiers: Basic Deployment, ProDeploy, and ProDeploy Plus (the "Service Tier" individually or the "Service Tiers" collectively). Enterprise solutions may include but are not limited to hardware platforms such as servers, storage, networking, and modular platforms (the "Hardware Platform") as well as associated enterprise software and hardware additions, upgrades, or data management ("Supplemental Deployment Services").

Dell is pleased to provide this Service in accordance with this Service Description. Your quote, order form or other mutually-agreed upon form of invoice or order acknowledgment (as applicable, the "Order Form") will include the name of the Service(s) and available service options that you purchased. For additional assistance or to request a copy of your service contract(s), contact Dell Technical Support or your sales representative.

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ProDeploy Scope of Service

The Service provides for deployment activities of a Dell Server, Storage, or Networking device during the hours outlined in the Service Hours section. The Scope of this Service is defined and limited to the description in the Service purchased as set forth more specifically in the corresponding Service Features and Service Feature Activities sections.

A Dell representative will contact the Customer to schedule this Service, allowing for at least a ten business day lead time prior to the start of the Service, based upon a mutually agreed to resource availability.

Note: A scheduled outage window will be required in case of an offline hardware upgrade.

Service Features

The following is a list and brief description of the Service Features included. Please note that the Service Features listed in this section may have a more detailed list of activities which can be found in the Service Feature Activities section in **Exhibit A**.

Onsite hardware installation

Technicians physically install hardware onsite according to customer specifications or Dell preferred practices.

Packaging materials disposal

Move used packaging materials to onsite trash and recycling facility or other designated onsite location.

Project management

The assigned Project Manager will guide you through the deployment process—from tracking your equipment through the factory to ensuring your site is prepared through transitioning you past deployment and into the support process.

Site readiness review and implementation planning

Project Manager reviews multi-point check list with customer to ensure overall site readiness and schedules deployment project. Examples of items include: confirming equipment delivery, power requirements, network connections are complete, and verifying project timelines and site contacts.

Install and configure system software

Technicians remotely install operating system, drivers, firmware, virtualization software, hypervisors, cluster managers, and Dell SupportAssist. Feature not tied to application workloads or enterprise software products.

System testing and verification

System deployment and configuration is tested by Dell and verified against documented requirements.

Configuration detail transfer to Dell technical support

Dell will capture all pertinent technical and configuration data from the newly deployed components and preload that information into Dell's technical support systems. In case of issues, this detail will enable Dell Technical Support services to more quickly identify root causes and speed problem resolution.

Product Orientation

The Delivery Engineer will complete a verbal product orientation session with the customer at the conclusion of the deployment. Product Orientation includes a basic review of product features and how to perform common tasks.

Project documentation

The Project Manager will provide close of engagement documents at the conclusion of the deployment. These documents include "as deployed" documentation and deployment verification report.

Offer Structure

There are two types of service offers available: Primary Services and Add-on Services.

Primary Services are either associated with the deployment of a specific Hardware Platform recently purchased or for a Supplemental Deployment Service on a Hardware Platform. Primary services are identified on the Order Form as either Basic Deployment, ProDeploy, or ProDeploy Plus followed by <Hardware Platform Series> or <Base> followed by <additional identifiers> if necessary. For example, ProDeploy Dell Storage ML Series 6010 5U Library.

Add-on Services are identified on the Order Form as "Add-on." Add-ons can be combined with any Primary Service within the same Service Tier. For example, a ProDeploy Add-on Service can only be combined with a ProDeploy Primary Service. Some Add-on Services may include a list of sub-service options and those sub-services will be chosen by the customer post sale or at the commencement of the project. Add-on Services can be purchased in

multiple quantities to cover different sub-services or for multiple quantities of the same sub-service. For additional information about specific Add-on Services, please review **Exhibit B**.

Identifying the service purchased

Services are listed below in sections (the "Service Feature"). The activities in each Service Feature may be combined by Hardware Platform or segregated by Server, Storage, Networking Hardware Platforms, and if applicable, Supplemental Deployment Services. To identify the service you purchased, locate the ProDeploy Suite service on your Order Form and the corresponding Product Line, Group, Category, and Series. Each Service Feature section may include the Product Line, Group and/or Category of the service purchased to aid in identifying the scope of activities.

Product Line	Group	Category	Series
Storage	Backup	Tape Libraries	ML Series
			TL Series
	Block/File	SAN/DAS Arrays	SC Series
			Unity XT Series
			MD/ME Series
		Disk Enclosures	SC Disk Series
			MD/ME Disk Series
		NAS	Unity SDNAS
			NX Series
Server	Servers	Rack	R Series C Series
		Tower	T Series
		Blade	M, MX or F Series
	Modular Platforms	Modular	M1000e or MX7000
		VRTX	VRTX
		FX	FX
Networking	Layer 3	L3 Fixed Port Switches	N Series
			S Series
		Chassis Switches	C Series
		Distributed Core Switches	Z Series
	Layer 2/3	Blade IO	M or FN Series
	Fibre Channel	FC switches	Connectrix
	Software Defined	Big Switch Networks	Big Cloud Fabric
			Big Monitoring Fabric OOB
			Big Monitoring Fabric Inline
		Access Edge Platforms	Edge 6xx
			Edge 3x00
			Virtual Edge
	Wireless	Wireless Access Points	Aerohive Ruckus
Solutions	Hyperconverged	XC Series	XC Series
		VxRail	VxRail
		VxFlex	VxFlex Ready Node VxFlex Appliance
		AX	AX

Product Line	Group	Category	Series
	High Performance Computing (HPC)	HPC	HPC
	Data Protection	Data Domain Appliances	DD3xxx
		Data Protection Appliances	DP4xxx
		Data Protection Software	Data Protection Suite Data Domain Avamar PowerProtect

Service Quantities

The Service you have purchased provides the corresponding deployment activities for your specific Dell Supported Product(s) identified on the Order Form. Unless otherwise stated either on the order form, in the Service Quantity Exceptions, or in the Service Feature Activities, no other Supported Products will be deployed beyond the Supported Product recognized on the Service you purchased.

Service Quantity Exceptions

This table shows additional hardware devices that will be installed and/or configured when purchasing Services represented in the Category column. Limitations and exclusions may apply. See Service Feature Activities for more details on inclusions, exclusions, and customer responsibilities.

Product Line	Group	Category	Additional Hardware Installation	Additional Configuration
Storage	Block/File	SAN/DAS Arrays	HBA/NICs in up to 4 SAN attached hosts	Storage connectivity on up to 4 SAN attached hosts
Server	Modular Platforms	MX7000 M1000e VRTX FX	Maximum quantity of blades or sleds Maximum networking I/O hardware	Up to 8 server blades or sleds Maximum storage blades or sleds (excludes PSM storage blades) Maximum networking I/O hardware
Networking	Layer 3	Chassis Switches	2 C Series line cards	2 C Series line cards

For certain Supported Products, a single ProDeploy Volume Pricing SKU on the Customer's Order Form that corresponds to such Supported Products will entitle Customer to receive deployment of multiple Supported Products of the same supported product type, up to the maximum quantity as indicated in the SKU Description on the Customer's Order Form. Those multiple Supported Products that are the subject of a ProDeploy Volume Pricing SKU or High Performance Computing Cluster (HPC) Pricing SKU must be deployed at a single deployment location, as part of a single deployment project. Unused quantities will not be credited, and may not be used for a separate deployment project.

Service Hours

A Dell representative will contact the Customer to schedule Service, allowing for a reasonable lead time prior to the start of the Service based upon mutually agreed upon resource availability. Subject to local law relating to weekly work hours, unless otherwise listed below, this Service will be performed Monday through Friday during normal Dell EMC Services business hours, which is from 8:00 AM to 6:00 PM Customer local time.

Country	Normal Dell Services business hours
Costa Rica, Denmark, El Salvador, Finland, Guatemala, Honduras, Norway, Panama, Puerto Rico, Rep. Dominicana, Sweden	8:00 AM to 5:00 PM
Australia, China, Hong Kong, Japan, Korea, Malaysia, New Zealand, Singapore, Taiwan, Thailand	9:00 AM to 5:00 PM
Argentina, France, India, Italy, Paraguay, Uruguay	9:00 AM to 6:00 PM
Bolivia, Chile	9:00 AM to 7:00 PM
Middle East	Sunday thru Thursday from 8:00 AM to 6:00 PM

Some ProDeploy and ProDeploy Plus activities may be performed outside of normal Dell business hours based upon Customer request and local regulations. Work will be performed in increments of up to 8 hours per day, unless mutually agreed to in advance with Dell. No activities shall take place during local, state and/or country holidays.

Delivery Methodologies

All Hardware Platform Service Tiers include onsite hardware installation of the physical equipment at Customer location (see *Onsite hardware installation* section for details of scope).

In the event the Customer location is inaccessible or unreachable, Dell will provide Customer with remote installation assistance. If the Customer elects to do the Onsite Installation themselves, Customer is responsible for ensuring that all components of the solution are physically installed and interconnected per solution or published documentation. Phone technicians can provide instructions and information to Customers who choose to do the work themselves and/or perform configuration work remotely via web connect or other similar technologies. If web connect assistance is requested, Customer must provide appropriate network access and credentials to Dell to access the solution remotely and perform the work. Services delivered by onsite technicians will be scheduled with Customers to accommodate hardware availability, data center access, customer maintenance windows and technician availability.

For the ProDeploy Service Tier, Dell will deliver services (except onsite hardware installation and packaging materials disposal) through phone based technicians who provide remote configuration. Some Add-on Services may be performed solely via phone technicians. The delivery method of ProDeploy and ProDeploy Plus Services will be discussed at the commencement of the project and any requested, proposed, or necessary changes will be addressed at that time.

Change Management

Service deliverables are defined in this Service Description that is reviewed with and signed off by the Customer and Dell. During the planning process, specific details related to the Customer environment are documented. Normally, these suffice to complete the project. In rare instances, changes to the solution integration plan are needed after it has been documented. In that case, the Change Management Process indicated below will govern changes to the scope of service. Either party may request a permitted change in the Service Description by completing a Change Order Form at: www.dell.com/servicecontracts/RFC

The receiving party will review the proposed Change Order and will (i) approve it, (ii) agree to further investigation, or (iii) reject it. Changes agreed pursuant to the Change Management Process will not be effective until mutually executed by both parties.

Service Exclusions

For the avoidance of doubt, the following activities are not included in the scope of this Service Description:

- Any services, tasks, or activities other than those explicitly described in the Service Feature Activities in **Exhibit A** and marked with a checkmark (✓) for the Service you purchased.
- All Excluded Services listed in **Exhibit A**
- All ProDeploy and ProDeploy Plus services have a planning component. This is designed to gather information about the Customer environment so that successful integration and deployment may take place. It is NOT a substitute for strategic assessment or design services. Those consultative services may be purchased from Dell separately.
- Activities related to the existing customer datacenter environment such as de/installation, re/configuration, connection, troubleshooting, etc.
- Custom scripting, coding, performance tuning or optimization.
- Installation of applications such as Microsoft Exchange, Microsoft IIS, Microsoft SQL Server, POSTGres, MySQL, Apache Web Server, etc.
- Installation or configuration of Software-Defined or Open Networking solutions except when explicitly described in the Service Feature Activities in **Exhibit A** or **Exhibit B**.
- Installation or configuration of unsupported products. All Dell- and Customer- supplied components will be validated as supported or not during the planning process. Note that in some instances, Dell may provide guidance for installation and configuration of non-supported products to be completed by the Customer.
- Routing of cabling between racks, or through walls, ceilings, floors, or between rooms.
- Racking of dense or heavy enclosures higher than 21u in a rack.
- Connection to Direct Current power supplies. A qualified electrician must perform all connections to DC power and to safety grounds.
- Planning and configuration of any feature listed as included for the product tier, but not supported on the specific model being deployed.

This Service Description does not confer on Customer any warranties which are in addition to the warranties provided under the terms of your master services agreement or Agreement, as applicable.

Service Specific Customer Responsibilities

As applicable, either prior to or during Dell's performance of the Services, Customer shall perform the following tasks:

- Promptly notify Dell in writing of a) any changes Customer makes to its information technology environment that may impact Dell's delivery of the Services; and b) if Customer becomes aware that any of the conditions or assumptions made during planning are incorrect.
- Indicate to Dell in writing a person to be the single point of contact to ensure that all tasks can be completed within the specified time period. All Services communications will be addressed to this point of contact (the "Customer Contact"). The Customer Contact will have the authority to act for Customer in all aspects of the Service.
- Provide technical points-of-contact who have a working knowledge of the data center and enterprise components related to the solution integration ("Technical Contacts") as applicable.
- As required, provide documentation of Customer's existing infrastructure during the implementation planning phase.
- Make at least one technical contact, with system administration responsibilities, available and provide appropriate facility/site/system/information access privileges as a resource to Dell during the performance of this Service.
- **Note that some services require outages or downtime.** Dell will notify Customer during planning of downtime or outage requirements. Customer will arrange for maintenance windows to accommodate as needed.
- Ensure that field technicians have reasonable and safe access to the Project site, a safe working environment, adequate space and parking.
- Customer will not begin additional configuration or application installation until the project is completed.
- Inform Dell of all access issues and security measures and provide access to all necessary hardware and facilities.
    - If any equipment that is part of the Service is 'protected' or in 'dark' areas, Customer will ensure that a resource is available to perform actions as needed for the Service (reboot, configuration, etc.) at the direction of the Dell engineer.

    - Provide the Dell Engineer with credentials, passcodes, SSL certificates, etc. sufficient to complete the Service or provide a resource to enter such credentials as needed to complete the Service.
- When needed for physical installation
    - Customer should provide carts, hand trucks, ladders, lifts, etc.
    - Place any equipment to be racked in the immediate area of the rack into which it will be installed.
    - Ensure that the required power outlets are installed and functional in the location of the hardware installation.
    - Ensure that the required power distribution units ("PDUs") are installed and functional unless purchased with the product.
    - Ensure any existing equipment repositioning is completed prior to arrival.
    - Ensure any modifications needed to existing racks to accept Dell equipment is completed prior to arrival.
- Customer should document and be prepared to provide key system events and information relevant to Service delivery such as:
    - Last successful controller failover.
    - Last successful backup and recovery.
- For Customer supplied equipment and software:
    - **Equipment and software are assumed to be in good working order and under valid service/maintenance contracts. Out of warranty or unsupported products will not be connected to or integrated with Dell solutions. If any impacted equipment or software is unsupported or not in working condition, Customer will notify Dell during the planning process.**
    - Software media (OS, Application, etc.) available in the immediate area of the equipment on which it is to be installed.
    - Obtain and provide valid software licenses for all software Customer supplies to Dell in connection with this Service.
    - Hardware which will attach to the solution has minimum supported revision levels for hardware, software and firmware per appropriate support matrixes.
    - Configure any hardware which will attach to the solution per solution recommendations or published best practices and standards.
    - For upgrade or expansion services which require opening system chassis (e.g. adding hard drives, HBAs, NICs, memory, etc.) Customer shall demonstrate that systems are functional prior to service and either power down/take offline the system or direct Engineer to do so.
    - For Services which require database connectivity, provide a suitable database or allow for included database software (e.g. MS SQL Express Edition) to be installed.
    - For Services which require a supported operating system for software install (e.g. Microsoft Windows® for Dell Storage PS Series SANHQ) Customer will ensure that supported OS is available on appropriate equipment.
    - For Networking Services, ensure that routing protocols (e.g. RIP, OSPF, BGP) are in working order prior to Service unless configuration of such protocols is part of Service.
- Ensure that an electrical branch circuit with the following characteristics is available:
    - Grounded outlet and circuit breaker compatible with the solution that meets local electrical code.
    - Required voltage and frequency.
    - Solution compatible supply circuit, line fusing and wire size.
- Ensure that IP network is setup to handle bandwidth requirements and that appropriate network drops are available.
- Coordinate, manage, and/or configure any 3rd party provided services (example: Internet service provider link reconfiguration or management of outside vendors)Ensure that telephone and high-speed internet access are available in the installation area (i.e. for software download, updates, connectivity testing, etc.) If such communications are not available for physical, technical or security reasons Customer will notify Dell during planning so the Engineer can plan accordingly. Note that without connectivity some Service deliverables may not be possible (e.g. 'phone home' testing).
- Ensure device connectivity within the Customer network and Firewall port configuration for connectivity external to the Customer network.
- Ensure that all relevant data, applications, network configurations, policies, security configurations or potentially impacted infrastructure settings or data are backed up.
- Integration of DNS, LDAP or other directory services.
- Provide IP and Subnets for device and/or hosts.

- Provide acknowledgement that services have been performed.
- Complete a customer satisfaction survey.
- For modular platforms, ensure that with respect to the existing network equipment configuration:
    - Standards-based spanning tree protocol is configured on switches interfacing with Supported Products
    - IP addresses are provided to assign to Supported Products and/or VLANs, as needed, in advance
- For Networking deployments, provide the requested information, including:
    - Ports and cabling availability
    - VLANs, IP addresses, or any other information required to configure the equipment
    - For wireless deployments, a diagram of the floor plan, in scale, in JPG or PNG format.
- For configuration detail transfer to Dell tech support:
    - When asked, Customer will permit the use of configuration detail capture tools or provide relevant configuration documents.
    - Ensure Dell deployment team have access to all necessary detail to create the as-deployed documents. NOTE: Changes to Customer's environment after deployment that occur without notice to Dell PM or EDT may lead to unsupported configurations.
- For installation and configuration of system software and server virtualization software for Storage:
    - Assist with directory services and/or DNS integration as needed.
    - Ensure the appropriate services are purchased for installation and configuration of any director class switch(es) is sold with the solution.
    - Setup and configuration of all suggested and required Virtual LANs (VLANs) for iSCSI, hypervisor management, VMotion, Live Migration, and other inter-connectivity on non-stand-alone/non Dell physical switches.
    - Ensure that the existing network environment is properly setup to handle the bandwidth requirements of all iSCSI hosts and that the appropriate network drops are in place prior to the commencement of service.
    - Ensure that a supported NOS with the supported Service Pack is installed and operational on each host connected to storage, if applicable.
    - Ensure that the non-Dell hosts being connected have the proper host bus adapters ("HBAs") installed, functional and at the proper revision levels.
- If you purchased Supplemental Deployment Services, please consult the Supplemental Deployment Services descriptions in **Exhibit B** to review additional Customer responsibilities that apply to those Supplemental Deployment Services.

General Customer Responsibilities

Authority to Grant Access. Customer represents and warrants that it has obtained permission for both Customer and Dell to access and use the Supported Products, the data located thereon and all hardware and software components included therein, for the purpose of providing these Services. If Customer does not already have that permission, it is Customer's responsibility to obtain it, at Customer's expense, before Customer asks Dell to perform these Services.

Cooperate with Phone Analyst and On-site Technician. Customer will cooperate with and follow the instructions given by any Dell phone analyst or on-site technicians. Experience shows that most system problems and errors can be corrected over the phone as a result of close cooperation between the user and the analyst or technician.

On-site Obligations. Where Services require on-site performance, Customer will provide (at no cost to Dell) free, safe and sufficient access to Customer's facilities and the Supported Products, including ample working space, electricity, and a local telephone line. A monitor or display, a mouse (or pointing device), and a keyboard must also be provided (at no cost to Dell), if the system does not already include these items.

Maintain Software and Serviced Releases. Customer will maintain software and Supported Products at Dell-specified minimum release levels or configurations as specified on PowerLink for Dell | EMC Storage or EqualLogic™, or as specified on www.support.dell.com for additional Supported Products. Customer must also ensure installation of remedial replacement parts, patches, software updates or subsequent releases as directed by Dell in order to keep the Supported Products eligible for this Service.

Data Backup; Removing Confidential Data. Customer will complete a backup of all existing data, software and programs on all affected systems prior to and during the delivery of this Service. Customer should make regular backup copies of the data stored on all affected systems as a precaution against possible failures, alterations, or loss of data. In addition, Customer is responsible for removing any confidential, proprietary, or personal information and any removable media such as SIM cards, CDs, or PC Cards regardless of whether an on-site technician is also providing assistance. DELL WILL HAVE NO LIABILITY FOR:

- ANY OF YOUR CONFIDENTIAL, PROPRIETARY OR PERSONAL INFORMATION;
- LOST OR CORRUPTED DATA, PROGRAMS OR SOFTWARE;
- DAMAGED OR LOST REMOVABLE MEDIA;
- DATA OR VOICE CHARGES INCURRED AS A RESULT OF FAILING TO REMOVE ALL SIM CARDS OR OTHER REMOVABLE MEDIA INSIDE SUPPORTED PRODUCTS THAT ARE RETURNED TO DELL;
- THE LOSS OF USE OF A SYSTEM OR NETWORK;
- AND/OR FOR ANY ACTS OR OMISSIONS, INCLUDING NEGLIGENCE, BY DELL OR A THIRD-PARTY SERVICE PROVIDER.

Dell will not be responsible for the restoration or reinstallation of any programs or data. When returning a Supported Product or part thereof, Customer will only include the Supported Product or part which has been requested by the phone technician.

Third Party Warranties. These Services may require Dell to access hardware or software that is not manufactured by Dell. Some manufacturers' warranties may become void if Dell or anyone else other than the manufacturer works on the hardware or software. Customer will ensure that Dell's performance of Services will not affect such warranties or, if it does, that the effect will be acceptable to Customer. Dell does not take responsibility for third party warranties or for any effect that the Services may have on those warranties.

Dell Services Terms and Conditions

This Service Description is entered between you, the customer ("you" or "Customer"), and the Dell entity identified on your invoice for the purchase of this Service. This Service is provided subject to and governed by Customer's separate signed master services agreement with Dell that explicitly authorizes the sale of this Service. In the absence of such agreement, depending on Customer's location, this Service is provided subject to and governed by either Dell's Commercial Terms of Sale or the agreement referenced in the table below (as applicable, the "Agreement"). Please see the table below which lists the URL applicable to your Customer location where your Agreement can be located. The parties acknowledge having read and agree to be bound by such online terms.

Customer Location	Terms & Conditions Applicable to Your Purchase of Dell Services	
	Customers Purchasing Dell Services Directly From Dell	**Customers Purchasing Dell Services Through an Authorized Dell Reseller**
United States	www.dell.com/CTS	www.dell.com/CTS
Canada	www.dell.ca/terms (English) www.dell.ca/conditions (French-Canadian)	www.dell.ca/terms (English) www.dell.ca/conditions (French-Canadian)
Latin America & Caribbean Countries	Local www.dell.com country-specific website or www.dell.com/servicedescriptions/global.*	Service Descriptions and other Dell service documents which you may receive from your seller shall not constitute an agreement between you and Dell but shall serve only to describe the content of Service you are purchasing from your seller, your obligations as a recipient of the Service and the boundaries and limitations of such Service. As a consequence hereof any reference to "Customer" in this Service Description and in any other Dell service document shall in this context be understood as a reference to you whereas any reference to Dell shall only be understood as a reference to Dell as a service provider providing the Service on behalf of your seller. You will not have a direct contractual relationship with Dell with regards to the Service described herein. For the avoidance of doubt any

		payment terms or other contractual terms which are by their nature solely relevant between a buyer and a seller directly shall not be applicable to you and will be as agreed between you and your seller.
Asia-Pacific-Japan	Local www.dell.com country-specific website or www.dell.com/servicedescriptions/global.*	Service Descriptions and other Dell service documents which you may receive from your seller shall not constitute an agreement between you and Dell but shall serve only to describe the content of Service you are purchasing from your seller, your obligations as a recipient of the Service and the boundaries and limitations of such Service. As a consequence hereof any reference to "Customer" in this Service Description and in any other Dell service document shall in this context be understood as a reference to you whereas any reference to Dell shall only be understood as a reference to Dell as a service provider providing the Service on behalf of your seller. You will not have a direct contractual relationship with Dell with regards to the Service described herein. For the avoidance of doubt any payment terms or other contractual terms which are by their nature solely relevant between a buyer and a seller directly shall not be applicable to you and will be as agreed between you and your seller.
Europe, Middle East, & Africa	Local www.dell.com country-specific website or www.dell.com/servicedescriptions/global.* In addition, customers located in France, Germany and the UK can select the applicable URL below: France: www.dell.fr/ConditionsGeneralesdeVente Germany: www.dell.de/Geschaeftsbedingungen UK: www.dell.co.uk/terms	Service Descriptions and other Dell service documents which you may receive from your seller shall not constitute an agreement between you and Dell but shall serve only to describe the content of Service you are purchasing from your seller, your obligations as a recipient of the Service and the boundaries and limitations of such Service. As a consequence hereof any reference to "Customer" in this Service Description and in any other Dell service document shall in this context be understood as a reference to you whereas any reference to Dell shall only be understood as a reference to Dell as a service provider providing the Service on behalf of your seller. You will not have a direct contractual relationship with Dell with regards to the Service described herein. For the avoidance of doubt any payment terms or other contractual terms which are by their nature solely relevant between a buyer and a seller directly shall not be applicable to you and will be as agreed between you and your seller.

Customer further agrees that by renewing, modifying, extending or continuing to utilize the Service beyond the initial term, the Service will be subject to the then-current Service Description available for review at www.dell.com/servicedescriptions/global.

To the extent that any terms of this Service Description conflict with any terms of the Agreement, the terms of this Service Description will prevail, but only to the extent of the specific conflict, and will not be read or deemed to replace any other terms in the Agreement which are not specifically contradicted by this Service Description.

By placing your order for the Services, receiving delivery of the Services, utilizing the Services or associated software or by clicking/checking the "I Agree" button or box or similar on the Dell.com website in connection with your purchase or within a Dell software or Internet interface, you agree to be bound by this Service Description and the agreements incorporated by reference herein. If you are entering this Service Description on behalf of a company or other legal entity, you represent that you have authority to bind such entity to this Service Description, in which case "you" or "Customer" shall refer to such entity. In addition to receiving this Service Description, Customers in certain countries may also be required to execute a signed Order Form.

Additional Terms & Conditions Applicable to the Services

1. Supported Products. This Service is available on supported products which includes select Dell OptiPlex™, Latitude™, Inspiron™, Precision™, Vostro™, PowerEdge™, PowerVault™, PowerConnect™, Dell EqualLogic™, Dell Compellent™, Dell Force10, Dell Networking and Dell Storage systems which are purchased in a standard

configuration ("**Supported Products**"). Supported Products are added regularly, so please contact your sales representative for the most up-to-date list of Services that are available on your Dell or non-Dell products. Each Supported Product is tagged with a serial number (the "**Service Tag**"). A separate service agreement must be purchased by Customer for each Supported Product. Please refer to the Service Tag on your Supported Product when contacting Dell for this Service.

2. Term of Service. This Service Description commences on the date listed on your Order Form and continues through the term ("**Term**") indicated on the Order Form. As applicable, the number of systems, licenses, installations, deployments, managed end points or end-users for which Customer has purchased any one or more Services, the rate or price, and the applicable Term for each Service is indicated on Customer's Order Form. Unless otherwise agreed in writing between Dell and Customer, purchases of Services under this Service Description must be solely for Customer's own internal use and not for resale or service bureau purposes.

3. Important Additional Information

A. Rescheduling. Once this Service has been scheduled, any changes to the schedule must occur at least 8 calendar days prior to the scheduled date. If Customer reschedules this service within 7 days or less prior to the scheduled date, there will be a rescheduling fee not to exceed 25% of the price for the Services. Any rescheduling of the Service will be confirmed by Customer at least 8 days prior to commencement of the Service.

B. Payment for hardware purchased with installation & deployment services. Unless otherwise agreed to in writing, payment for hardware shall in no case be contingent upon performance or delivery of installation or deployment services purchased with such hardware.

C. Commercially Reasonable Limits to Scope of Service. Dell may refuse to provide Service if, in its opinion, providing the Service creates an unreasonable risk to Dell or Dell's Service providers or if any requested service is beyond the scope of Service. Dell is not liable for any failure or delay in performance due to any cause beyond its control, including Customer's failure to comply with its obligations under this Service Description. Service extends only to uses for which the Supported Product was designed.

D. Optional Services. Optional services (including point-of–need support, installation, consulting, managed, professional, support or training services) may be available for purchase from Dell and will vary by Customer location. Optional services may require a separate agreement with Dell. In the absence of such agreement, optional services are provided pursuant to this Service Description.

E. Assignment. Dell may assign this Service and/or Service Description to qualified third party service providers.

F. Cancellation. Dell may cancel this Service at any time during the Term for any of the following reasons:

- Customer fails to pay the total price for this Service in accordance with the invoice terms;
- Customer is abusive, threatening, or refuses to cooperate with the assisting analyst or on-site technician; or
- Customer fails to abide by all of the terms and conditions set forth in this Service Description.

If Dell cancels this Service, Dell will send Customer written notice of cancellation at the address indicated on Customer's invoice. The notice will include the reason for cancellation and the effective date of cancellation, which will be not less than ten (10) days from the date Dell sends notice of cancellation to Customer, unless local law requires other cancellation provisions that may not by varied by agreement. If Dell cancels this Service pursuant to this paragraph, Customer shall not be entitled to any refund of fees paid or due to Dell.

G. Geographic Limitations and Relocation. This Service will be delivered to the site(s) indicated on the Customer's invoice. This Service is not available at all locations. Service options, including service levels, technical support hours, and on-site response times will vary by geography and certain options may not be available for purchase in Customer's location, so please contact your sales representative for these details. Dell's obligation to supply the Services to relocated Supported Products is subject to various factors, including without limitations, local Service availability, additional fees, and inspection and recertification of the relocated Supported Products at Dell's then-current time and materials consulting rates.

H. Transfer of Service. Subject to the limitations set forth in this Service Description, Customer may transfer this Service to a third party who purchases Customer's entire Supported Product before the expiration of the then-current Term, provided Customer is the original purchaser of the Supported Product and this Service or Customer

purchased the Supported Product and this Service from its original owner (or a previous transferee) and complied with all the transfer procedures available at www.support.dell.com. A transfer fee may apply. Please note that if Customer or Customer's transferee moves the Supported Product to a geographic location in which this Service is not available (or is not available at the same price), Customer or Customer's transferee may not have coverage or may incur an additional charge to maintain the same categories of support coverage at the new location. If Customer or Customer's transferee chooses not to pay such additional charge, the Service may be automatically changed to categories of support which are available at such price or a lesser price in such new location with no refund available.

I. Service Expiration Six Months After Purchase. EXCEPT TO THE EXTENT APPLICABLE LAW REQUIRES OTHERWISE, YOU MAY USE THIS SERVICE ONE TIME DURING THE 6 MONTH PERIOD FOLLOWING THE DATE OF ORIGINAL PURCHASE ("EXPIRATION DATE"). THE ORIGINAL PURCHASE DATE IS DEFINED AS THE EARLIER OF THE DATE OF THE INVOICE FOR THE SERVICE OR ORDER CONFIRMATION FROM DELL. DELL'S DELIVERY OF THE SERVICE WILL BE DEEMED SATISFIED AFTER THE EXPIRATION DATE EVEN IF YOU DO NOT USE THE SERVICE.

Exhibit A
Service Features and Excluded Services

Service Feature Activities

- ✓ Represents the only activities included in Services purchased. Every other activity excluded.
- × Represents some activities excluded in Services purchased. This list is not intended to be exhaustive and is for guidance only.
- ◆ Represents activities Customer is to perform and may be necessary before some or all of the activities in the Included in Service section is performed.

Onsite hardware installation – Storage

	Storage				
	Backup		Block/File		
Included in Service	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Unpack and inspect hardware	✓	✓	✓	✓	✓
Rack, mount, and/or position the product & components	✓	✓	✓	✓	✓
Install and route power cables	✓	✓	✓	✓	✓
Install and route data cables	✓	✓	✓	✓	✓
Apply customer-provided labels to newly-installed cables	✓	✓	✓	✓	✓
Power on equipment	✓	✓	✓	✓	✓
Check for error lights; obvious issues	✓	✓	✓	✓	✓
Tape library shuttle test, if applicable	✓				
Update hardware's software or firmware, if applicable	✓	✓			
Install HBA/NIC adapters into up to 4 hosts for storage connectivity			✓		
Install HBA/NIC adapters			✓		
Install, route, and label host to storage connectivity cables			✓		

	Backup		Block/File		
Excluded from Service	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Installation of server(s) or host(s)	×	×	×	×	×
Installation of HBAs and/or drivers into non-Dell servers	×	×	×	×	×
Installation or configuration of any networking switches (Ethernet or Fibre Channel)	×	×	×	×	×

Onsite hardware installation – Server

Included in Service	Server				
	Servers		Modular Platforms		
	Rack or Tower	Blade	Modular	VRTX	FX
Unpack and inspect hardware	✓	✓	✓	✓	✓
Rack, mount, and/or position the product & components	✓	✓	✓	✓	✓
Install solution specific chassis components	✓		✓	✓	✓
Install server blades, nodes, or sleds within a single enclosure, up to the capacity of the enclosure			✓	✓	✓
Install Ethernet or Fibre Channel chassis switches, IO aggregators, and components within a single enclosure, up to the capacity of the enclosure			✓	✓	✓
Update chassis switch firmware			✓	✓	✓
Install Customer-provided Dell-branded PDU(s), as needed for proper power configuration	✓		✓	✓	✓
Install and route power cables	✓		✓	✓	✓
Install and route data cables	✓		✓	✓	✓
Apply customer-provided labels to newly-installed cables	✓	✓	✓	✓	✓
Power on equipment	✓	✓	✓	✓	✓
Confirm server boots, check for error lights and obvious issues	✓	✓	✓	✓	✓
Configure an IP address on CMC / iDRAC / iKVM	✓	✓	✓	✓	✓
Configure first time boot info	✓	✓	✓	✓	✓
Update drivers, firmware, and BIOS, including chassis firmware if applicable	✓	✓	✓	✓	✓

Excluded from Service	Servers		Modular Platforms		
	Rack or Tower	Blade	Modular	VRTX	FX
Configuration as it relates to OS clustering, redundancy, or failover	×	×	×	×	×
Data validations, migration, snapshots, or cloning	×	×	×	×	×

Onsite hardware installation – Networking

Included in Service	Networking				
	Layer 3			Layer 2/3	Fibre Channel
	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Unpack and inspect hardware	✓	✓	✓	✓	✓
Rack, mount, and/or position the product & components	✓	✓	✓	✓	✓
Install and route power cables	✓	✓	✓	✓	✓
Install and route data cables	✓	✓	✓	✓	✓
Apply customer-provided labels to newly-installed cables	✓	✓	✓	✓	✓
Power on equipment	✓	✓	✓	✓	✓
Check for error lights; obvious issues	✓	✓	✓	✓	✓
Update hardware's software or firmware	✓	✓	✓	✓	✓
Configure out-of-band management port	✓	✓	✓	✓	✓

Demonstrate switch or access point functionality	✓	✓	✓	✓	✓
Install HBA/NIC adapters into up to 4 hosts for storage connectivity					✓
Install, route, and label host to storage connectivity cables					✓

	Layer 3			Layer 2/3	Fibre Channel
Excluded from Service	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Network topology or performance assessment	×	×	×	×	×

Onsite hardware installation – Big Switch Networks

	Big Switch Networks		
Included in Service	BCF/BMF Controller Appliance	BCF/BMF Controller VM	BCF/BMF Switch
Unpack and inspect hardware	✓		✓
Rack, mount, and/or position the product & components	✓		✓
Install and route power cables	✓		✓
Install and route data cables (Management, pSwitch, Inband)	✓		✓
Apply customer-provided labels to newly-installed cables	✓		✓
Power on equipment	✓		✓
Check for error lights; obvious issues	✓		✓
Configure iDRAC port	✓		
Collect the Fabric Switch Identifier (Switch Management MAC Address)			✓

	Big Switch Networks		
Excluded from Service	BCF/BMF Controller Appliance	BCF/BMF Controller VM	BCF/BMF Switch
Network topology or performance assessment	×	×	×

Onsite hardware installation – Access Edge Platforms

	Access Edge Platforms		
Included in Service	Edge 6xx	Edge 3x00	Virtual Edge
Unpack and inspect hardware		✓	
Rack, mount, and/or position the product & components		✓	
Install and route power cables		✓	
Install and route data cables		✓	
Apply customer-provided labels to newly-installed cables		✓	
Power on equipment		✓	
Check for error lights; obvious issues		✓	
Update hardware's software or firmware		✓	
Configure out-of-band management port		✓	
Demonstrate device functionality	✓	✓	✓

Excluded from Service	Access Edge Platforms		
	Edge 6xx	Edge 3x00	Virtual Edge
Network topology or performance assessment	×	×	×
Onsite physical installation	×		×

Onsite hardware installation – Wireless

Included in Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
Unpack and inspect hardware		✓				
Rack, mount, and/or position the product & components		✓				
Install and route power cables		✓				
Install and route data cables		✓				
Apply customer-provided labels to newly-installed cables		✓				
Power on equipment		✓				
Check for error lights; obvious issues		✓				
Update hardware's software or firmware	✓	✓	✓			
Configure out-of-band management port	✓	✓	✓			
Demonstrate switch or access point functionality	✓	✓	✓			

Excluded from Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
Network topology or performance assessment	×	×	×	×	×	×
Onsite physical installation of access points	×	×	×	×	×	×

Onsite hardware installation – Solutions

Included in Service	Solutions			
	XC & AX Series	VxRail VxFlex	HPC	Data Protection
Unpack and inspect hardware	✓	✓	✓	✓
Rack, mount, and/or position the product & components	✓	✓		✓
Install and route power cables	✓	✓		✓
Install and route data cables	✓	✓		✓
Apply customer-provided labels to newly-installed cables	✓	✓		✓
Power on equipment	✓	✓		✓
Confirm server boots, check for error lights and obvious issues	✓	✓		✓
Configure an IP address on iDRAC	✓	✓		✓
Final storage installation:				
Install pre-labeled hard drives into storage enclosures				

Power up the storage and verify drive integrity				
Switch installation:			✓	
Install and route all Customer-provided cables			✓	
Print and apply labels to newly-installed cables			✓	
Power up the switches			✓	
Connect the switch into the network using Customer-provided interconnect cables			✓	
Install HPC specific switches certified by Dell EMC			✓	

Excluded from Service	XC & AX Series	VxRail VxFlex	HPC	Data Protection
Physical installation of any non-Dell branded hardware	×	×	×	×
Physical installation of components into any non-Dell branded hardware	×	×	×	×
Physical installation for software-only products				×
Physical installation of associated switches	×	×		×
Physical installation of switches outside of the HPC cluster			×	
Uplink of HPC Cluster switches to Customer network beyond HPC environment			×	

Packaging materials disposal

Included in Service	Storage	Server	Networking	Solutions
Move used packaging materials to trash and recycling facility or other designated area within the immediate installation location	✓	✓	✓	✓

Excluded from Service	Storage	Server	Networking	Solutions
Disposal of installation packaging offsite	×	×	×	×
Disposal of packaging materials for wireless access points, analyzer, GMS			×	

Project management

Included in Service	Storage	Server	Networking	Solutions
Review the site environmental and technical readiness requirements	✓	✓	✓	✓
Confirm readiness review and installation dates and highlight dependencies on complete customer site readiness and product ship dates to meet the planned installation schedule.	✓	✓	✓	✓
Review any sub-service options with the customer and document the selection.	✓	✓	✓	✓
Integrate any Add-on Service with the Base Service.	✓	✓	✓	✓
Confirm deliverables and overall plan are reviewed and approved by the customer.	✓	✓	✓	✓
Customer to provide a contact to allow timelines and processes to be completed on schedule.	✓	✓	✓	✓
Schedule an outage window in the case of an offline hardware upgrade.	✓	✓	✓	✓
Ensure that the customer reviews and understands the site requirements.	✓	✓	✓	✓
Ensure that the customer reviews, accepts, and abides by the terms and conditions of the Service Description.	✓	✓	✓	✓

Excluded from Service	Storage	Server	Networking	Solutions
Onsite project management or planning	×	×	×	×

Site readiness review and implementation planning – Storage

	Storage				
	Backup		Block/File		
Included in Service	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Review and obtain the site technical requirements with the customer	✓	✓	✓	✓	✓
Validate rack type, rail type, and space requirements	✓	✓	✓	✓	✓
Validate power requirements	✓	✓	✓	✓	✓
Validate network requirements	✓	✓	✓	✓	✓
Verify that the existing environment meets the minimum hardware and software requirements for the solution.	✓	✓	✓	✓	✓
Create a valid design/implementation plan based on the customer's hardware and software configuration:	✓	✓	✓	✓	✓
Define/confirm that the configuration meets the minimum hardware and software requirements for the environment	✓	✓	✓	✓	✓
Plan any required software and/or firmware upgrades, if applicable	✓	✓	✓	✓	✓
Define and document cluster configuration					✓
Define and document network settings such as IP addresses, gateway, hostnames, SNMP, NTP, and DNS, if applicable	✓	✓	✓	✓	✓
Define the storage allocation and configuration:		✓	✓	✓	✓
Storage pools, volumes, and/or profiles			✓	✓	✓
SMB/NFS shares and quotas for up to 6 shares		✓			✓
Define Replay schedules for up to 4 volumes			✓	✓	✓
Planning for up to 4 SAN-attached hosts and 16 zones			✓		
Review the recommended iSCSI or FC best practice guidelines with the customer for any Non-Dell switches so the customer can properly configure the switches, if applicable	✓	✓	✓		✓
Define/confirm location to install and configure storage management software			✓		

	Backup		Block/File		
Excluded from Service	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Planning for replication	×		×	×	×

Site readiness review and implementation planning – Server

	Server				
	Servers		Modular Platforms		
Included in Service	Rack or Tower	Blade	Modular	VRTX	FX
Software Install Planning	✓	✓	✓	✓	✓
Virtualization Planning	✓	✓	✓	✓	✓

Site readiness review and implementation planning – Networking

Included in Service	Networking				
	Layer 3			Layer 2/3	Fibre Channel
	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Planning of the deployment	✓	✓	✓	✓	✓
Layer 2 Features	✓	✓	✓	✓	
Design and planning for up to 100 VLANs per deployed switch	✓			✓	
Design and planning for up to 200 VLANs per deployed switch		✓	✓		
Layer 3 Features	✓	✓	✓	✓	
Design and planning for storage area network (Ethernet or Fibre Channel)	✓	✓	✓	✓	✓
Interoperability planning	✓	✓	✓	✓	✓
Identify devices, enabled features and configurations	✓	✓	✓	✓	✓
Review devices and determine any incompatibilities that exist	✓	✓	✓	✓	✓
Review necessary changes required for customer's existing environment	✓	✓	✓	✓	✓
Creation of pre-deployment documentation	✓	✓	✓	✓	✓

Excluded from Service	Layer 3			Layer 2/3	Fibre Channel
	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Create documentation of the existing network topology	×	×	×	×	×
Networking device migration activities or switch replacement	×	×	×	×	×

Site readiness review and implementation planning – Big Cloud Fabric

Included in Service	Big Cloud Fabric		
	BCF Controller Appliance	BCF Controller VM	BCF Switch
Planning of the deployment	✓	✓	✓
Define and document network settings such as IP addresses, gateway, hostnames, SNMP, NTP, DNS, and syslog if applicable	✓	✓	✓
Design and planning for up to 200 segments per deployed controller	✓	✓	
Design and planning for up to 25 tenants per deployed controller	✓	✓	
Design and planning the of BCF with integration with a dynamic routing protocol	✓	✓	
Design and planning the insertion of one pair of services (Firewall or Load Balancer)	✓	✓	
Design and planning Multicast and QoS if required	✓	✓	
Design and planning the connections of up to 20 non-production server connections to BCF	✓	✓	
Design and planning for up to 10 segments per deployed switch			✓
Design and planning for up to 1 tenant per deployed switch			✓
Define the role of the switch in the Fabric			✓
Identify devices, enabled features and configurations	✓	✓	✓
Review devices and determine any incompatibilities that exist	✓	✓	✓
Review necessary changes required for customer's existing environment	✓	✓	✓
Creation of pre-deployment documentation	✓	✓	✓

Excluded from Service	Big Cloud Fabric		
	BCF Controller Appliance	BCF Controller VM	BCF Switch
Design of customer network	×	×	×

Site readiness review and implementation planning – Big Monitoring Fabric OOB

Included in Service	Big Monitoring Fabric OOB		
	BMF OoB Controller Appliance	BMF OoB Controller VM	BMF OoB Switch
Planning of the deployment	✓	✓	✓
Define and document network settings such as IP addresses, gateway, hostnames, SNMP, NTP, DNS, and syslog if applicable	✓	✓	✓
Identify scalability requirements	✓	✓	✓
Identify redundancy requirements	✓	✓	✓
Identify the location and number of TAPs or SPANs (mirrored production ports)			✓
Identity the expected traffic volume and patterns from each TAP/SPAN port			✓
Identify the number of tools and the location and type of tools			✓
Identify tools physical connectivity requirements			✓
Design and planning of inter-switch connectivity			✓
Design and planning of Filter and Delivery interface choices			✓
Design and planning Filter, Delivery and IP address Groups			✓
Design and planning of Policies			✓
Design and planning of VLAN manipulation modes if applicable			✓
Design and planning of Fabric Topology and policy path optimization			✓
Design and planning of Tunnel interfaces and L2-GRE tunnels (BMF OoB Tunneling Switch only)			✓
Creation of pre-deployment documentation	✓	✓	✓

Excluded from Service	Big Monitoring Fabric OOB		
	BMF OoB Controller Appliance	BMF OoB Controller VM	BMF OoB Switch
Design of customer network	×	×	×

Site readiness review and implementation planning – Big Monitoring Fabric Inline

Included in Service	Big Monitoring Fabric Inline		
	BMF Inline Controller Appliance	BMF Inline Controller VM	BMF Inline Switch
Planning of the deployment	✓	✓	✓
Define and document network settings such as IP addresses, gateway, hostnames, SNMP, NTP, DNS, and syslog if applicable	✓	✓	✓
Design and Planning switch Inline interfaces to services (monitoring tools, security devices, etc.)			✓
Design and Planning failure groups			✓
Design and Planning up to four BMF Inline chains, including services, health check, and filtering rules			✓
Design and Planning SPAN services for monitoring chain traffic if required			✓
Creation of pre-deployment documentation	✓	✓	✓

Excluded from Service	Big Monitoring Fabric Inline		
	BMF Inline Controller Appliance	BMF Inline Controller VM	BMF Inline Switch
Design of customer network	✖	✖	✖

Site readiness review and implementation planning – Access Edge Platforms

Included in Service	Access Edge Platforms		
	Edge 6xx	Edge 3x00	Virtual Edge
Validate site readiness for the installation	✓	✓	✓
Validate virtual environment requirements, if applicable			✓
Validate physical space requirement, if applicable	✓	✓	
Validate power requirements	✓	✓	
Validate network requirements	✓	✓	✓
Validate license requirements	✓	✓	✓
Requirements Discovery	✓	✓	✓
Use cases discovery	✓	✓	✓
Technical and business requirements discovery	✓	✓	✓
Review of network topologies	✓	✓	✓
Review of current WAN network environment	✓	✓	✓
Implementation planning	✓	✓	✓
Review SD-WAN Edge implementation plan, if existing	✓	✓	✓
Design the overlay routing between sites	✓	✓	✓
Design SD-WAN Edge profiles to match sites needs	✓	✓	✓
Design SD-WAN Hub configuration	✓	✓	✓
Define traffic segmentation	Up to 1 segment	Up to 1 segment	Up to 1 segment
Define firewall rules	Up to 10 rules / profile	Up to 10 rules / profile	Up to 10 rules / profile
Define business policies	Default policies	Default policies	Default policies
Define High Availability/Cluster configuration	✓	✓	✓
Interoperability planning	✓	✓	✓
Identify integration requirements with existing routing	✓	✓	✓
Identify integration requirements with private links (MPLS, Metro Ethernet, dark fiber)	✓	✓	✓
Review necessary changes required for customer's existing environment	✓	✓	✓
Creation of predeployment documentation	✓	✓	✓

Excluded from Service	Access Edge Platforms		
	Edge 6xx	Edge 3x00	Virtual Edge
Create documentation of existing network	✖	✖	✖
Plan the configuration of equipment on existing environment	✖	✖	✖
Plan for multi-country deployment, custom services available	✖	✖	✖

Site readiness review and implementation planning – Wireless

Included in Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
Validate site readiness for the installation	✓	✓	✓	✓	✓	✓
Validate virtual environment requirements, if applicable	✓	✓		✓	✓	✓
Validate physical space requirement, if applicable		✓	✓			
Validate power requirements		✓	✓			
Validate network requirements		✓	✓			
Validate license requirements	✓	✓	✓	✓	✓	✓
Planning of the deployment	✓	✓	✓	✓	✓	✓
Device management protocols (SYSLOG, SNMP, Authentication)	✓	✓	✓	✓	✓	✓
VLAN and IP Address planning	✓	✓	✓	✓	✓	✓
Planning of access points locations based on customer provided floorplan, up to the number of APs defined on the service	✓		✓			
Planning for Network Policies and SSIDs	✓	✓	✓			
Planning for physical appliance deployment, if applicable		✓				
Planning for virtual appliance deployment, if applicable	✓	✓		✓	✓	✓
Integration with Ruckus Controller			✓	✓	✓	✓
Creation of pre-deployment documentation	✓	✓	✓	✓	✓	✓

Excluded from Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
Create documentation of the existing network	×	×	×	×	×	×
Creation of building drawing for floor plan	×	×	×	×	×	×
Wireless site survey	×	×	×	×	×	×

Site readiness review and implementation planning – Solutions

Included in Service	Solutions				
	XC Series	AX Series	VxRail VxFlex	HPC	Data Protection
Review and obtain the site technical requirements with the customer	✓	✓	✓	✓	✓
Validate rack type, rail type, and space requirements	✓	✓	✓	✓	✓
Validate power requirements	✓	✓	✓	✓	✓
Validate network requirements	✓	✓	✓	✓	✓
Verify that the existing environment meets the minimum hardware and software requirements for the solution.	✓	✓	✓	✓	✓
Create a valid implementation plan based on the customer's hardware and software configuration:	✓	✓	✓	✓	✓
Define/confirm that the configuration meets the minimum hardware and software requirements for the environment	✓	✓	✓	✓	✓

Define and document network settings such as IP addresses, gateway, hostnames, SNMP, NTP, and DNS, if applicable	✓	✓	✓	✓	✓
Ensure cable quantity and lengths are correct per order				✓	
Define cable routing				✓	
Define the new Dell switch configurations	✓	✓	✓		
Verify if the customer will be using SCVMM and discuss the customer responsibility for SCVMM support.		✓			

Excluded from Service	XC Series	AX Series	VxRail VxFlex	HPC	Data Protection
Upgrade of existing environment to support the new solution	×	×	×	×	×
Create documentation of the existing network	×	×	×	×	×
Define the environmental requirements including, heat output (BTUs), electrical draw (Amps), electrical circuits required, and uninterruptable power supply (UPS) and power distribution unit (PDU) requirements	×	×	×	×	×

Install and configure system software– Storage

	Storage				
	Backup		Block/File		
Included in Service	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Configure the storage system	✓	✓	✓	✓	✓
Assign serial numbers to storage controller(s), if applicable			✓		
Initialize the storage system		✓	✓		✓
Upgrade firmware/SCOS as required	✓	✓	✓		✓
Install any purchased license(s)		✓	✓	✓	
Configure cluster					✓
Configure disks			✓	✓	
Configure storage pools, volumes, and/or profiles			✓	✓	✓
Configure SMB/NFS shares and quotas for up to 6 shares		✓			✓
Configure storage ports			✓		
Configure network settings such as IP addresses, gateway, hostnames, SNMP, NTP, and DNS, if applicable	✓	✓	✓		✓
Configure system settings, if applicable	✓	✓	✓		✓
Configure and test email alerts, phone home and/or SupportAssist, if applicable	✓	✓	✓		✓
Verify backup host to file system or tape library connectivity, if applicable	✓				
Configure Replay schedules for up to 4 volumes			✓	✓	✓
Configure CIFS and/or CIFS Shares (6)		✓			
Add to existing AD or Workgroup, where applicable		✓			
Add OST Plug-In, where applicable		✓			
Configure the storage-related hardware according to the implementation plan	✓	✓	✓		✓
Configure Fibre Channel or iSCSI network connectivity on up to 4 existing storage attached hosts and 16 zones			✓		
Configure HBA/NIC adapters installed in hosts			✓		
Install/update drivers and firmware			✓		
Configure required adapter parameters such as timeout values			✓		
Configure network parameters, as required			✓		

Included in Service	Storage				
	Backup		Block/File		
	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Config Boot from SAN (BFS) as required			✓		
Install and configure storage specific agents/software			✓		
Create and configure volumes/virtual disks			✓	✓	
Assign/map volumes/virtual disks to servers			✓	✓	
Partition and format assigned volumes/virtual disks			✓	✓	
Attach Hyper-V environment to SMB share					✓
Attach VMware environment to NFS export.					✓
Verify host to file system or share/export connectivity					✓
Install and configure storage management software on predetermined management station, if applicable			✓		
Attach to customer created database as required			✓		
Add storage systems			✓		
Integrate into directory services		✓	✓		✓
Install and configure storage management vCenter plug-in for existing virtualization environment managed via vCenter Server			✓		
Controller hardware upgrade of Dell SC-Series array controllers			✓		
Perform data-in-place controller hardware upgrade, including moving supported IO cards and/or installing new IO cards, as required.			✓		
Replace and upgrade controllers one at a time, according to plan			✓		
Verify host connectivity			✓		

Excluded from Service	Backup		Block/File		
	Tape Libraries	Disk Backup	SAN/DAS Arrays	Disk Enclosures	NAS
Configure the storage system					
Installation or configuration of any backup software	×	×	×	×	×
Any integration with any non-Dell branded hardware	×	×	×	×	×
Scripting of any kind	×	×	×	×	×
Installation or configuration of replication	×		×	×	×
Multiple tape library, SAN/DAS Arrays, Disk Enclosures, or Dedicated NAS implementations (additional services are required)	×	×	×	×	×
Installation and configuration of Network Attached Storage ("NAS") device(s)	×	×	×	×	
Installation of Windows Operating System or Microsoft SQL Server for the management system running the SAN management software	×	×	×	×	×
Installation and configuration of the virtualization environment including the Hypervisor or management application such as SCVMM, WAC or vCenter Server	×	×	×	×	×
Physical installation or OS/Hypervisor installation on storage attached hosts	×	×	×	×	×
Network configuration outside of new host or new storage connectivity	×	×	×	×	×
Performance tuning, system optimization, teaming/load balancing of network interface cards (NICs) or other similar activities.	×	×	×	×	×
Installation or configuration of any networking switches (Ethernet or Fibre Channel)	×	×	×	×	×
SC-Series controller hardware upgrade does not include data migration, adding drives, or moving drives from existing controllers. Upgrades requiring these services must be custom quoted.		×			
Any required back end reconfiguration must be completed before controller hardware upgrade		×			

Install and configure system software– Server

Included in Service	Server				
	Servers		Modular Platforms		
	Rack or Tower	Blade	Modular	VRTX	FX
Configuration of equipment (physical topology, firmware levels, IP address, running diagnostics)	✓	✓	✓	✓	✓
Enter the RAID utility and configure the local disks or chassis shared storage into one or more RAID logical unit number ("LUN") according to Dell supported Customer specifications	✓	✓	✓	✓	✓
Create and assign Virtual Disks to servers that contain an operating system installed by Dell	✓	✓	✓	✓	✓
Verify server(s) are connected to the Virtual Disks assigned to the OS installed by Dell	✓	✓	✓	✓	✓
Configure chassis specific components for Modular Platforms			✓	✓	✓
Assign chassis PCIe slots as supported by product				✓	✓
Configure virtual switches				✓	✓
Configure Service Console IP address			✓	✓	✓
Install and configure Operating System or Hypervisor (maximum of 8 server nodes for Modular Platforms)	✓	✓	✓	✓	✓
Microsoft Windows	✓	✓	✓	✓	✓
Red Hat Linux	✓	✓	✓	✓	✓
SUSE Linux	✓	✓	✓	✓	✓
VMware vSphere	✓	✓	✓	✓	✓
Citrix XenServer	✓	✓	✓	✓	✓
Microsoft Hyper-V	✓	✓	✓	✓	✓
Install and configure system software on deployed server	✓	✓	✓	✓	✓
Dell Repository Manager	✓	✓	✓	✓	✓
Dell SupportAssist	✓	✓	✓	✓	✓
Dell OpenManage Server Administrator (OMSA)	✓	✓	✓	✓	✓
Dell OpenManage Enterprise (OME) single instance	✓	✓	✓	✓	✓
Configure OME to discover newly deployed devices, including OOB interfaces (iDRACs) on servers, and configure SNMP forwarding on those devices	✓	✓	✓	✓	✓
Installation of Windows Admin Center single instance and OpenManage Integration for Microsoft Windows Admin Center plug-in	✓	✓	✓	✓	✓
Attach Host to existing Dell EMC SAN – includes SC-Series, Unity XT and PowerVault	✓	✓	✓	✓	✓
For VMware vSphere and Microsoft Hyper-V, the following apply:	✓	✓	✓	✓	✓
Cluster creation	✓	✓	✓	✓	✓
Basic OS install to local storage using standard defaults	✓	✓	✓	✓	✓
Configuration of host connection to SAN	✓	✓	✓	✓	✓
Configuration of up to 5 volumes to the host or cluster	✓	✓	✓	✓	✓
Configuration of standard virtual networking: VMware Distributed Switch or Hyper-V Virtual Networking (2 switch independent native teams, 2 External Virtual Switches, 4 VM Network adapters with VLAN access)	✓	✓	✓	✓	✓
Creation of up to one Virtual Machine, with customer supplied media and license	✓	✓	✓	✓	✓
Installation and basic configuration of hypervisor manager (vCenter Server, WAC, or SCVMM)	✓	✓	✓	✓	✓
Configuration of VMotion or Live Migration	✓	✓	✓	✓	✓
Enable VMware High Availability and/or Distributed Resource Scheduler	✓	✓	✓	✓	✓
Networking partitioning (NPAR)	✓	✓	✓	✓	✓
DCB - data center bridging	✓	✓	✓	✓	✓
Configuration of supported Layer 2 and Layer 3 features on Dell chassis based Ethernet Switches, as supported by product/solution.			✓	✓	✓

Included in Service	Server				
	Servers		Modular Platforms		
	Rack or Tower	Blade	Modular	VRTX	FX
Configure switches for stacking, as appropriate			✓	✓	✓
Configure Customer-provided internet protocol address, mask and gateway information, as appropriate			✓	✓	✓
Configure switch VLANs, as appropriate			✓	✓	✓
Configure switch link aggregations, as appropriate			✓	✓	✓
Configure switch DCB and FCoE protocols, as required			✓	✓	✓
Configure switch with static routes, RIP, OSPF, or BGP as appropriate			✓	✓	✓
Configure ISL on Dell chassis based Fibre Channel switches as Access Gateway or Subordinate mode			✓		
Configure zoning on Dell chassis based Fibre Channel switches			✓		
Visually verify via switch LED that there is link connectivity			✓	✓	✓
Provide advisory level assistance integrating chassis switch to existing top-of-rack infrastructure (ProDeploy only)			✓	✓	✓
Integrate chassis switch to top-of-rack infrastructure (ProDeploy Plus only)			✓	✓	✓
Demonstrate chassis switch functionality			✓	✓	✓

Excluded from Service	Servers		Modular Platforms		
	Rack or Tower	Blade	Modular	VRTX	FX
Advanced virtual networking (Switch Embedded Teaming, network QoS bandwidth allocation, and bandwidth reservation)	×	×	×	×	×
Resource Pool creation	×	×	×	×	×
Configuration of High Availability services (including vCenter, WAC, or SCVMM)	×	×	×	×	×
Operating System clustering	×	×	×	×	×
Creation of Virtual Templates	×	×	×	×	×
P2V or V2V Migration	×	×	×	×	×
Domain Controllers	×	×	×	×	×
Configuration of Infiniband	×	×	×	×	×
Configuration of Fibre Channel switches	×	×		×	×
Configuration of non-Dell chassis based Fibre Channel switches			×		
Configuration of Dell chassis based Fibre Channel switches as Principal in existing fabric			×		
Networking activities beyond chassis based switches	×	×	×	×	×
Installation and configuration of multiple OME servers	×	×	×	×	×
OME discovery and configuration of existing devices	×	×	×	×	×
Configuration of OME advanced fee-based features	×	×	×	×	×
Configuration of Open Manage Integration for VMWare VCenter	×	×	×	×	×
Configuration of advanced features of vCenter, WAC, or SCVMM, unless otherwise noted	×	×	×	×	×
vCenter, WAC or SCVMM configuration for existing clusters/servers that are not covered by this Service	×	×	×	×	×
Configuration of graphics processing units (GPUs), accellerators, or similar.	×	×	×	×	×

Install and configure system software– Networking

	Networking				
	Layer 3			Layer 2/3	Fibre Channel
Included in Service	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Layer-2 switching configuration	✓	✓	✓	✓	
Set up non-routable VLANs	✓	✓	✓	✓	
Implement up to 100 VLANs per deployed switch	✓			✓	
Implement up to 200 VLANs per deployed switch		✓	✓		
Set up Link Aggregation Groups	✓	✓	✓	✓	
Perform Firmware upgrades	✓	✓	✓	✓	
Perform Switch stacking	✓	✓	✓	✓	
Configuration for storage traffic	✓	✓	✓	✓	
iSCSI (Jumbo frames and flow control)	✓	✓	✓	✓	
DCB and FCoE	✓	✓	✓	✓	
Virtual Link Trunking (VLT) or Multi-Chassis Link Aggregation (MLAG)	✓	✓	✓	✓	
TACACS or Radius	✓	✓	✓	✓	
Telemetry configuration on switch (not collector)	✓	✓	✓	✓	
Spanning Tree, SNTP, SNMP, or SMTP	✓	✓	✓	✓	
Configure SmartFabric Services MX7000	✓	✓	✓	✓	
Configure SmartFabric Services for leaf and spine fabrics	✓	✓	✓	✓	
Deploy OpenManage Network Integration and connect to vCenter	✓	✓	✓	✓	
Layer-3 routing configuration	✓	✓	✓	✓	
Set up IPs on VLANs or Interfaces for routing	✓	✓	✓	✓	
Set up dynamic routing (RIP, OSPF or BGP basic configuration)	✓	✓	✓	✓	
Set up Multicasting (using IGMP and/or PIM)	✓	✓	✓	✓	
Set up Access Control statements	✓	✓	✓	✓	
Configure for first hop redundancy	✓	✓	✓	✓	
Set up QoS for dedicated Voice/Video VLANs	✓	✓	✓	✓	
Configure switch for an existing RIP, OSPF, or BGP environment	✓	✓	✓	✓	
Configuration of Dell EMC Storage Area Network (Ethernet or Fibre Channel)	✓	✓	✓	✓	✓
Configure connectivity to 4 hosts (up to 16 zones or 2 VLANs)	✓	✓	✓	✓	✓
Configure and test email alerts and/or SupportAssist, if applicable	✓	✓	✓	✓	✓

	Layer 3			Layer 2/3	Fibre Channel
Excluded from Service	L3 Fixed Port Switches	Chassis Switches	Distributed Core Switches	Blade IO	FC Switches
Connecting or integrating to existing customer environment	×	×	×	×	×
Scripting	×	×	×	×	×
Web programming	×	×	×	×	×
OSPF configuration beyond a single area	×	×	×	×	×
Advanced BGP Path control	×	×	×	×	×
Multi-vendor switch configuration, switch replacement or onsite cutover support	×	×	×	×	×

Configuration of Infiniband interconnect modules				×	×
Management of 3rd party activities (example: Internet service provider link reconfiguration or management of outside vendors)	×	×	×	×	×
Performance testing or fine tuning optimization	×	×	×	×	×
Proprietary features not supported by Dell EMC hardware	×	×	×	×	×
Anything outside specific test plan created for customer	×	×	×	×	×
Installation or configuration of host operating system, HBA, or multi-path	×	×	×	×	×
Configuration of 3rd party Storage Area Network	×	×	×	×	×
Installation and deployment of SAN management software (such as SANnav, Cisco DCNM, or others)	×	×	×	×	×

Install and configure system software – Big Cloud Fabric

	Big Cloud Fabric		
Included in Service	BCF Controller Appliance	BCF Controller VM	BCF Switch
Initial configuration of a Big Cloud Fabric Controller	✓	✓	
Cluster Configuration of a pair of Big Cloud Fabric Controllers	✓	✓	
Perform Software upgrades, if applicable	✓		
Customizing access privileges to the Fabric including access controller list, users and AAA services (TACACS or Radius)	✓	✓	
Configuration for remote syslog servers	✓	✓	✓
Configuration of NTP servers and time zone	✓	✓	✓
Configuration of SNMP on BCF if SNMP monitoring of the Fabric is required	✓	✓	✓
Integration with an existing installation of one VMware vCenter	✓	✓	
Set up a dynamic routing protocol (RIP, OSPF or BGP basic configuration) and/or static routing	✓	✓	
Configure policies to insert one pair of services (Firewall or Load Balancer)	✓	✓	
Set up Multicast and QoS if needed	✓	✓	
Setup up to 20 non-production servers connections to BCF	✓	✓	
Implement up to 200 segments	✓	✓	
Implement up to 25 tenants	✓	✓	
Create a policy in the system tenant to deny traffic between two tenants	✓	✓	
Create a policy in a workload tenant to deny traffic between two segments	✓	✓	
Verify the switch is connected to the controllers			✓
Update the firmware on the switch if required (CPLD, ONIE)			✓
Configure the fabric role			✓
Implement up to 10 additional segments			✓
Implement up to 1 additional tenant			✓
Set up IPs on Segment Interfaces for the segments created	✓	✓	✓

	Big Cloud Fabric		
Excluded from Service	BCF Controller Appliance	BCF Controller VM	BCF Switch
Configuration of any other networking equipment that is not part of BCF	×	×	×
Creating and executing user acceptance test plans	×	×	×

Creating and executing design validation testing	×	×	×
Physical and logical migration: planning, creating and testing procedure to move servers and services from existing infrastructures to Big Cloud Fabric	×	×	×
Validation of the operation of internal applications	×	×	×
Any additional software development/integration work on the tools and automation platforms that have not already been agreed upon	×	×	×

Install and configure system software – Big Monitoring Fabric OoB

	Big Monitoring Fabric OoB		
Included in Service	BMF OoB Controller Appliance	BMF OoB Controller VM	BMF OoB Switch
Initial configuration of a Big Monitor Fabric OoB Controller	✓	✓	
Cluster Configuration of a pair of BMF OoB Controllers	✓	✓	
Perform Software upgrades if applicable	✓	✓	
Customizing access privileges to the Fabric including access controller list, users and AAA services (TACACS or Radius)	✓	✓	
Configuration for remote syslog servers	✓	✓	✓
Configuration of NTP servers and time zone	✓	✓	✓
Configuration of SNMP on BMF if SNMP monitoring of the Fabric is required	✓	✓	✓
Install Switch Light OS if applicable (pre-configured mode)			✓
Verify the switch is connected to the controllers			✓
Update the firmware on the switch if required (CPLD, ONIE)			✓
Configure the switch role			✓
Configure all Filter and Delivery interfaces with their associated interface groups			✓
Configure Filter, Delivery and IP address Groups			✓
Configure BMF OOB policies			✓
Configure Tunnel interfaces and L2-GRE tunnels (BMF OoB Tunneling Switch only)			✓

	Big Monitoring Fabric OoB		
Excluded from Service	BMF OoB Controller Appliance	BMF OoB Controller VM	BMF OoB Switch
Configuration of any other networking equipment that is not part of BMF	×	×	×
Creating and executing user acceptance test plans	×	×	×
Creating and executing design validation testing	×	×	×
Physical and logical migration: planning, creating and testing procedure to move servers and services from existing infrastructures to Big Monitoring Fabric	×	×	×
Validation of the operation of internal applications	×	×	×
Any additional software development/integration work on the tools and automation platforms that have not already been agreed upon	×	×	×

Install and configure system software – Big Monitoring Fabric Inline

	Big Monitoring Fabric Inline		
Included in Service	BMF Inline Controller Appliance	BMF Inline Controller VM	BMF Inline Switch
Initial configuration of a Big Monitor Fabric Inline Controller	✓	✓	
Cluster Configuration of a pair of BMF Inline Controllers	✓	✓	

Perform Software upgrades, if applicable	✓		
Customizing access privileges to the Fabric including access controller list, users and AAA services (TACACS or Radius)	✓	✓	
Configuration for remote syslog servers	✓	✓	✓
Configuration of NTP servers and time zone	✓	✓	✓
Configuration of SNMP on BMF if SNMP monitoring of the Fabric is required	✓	✓	✓
Install Switch Light OS if applicable (pre-configured mode)			✓
Verify the switch is connected to the controllers			✓
Update the firmware on the switch if required (CPLD, ONIE)			✓
Configure the switch role			✓
Setup services and instances to match the number of services to be connected to inline switches			✓
Setup health checks for services if required			✓
Setup SPAN services for monitoring chain traffic if required			✓
Configure up to four BMF Inline chains			✓
Insert services within chains based on the order in which production traffic needs to be processed			✓
Configure filtering rules to control specified flows to go through specified services if required			✓
Configure port failure groups according to the customer requirements			✓
Setup service failover mechanisms as per design (optional - fail open or mandatory - fail close)			✓

	Big Monitoring Fabric Inline		
Excluded from Service	BMF Inline Controller Appliance	BMF Inline Controller VM	BMF Inline Switch
Configuration of any other networking equipment that is not part of BMF	×	×	×
Creating and executing user acceptance test plans	×	×	×
Creating and executing design validation testing	×	×	×
Physical and logical migration: planning, creating and testing procedure to move servers and services from existing infrastructures to Big Monitoring Fabric	×	×	×
Validation of the operation of internal applications	×	×	×
Any additional software development/integration work on the tools and automation platforms that have not already been agreed upon	×	×	×

Install and configure system software – Access Edge Platforms

	Access Edge Platforms		
Included in Service	Edge 6xx	Edge 3x00	Virtual Edge
Configuration	✓	✓	✓
Configure profiles according to plan			✓
Configure segments according to plan	✓	✓	
Configure firewall rules according to plan	✓	✓	
Configure business policies according to plan	✓	✓	✓
Configure the solution to integrate with up to one (1) VNF service or cloud security provider	✓	✓	✓
SD-WAN Edge Implementation	✓	✓	✓
Add an edge device on the orchestrator and associate with a profile	✓	✓	✓
Customize the edge parameters to match the deployment site	✓	✓	✓
Activate the edge	✓	✓	✓
Validate with customer assistance the traffic flow for the site	✓	✓	✓

Excluded from Service	Access Edge Platforms		
	Edge 6xx	Edge 3x00	Virtual Edge
Configuration on existing devices	×	×	×
Configure the VNF service or cloud security provider for the integration	×	×	×
Changes on configuration on existing SD-WAN Edge devices	×	×	×
Deployment of on premisses SD-WAN Orchestrator and SD-WAN Gateway	×	×	×

Install and configure system software – Wireless

Included in Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
HiveManager virtual appliance deployment on VMware	✓					
Ruckus Virtual SmartZone deployment on Vmware, Hyper-V, or KVM		✓				
Ruckus Virtual SmartZone-Dataplane deployment on Vmware, or KVM				✓		
Ruckus Cloudpath deployment on Vmware, or Hyper-V					✓	
Ruckus SmartCell Insight deployment on Vmware, or KVM						✓
Perform Initial Setup	✓	✓	✓	✓	✓	✓
Install licenses	✓	✓	✓	✓	✓	✓
Onboard access points on the controller, up to the number of APs defined on the service	✓	✓	✓	✓		
Update access points firmware	✓	✓	✓			
Floor Plan configuration	✓	✓	✓			
Upload floor plans defined during the planning phase	✓	✓	✓			
Indicate placement of deployed access points on the floor plan	✓					
Wireless configuration	✓	✓				
SSIDs configuration	✓	✓				
Open Access authentication	✓	✓				
Pre-Shared Key (PSK) Authentication	✓	✓				
Private Pre-Shared Key (PPSK) Authentication	✓					
Dynamic Pre-Shared Key (PPSK) Authentication		✓				
802.1x Authentication	✓	✓				
Local Captive Web Portal configuration	✓	✓				
Integration with Radius for wireless authentication	✓	✓			✓	
Integration with Microsoft Active Directory for wireless authentication	✓	✓			✓	
Configuration of DHCP for the wireless clients	✓	✓				
Integrate with Ruckus Controller				✓	✓	✓
Configure Authentication Workflow					✓	
Provide an overview of the tool and available reports						✓

Excluded from Service	Wireless					
	Aerohive	Ruckus Controller	Ruckus Access Point	Ruckus Virtual DataPlane	Ruckus CloudPath	Ruckus SCI
Configuration of external captive portal server	×	×			×	
Configuration of license or certificate server	×	×			×	
Requesting or issuing certificates for wireless client authentication	×	×			×	
Integration with Hotspot service	×	×				
Configuration of wireless mesh	×	×				

Install and configure system software– Solutions

XC Series

Included in Service	XC Series
Validate Customer top of rack switch configuration meets the requirements for XC implementation. If required, configure up to two VLANs for the XC cluster on up to two Dell switches.	✓
Initialize cluster and assign all IP addresses	
Install supported hypervisor, as necessary	✓
Confirm Nutanix software is at the latest version, update as necessary	✓
Confirm component drivers and firmware are at latest supported version, update as necessary	✓
Create single storage container and Datastore	✓
For vSphere XC clusters, install vCenter if required. Register cluster nodes in vCenter.	✓
For Hyper-V XC clusters, register cluster nodes with an existing SCVMM server, as necessary.	✓
Add a node to an existing Nutanix cluster	✓
Configure and test SupportAssist	✓
Installation of a single SupportAssist console, and discovery of all installed nodes (via iDRAC)	✓

Excluded from Service	XC Series
Any configuration of non-Dell switches	×
Acquisition or installation of Nutanix or VMware licenses	×
Deployment of System Center, or integration into existing management platforms	×
Installation, configuration, migration, or testing of VMs, hosts or other workloads	×
Uplinks to existing customer networks	×
Any configuration of client computers	×
Configuration of client or VM networks	×
Configuration of advanced networking (e.g., Distributed Virtual Switches) in the hypervisor	×

VxRail

Included in Service	VxRail
Validate Customer Top of Rack switch configuration meets the requirements for VxRail implementation	✓
Initialize cluster and assign all IP addresses	✓
Install supported ESXi hypervisor, as necessary	✓
Confirm component drivers and firmware are at latest supported version, update as necessary	✓
Create vSAN Datastore	✓
Install vCenter if required, and add cluster nodes in vCenter	✓
Add a node to an existing VxRail cluster	✓
Enable Data-At-Rest-Encryption (DARE) on datastore, if required, and VMware approved KMS server is accessible	✓
Install customer-supplied VMware licenses for the VxRail cluster	✓
Perform VxRail EMC Secure Remote Services (ESRS) setup and verify that ESRS deployment and activation is successful	✓
Register Customer to receive product alerts	✓

Excluded from Service	VxRail
Switch configuration	×
Acquisition of VMware licenses	×
Installation, configuration, migration, or testing of VMs, hosts or other workloads	×
Uplinks to existing customer networks	×
Any configuration of client computers	×
Configuration of client or VM networks	×
Installation of a Key Management System (KMS)	×
Stretched-cluster	×

VxFlex Appliance

Included in Service	VxFlex Appliance
Validate Customer Top of Rack switch configuration meets the requirements for VxFlex Appliance. (Validate pre-requisites for VxFlex Manager to control host-facing ports are set.)	✓
Initialize cluster and assign all IP addresses	✓
Install VxFlex Manager on a provided management cluster or host	✓
Deploy VxFlex Appliance cluster via VxFlex Manager automation	✓
Install supported hypervisor, as necessary; configure VxFlex Manager for OS/Hypervisor installation	✓
Create and map VxFlex OS volumes	✓
Confirm component drivers and firmware are at latest supported version, update as necessary	✓
Add a node to an existing VxFlex Appliance cluster	✓
Setup VxFlex Appliance cluster for SRS (Secure Remote Services)	✓

Excluded from Service	VxFlex Appliance
Switch configuration	×

Installation on hardware other than VxFlex Apppliance	
Acquisition of licenses	×
Installation, configuration, migration, or testing of VMs, hosts or other workloads	×
Uplinks to existing customer networks	×
Any configuration of client computers	×
Configuration of client or VM networks	×

AX

Included in Service	AX
Validate Customer Top of Rack switch configuration meets the requirements for AX implementation	✓
Initialize cluster and assign all IP addresses	✓
Install supported OS, as necessary	✓
Confirm component drivers and firmware are at latest supported version, update as necessary	✓
Create Microsoft Failover Cluster	✓
Configure RDMA and network settings on each node	✓
Enable S2D; configure Storage Pools and virtual disks	✓
Install and configure Windows Admin Center (WAC) and the Dell OpenManage Plugin for WAC	✓
Configure the Azure Stack HCI cluster using an existing Microsoft System Center Virtual Manager (SCVMM) if applicable	✓
Add S2D Management Packs to existing System Center Operations Manager (SCOM) if applicable	✓
Add node to an existing AX cluster	✓

Excluded from Service	AX
Switch configuration	×
Installation on hardware other than AX nodes	×
Acquisition of licenses	×
Installation, configuration, migration, or testing of VMs, hosts or other workloads	×
Uplinks to existing customer networks	×
Any configuration of client computers	×
Configuration of client or VM networks	×

VxFlex Ready Node

Included in Service	VxFlex Ready Node
Validate Customer Top of Rack switch configuration meets the requirements for VxFlex Ready Node.	✓
Initialize cluster and assign all IP addresses	✓
Install supported hypervisor or OS, as necessary on each node	✓
Confirm component drivers and firmware are at latest supported version, update as necessary	✓
Deploy VxFlex OS cluster	✓
Configure Ready Node VxFlex Data Clients (SDC)	✓
Create and map VxFlex OS volumes	

Add a node to an existing VxFlex Ready Node cluster	✓
Configure a single VxFlex Ready Node as a management server for a VxFlex Appliance environment.	
Setup VxFlex OS for SRS (Secure Remote Services)	✓

Excluded from Service	**VxFlex Ready Node**
Switch configuration	×
Installation on hardware other than VxFlex Ready Nodes	
Acquisition of licenses	×
Installation, configuration, migration, or testing of VMs, hosts or other workloads	×
Uplinks to existing customer networks	×
Any configuration of client computers	×
Configuration of client or VM networks	×

HPC

Included in Service	**HPC**
Configuration of equipment (physical topology, firmware levels, IP address, running diagnostics)	✓
Configuration of switches per implementation plan	✓
Head node(s) operating system installation and configuration	✓
Red Hat Enterprise Linux	✓
CentOS	✓
SUSE Linux Enterprise Server	✓
Installation of Dell certified Cluster Manager Software (CMS) on Master Node	✓
Installation of Scheduler supported by CMS	✓
Cluster creation	✓
Configure node groups per implementation plan	✓
Deploy and configure compute notes per implementation plan	✓
Verify nodes are connected to the network and available	✓
Configure Preboot Execution Environment (PXE) boot options	✓
Compute nodes operating system installation and configuration	✓
Install licenses for solution as required	✓
Install and configure system support software on deployed server(s)	✓
Installation of Scheduler supported by CMS	✓
Set BMC IP address and complete any Intelligent Platform Management Interface (IPMI)/BMC configuration for remote cluster management	✓
Configure the internal storage per implementation plan	✓
Connect to Extents File System (XFS) repository for customer	✓
Install Dell supported file systems, XFS or NFS	✓
Install OpenFabrics Enterprise Distribution (OFED) as required per design	✓
Demonstrate CMS functionality	✓

Excluded from Service	HPC
Advanced virtual networking	×
Physical server installation (covered by HPC supplemental deployment services)	×
Data, server or application migration activities	×
Modular platform storage array	×
Configuration of Fibre Channel switches	×
Configuration of non-Dell chassis based Fibre Channel switches	×
Configuration of Dell chassis based Fibre Channel switches as Principal in existing fabric	×
Networking activities beyond scope of this Service	×
OME discovery and configuration of existing devices	×
Configuration of OME advanced fee-based features	×
Boot over InfiniBand (IB) or Boot over Omni Path Architecture (OPA)	×

Data Domain Appliance (DD3xxx)

Included in Service	Data Domain Appliance
Perform initial Data Domain system configuration	✓
Verify and configure LAN connectivity	✓
Configure additional Data Domain software, if necessary	✓
Configure system administration for auto support and alerts	✓
Configure MTrees and quotas, if necessary	✓
Configure data movement policies on all applicable MTrees on Data Domain systems, if necessary	✓
Upgrade the Data Domain Operating Systems, as required	✓
Configure CIFS/NFS data access	✓
Assist Customer with CIFS/NAS integration into backup-application software	✓
Verify that Data Domain auto support and alerts are sending and submitting Customer Support ID information	✓
Update Data Domain asset information and documentation, and create Data Domain Customer Support accounts	✓

Data Protection Appliance (DP4xxx)

Included in Service	Data Protection Appliance
Perform initial Integrated Data Protection Appliance system configuration	✓
Verify and configure LAN connectivity	✓
Deploy vCenter Server Appliance via Appliance Configuration Manager (ACM)	✓
Deploy Avamar Virtual Edition via Appliance Configuration Manager (ACM)	✓
Deploy Data Domain Virtual Edition via Appliance Configuration Manager (ACM)	✓
Deploy Data Protection Advisor via Appliance Configuration Manager (ACM)	✓
Deploy Search via Appliance Configuration Manager (ACM)	✓
Deploy Cloud Disaster Recovery via Appliance Configuration Manager (ACM)	✓
Configure system administration for auto support and alerts	✓

Confirm the successful status of all IDPA components	✓
Confirm the successful import of IDPA integrated components into the Appliance Configuration Manager and Systems Manager	✓
Set up backup policies for VMware workloads via IDPA System Management (DPC) tool and launching the Avamar Proxy Deployment page Add vCenter in IDPA 2.2 or newer Discover and add virtual machine client Deploy proxy for performing virtual machine backups and restores Create a Dataset for a client Create a Backup Policy Initiate a backup via the Policy and review the Backup set for restore	✓
Test On-demand Backup for an Avamar Server of a test system (test server, desktop, or laptop) with a limited dataset size (1 VM and up to 5GB) to facilitate the demonstration of this functionality	✓
Test Data Restore of the test on-demand Backup (1 VM and up to 5GB)	✓
Verify that IDPA auto support and alerts are sending and submitting Customer Support ID information	✓
Create Customer Support accounts, if necessary	✓

Data Protection Suite for VMware

Included in Service	**DP Suite for VMware**
This service includes the following components (not to exceed the listed values): Data Domain Virtual Edition Appliance: 1 Data Domain Appliance: 1 Avamar Servers: 1 Avamar Clients in Design: 50 ESX Servers for Integration: 1 VMware Image Level Backups: 5 Collection nodes: 1 Data Protection Advisor Collector Nodes: 1 Avamar Clients for Implementation: 50 Avamar VMware Image Proxies: 2 Avamar Servers Configured for use with Data Domain: 1 Avamar application plug-ins with DD Boost: 10	✓
Perform the following Data Domain Virtual Edition (DDVE) configuration: Verify VMware and DDVE software requirements. Review vCenter or ESXi Server configuration settings. Verify the successful installation of the customer-installed DDVE virtual machine. Review DDVE configuration settings. Add additional VMware virtual disks to the virtual machine configuration settings.	✓
Expand new storage into the Data Domain virtual appliance file system.	✓
Perform an initial Data Domain system configuration: Verify and Configure LAN connectivity. Configure Data Domain purchased software license, if necessary. Configure system administration for auto support and alerts. Configure MTrees and quotas, if necessary	✓
Configure data movement policies on all applicable MTrees on Data Domain systems, if necessary.	✓
Demonstrate additional capacity is recognized by the Data Domain storage system.	✓
Verify that Data Domain auto support and alerts are sending and submitting Customer Support ID information.	✓
Perform the tests in the Test Plan for Customer.	✓
Configure additional Data Domain software, if necessary.	✓
Upgrades the Data Domain operating systems, as required	✓
Configure the DDR(s) for DD Boost data access: Create the DD Boost user(s) and logical storage unit(s). Add the ifgroup(s) with dedicated interfaces, if necessary.	✓
Update Data Domain asset information and documentation, and creates Data Domain Customer Support accounts.	✓
Register Avamar hardware serial numbers.	✓
Configure Avamar IP addresses and host names for Customer's network.	✓
Configure Avamar remote management and monitoring network interface.	✓
Copy software packages to prepare Avamar Grid for implementation and configuration of Avamar features.	✓
Install and Configure Avamar Software and activates the Avamar Grid.	✓

Configure Avamar local authentication.	✓
Install, Configure, and activate Avamar client agents on any supported host platform.	✓
Configure vSphere and Avamar Administrator and Authentication.	✓
Configure VMware Image Backups and Proxies for Avamar.	✓
Validate VM backups completed in the Data Protection environment.	✓
Configure the Avamar system for use with the Data Domain as a target backup device.	✓
Configure datasets on the Avamar systems for the client application plug-in using DD Boost.	✓
Verify that the requirements for the Data Protection Advisor implementation within the existing backup, recovery, and replication environments are detailed.	✓
Install and Configure the DPA server software, creating a DPA server (instance) for supported backup software products.	✓
Configure and enable DPA licensed modules.	✓
Configure DPA Users and Roles.	✓
Install, Configure, and implement DPA collectors on supported backup servers, host clients, and appliance nodes.	✓
Configure collector nodes for each appliance, application, or host type for data monitoring.	✓
Configure and validate database maintenance routines.	✓
Configure the DPA environment with the existing ESRS environment.	✓

Data Protection Suite Solution Package

Included in Service	**PKGDPS**
Develop a high level Integration Plan of applicable DPS components and services from the following: Avamar DD Boost for Enterprise Applications (Oracle, DB2, MS SQL, SAP) Data Protection Advisor NetWorker SourceOne Cloud Options for Mozy and Syncplicity	✓
Review and validate documents including Questionnaires, Qualifiers, Sales Order, SOW, Service Briefs of services sold and any other architecture-related documents provided by Presales.	✓
Validate and document Customer environment requirements and Customer expectations.	✓
Prepare a high level Integration Plan of DPS components that are applicable to the Customer's environment.	✓
Validate required product licenses, services and resource skills.	✓
Identify additional solution components that are required to be purchased by the Customer.	✓
Present and explain to the Customer features, functionality and integration of purchased DPS components.	✓
Present to the Customer value add of services purchased.	✓
Address technical concerns of Customer with regard to the DPS package purchase, if any.	✓

Data Domain Virtual Edition

Included in Service	**DDVE**
This service includes the following components (not to exceed the listed values): Data Domain Virtual Edition Appliance: 1	✓
Perform the following Data Domain Virtual Edition (DDVE) configuration: Verify VMware and DDVE software requirements. Review vCenter or ESXi Server configuration settings. Verify the successful installation of the customer-installed DDVE virtual machine. Review DDVE configuration settings. Add additional VMware virtual disks to the virtual machine configuration settings.	✓
Expand new storage into the Data Domain virtual appliance file system.	✓
Perform an initial Data Domain system configuration: Verify and Configure LAN connectivity. Configure Data Domain purchased software license, if necessary. Configure system administration for auto support and alerts. Configure MTrees and quotas, if necessary	✓
Configure data movement policies on all applicable MTrees on Data Domain systems, if necessary.	✓
Demonstrate additional capacity is recognized by the Data Domain storage system.	✓
Verify that Data Domain auto support and alerts are sending and submitting Customer Support ID information.	✓

Configure CIFS/NFS data access.	✓
Assist the customer with CIFS/NAS integration into backup-application software.	✓
Configure replication on Data Domain Appliance.	✓

Data Domain Cloud Tier

Included in Service	DDCT
This service includes the following components (not to exceed the listed values): Number of cloud providers: 1 Number of MTrees for cloud data movement policy: 1	✓
Discuss cloud provider and certificates required for cloud enablement.	✓
Review Customer's Cloud Backup SLA.	✓
Complete solution design validation.	✓
Add Cloud Tier Capacity License.	✓
Add Storage to Cloud Tier.	✓
Add Cloud Certificates, Profiles and Units.	✓
Add MTrees to Data Movement Policy and Schedule Cloud Data Movement.	✓

Data Domain with High Availability

Included in Service	DDHA
Confirm identical hardware and IO SLIC locations in both designated Data Domain High Availability active and passive nodes.	✓
Relocate IOPS SLICs in High Availability passive nodes to match IOPS SLIC location in High Availability active nodes, if necessary	✓
Perform an installation of IOPS interconnect SLIC in designated IOPS slot in active and passive nodes.	✓
Provide assistance in racking and stacking the Data Domain passive node appliances.	✓
Connect LAN, Fiber, SAS, and power cables to the Data Domain passive node appliances.	✓
Configure and verify LAN, Fiber, SAS connectivity to the Data Domain passive node appliances.	✓
Perform a basic system configuration on passive nodes for High Availability cluster integration.	✓
Install purchased Data Domain High Availability software licenses.	✓
Perform High Availability configuration for two node clusters implementation.	✓
Perform a fail-over and fail-back test for verification of successful High Availability configuration.	✓
Register the Customer to receive product alerts.	✓
Verify Data Domain auto support and alerts, sending and submitting customer support ID information.	✓

Data Domain Management Center Configuration

Included in Service	DDMCC
Validate DDMC Installation and Configuration:	✓
Verify VMware and DDMC Software Requirements	✓
Review vCenter or ESXi Server Configuration Settings	✓
Review VMware Virtual Machine Configuration Settings	✓
Review DDMC Configuration Settings	✓
Configure the following DDMC settings:	✓
Join the DDMC system to Active Directory (AD), if necessary.	✓
Add DD managed systems to DDMC inventory	✓
Configure Groups	✓
Configure Local and AD Users and Roles	✓
Configure Reports, Notifications, and Properties	✓
Configure Dashboard Widgets and Tabs	✓

Data Domain Virtual Tape Library

Included in Service	DDVTL
This service includes the following components (not to exceed the listed values): Data Domain Appliances with TFL: 1 Number of Data Domain fibre cards: 1 VTLs to create: 1	✓
Install Data Domain Fibre Channel card for SAN connectivity.	✓
Assist with SAN zoning recommendations for backup servers and Data Domain appliance.	✓
Configure the Data Domain system for VTL	✓
Assist customer in mounting VTL and loading device drivers on backup servers (Data Domain supported operating systems or hardware configurations only).	✓
Assist in configuring the backup server to allow connectivity and operation of VTL.	✓
Provide for NDMP connections via backup server client connectivity and protocol mount point destinations.	✓
Provide an exported VTL Configuration file for DD appliances with DDOS 5.5, or newer.	✓

Data Domain with IBM i Series

Included in Service	DDIBMI
Perform VTL Data Domain system configuration for IBM i integration at one location.	✓
Configure Data Domain purchased software license, if necessary.	✓
Configure data access for up to four LPARs.	✓
Demonstrate VTL is visible to the IBM i.	✓
Configure up to four VTL tape drives and single write/restore streams.	✓
Configure one MTree, if necessary.	✓
Configure Data Domain replication for up to four LPARs to a remote Data Domain appliance.	✓

Avamar with Data Domain Boost

Included in Service	AVDD
This service includes the following components (not to exceed the listed values): Avamar Clients: 1 Avamar Oracle Plugins: 1 Avamar Exchange Plugins: 1 Avamar Microsoft SQL Plugins: 1 Avamar Microsoft SharePoint Plugins: 1 Avamar Domino Plugins: 1 Avamar Servers Configured for use with Data Domain: 1 Avamar application plug-ins with DD Boost: 1	✓
Develop and document the Avamar client design and requirements.	✓
Develop and document a client, dataset, groups, and retention policy design and requirements.	✓
Develop and document the Avamar Application Plug-in solution design and requirements.	✓
Develop and document the Avamar and Data Domain integration design.	✓
Configure the Avamar system for use with the Data Domain as a target backup device.	✓
Configure datasets on the Avamar systems for client application plug-in utilizing DD Boost.	✓

Data Domain Boost with Symantec NBU

Included in Service	DDBT
This service consists of configuring DD Boost over Internet Protocol (IP), or DD Boost over Fiber Channel (FC) with software versions of DDOS 5.3 and NBU 7.x, or later, on one Data Domain appliance and on up to five NBU media servers.	✓
Verify one Data Domain appliance operating system is at supportability mode in order to integrate DD Boost.	✓
Assist with SAN zoning recommendations for DD Boost over FC considerations, if necessary.	✓
Install one DD HBA for DD Boost over FC connectivity, if necessary	✓
Configure DD Boost data access, which includes:	✓
Create one DD Boost user and logical storage unit.	✓

Configure end points, access groups, initiators and services, if necessary.	✓
Add up to one if group with dedicated interfaces, if necessary	✓
Install and register a DD Boost plug-in on up to five media servers.	✓
Configure DD Boost devices on up to five NBU media servers.	✓
Update Data Domain asset information and documentation, and create Data Domain customer support accounts.	✓

Data Domain Boost for Database Applications

Included in Service	DDBDBA
This service delivers the installation and configuration of the database application agent on one source database server backing up one of the following databases: DB2, Oracle, SAP HANA, or SAP with Oracle, to one targeted Data Domain (DD) system with Data Domain operating system (DDOS) of 5.7 or later. This service includes the following components (not to exceed the listed values): Database Application Servers: 1 Data Domain appliances with DD Boost: 1 DB2 Databases: 1 Oracle Databases without SAP: 1 SAP HANA Databases: 1 SAP with Oracle Databases: 1	✓
Assist with SAN zoning recommendations for DD Boost over FC considerations, if necessary.	✓
Install FC Target HBA(s) in DDR(s), if applicable.	✓
Configure the DDR(s) for DD Boost data access:	✓
Create the DD Boost user(s) and logical storage unit(s).	✓
Configure End Points, Access Groups, Initiators and Services, if necessary.	✓
Add the ifgroup(s) with dedicated interfaces, if necessary.	✓
Install and verify the successful installation of the Data Domain Boost Enterprise Applications Database Agent Software.	✓
Configure the Data Domain Boost Enterprise Applications Database Agent Software.	✓
Configure the database backup parameters.	✓
Perform and verify the successful database backup for the customer.	✓

Data Domain Boost for Microsoft Applications

Included in Service	DDBMSA
This service includes the following components (not to exceed the listed values): Data Domain appliances with DD Boost: 1 Microsoft SQL Database Servers: 1	✓
Assist with SAN zoning recommendations for DD Boost over FC considerations, if necessary.	✓
Install FC Target HBA(s) in DDR(s), if applicable.	✓
Configure the DDR(s) for DD Boost data access:	✓
Create the DD Boost user(s) and logical storage unit(s).	✓
Configure End Points, Access Groups, Initiators and Services, if necessary.	✓
Add the ifgroup(s) with dedicated interfaces, if necessary.	✓
Install and verify the successful installation of the Data Domain Boost Enterprise Applications Microsoft Agent Software.	✓
Configure the Data Domain Boost for Enterprise Applications Microsoft Agent Software.	✓
Configure the database backup parameters.	✓
Perform and verify the successful database backup for the customer.	✓
Create Data Domain Customer Support accounts.	✓

Data Protection Search

Included in Service	DPSI
This service includes the following components (not to exceed the listed values): Number of Index Master servers: 1 Number of Avamar application servers: 1 Number of NetWorker application servers: 1 Number of virtual machines: 1 Worker Node instances: 2 Index Data Node instances: 2	✓

Verify readiness of Data Protection Search Implementation including access, implementation procedure and hardware and software requirements.	✓
Install and configure Data Protection Search Index Master software.	✓
Install and configure Data Protection Search Index Data software.	✓
Install and configure Data Protection Search Worker software.	✓
Create and configure up to 4 indexes and 4 collection activities per data protection search environment.	✓
Configure Avamar servers.	✓
Configure NetWorker servers.	✓

Data Protection Advisor

Included in Service	DPA
This service includes the following components (not to exceed the listed values): Data Protection Advisor Collector Nodes: 1 Collection nodes: 1 Federated DPA servers: 1 Reports to be customized: 0.00 Analysis jobs: 1 Recoverability Agents: 1	✓
Verify requirements for the Data Protection Advisor implementation within the existing backup, recovery, and replication environments are detailed.	✓
Install and configure the DPA server software, creating a DPA server (instance) for supported backup software products.	✓
Configure and enable DPA licensed modules.	✓
Configure DPA Users and Roles.	✓
Install, configure, and implement DPA collectors on supported backup servers, host clients, and appliance nodes.	✓
Configure collector nodes for each appliance, application, or host type for data monitoring.	✓
Configure and validate database maintenance routines.	✓
Configure federated reporting	✓
Configure and validate Data Protection Advisor custom reports	✓
Configures DPA application customization views, panels, and schedules.	✓
Configure the DPA environment with the existing ESRS environment.	✓
Creates and configures analysis jobs, reports, and schedules.	✓
Installs and configures Data Protection Advisor Recoverability agents and hosts.	✓
Configures and validates database maintenance routines.	✓

Single Federated Reporting Server DPA

Included in Service	DPAFR
This service includes the following components (not to exceed the listed values): Federated DPA Servers: 1	✓
Verify that the environment meets all hardware and software requirements.	✓
Install and configure one instance of Data Protection Advisor server software for federated reporting.	✓
Verify standard reporting and alerting.	✓
Configure and validates data protection analysis jobs, schedules, and reports.	✓
Configure and validates recoverability agents, analysis jobs, schedules and reports.	✓
Configure and validates database maintenance routines.	✓
Configure DPA environment with existing ESRS environment.	✓

RecoverPoint for Virtual Machines

Included in Service	RP4VMDP
This service includes the following components (not to exceed the listed values): Sites: 2 Virtual machines that require protection: 1 Virtual RecoverPoint Appliances (vRPAs): 4 ESXi servers that host the vRPA cluster: 2 ESXi servers that host protected VMs: 1	✓

Virtual RecoverPoint Appliance Clusters: 2 vCenter servers: 2 RecoverPoint for VM systems: 2 ESXi servers that host replica VMs: 2 Consistency Groups: 1	
Validate prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.	✓
Install and configure virtual RecoverPoint appliances.	✓
Install and connect vRPA clusters.	✓
Registers vCenter servers in RecoverPoint for VMs system.	
License, register, and enable support for RecoverPoint for VMs systems.	✓
Register data stores and ESXi clusters.	✓
Create RecoverPoint replicas of virtual machines.	✓
Create a consistency group and define replication policies.	✓
Monitor consistency groups initialization.	✓
Perform the required tests using the Test Plan.	✓
Complete solution implementation validation.	✓

RecoverPoint for Virtual Machines Local Replication

Included in Service	**RPVMLR**
This service includes the following components (not to exceed the listed values): Sites: 1 Virtual machines that require protection: 2 Virtual RecoverPoint Appliances (vRPAs): 2 ESXi servers that host the vRPA cluster: 2 ESXi servers that host protected VMs: 2 RecoverPoint for VM systems: 1 ESXi servers that host replica VMs: 2 Virtual RecoverPoint Appliance Clusters: 1 Consistency Groups: 1	✓
Validate prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.	✓
Install and configure two (2) virtual RecoverPoint appliances in a single (1) vCenter server.	✓
Install and configure a single (1) vRPA cluster.	✓
License, register, and enable support for RecoverPoint for VMs systems.	✓
Register data stores and ESXi clusters.	✓
Create RecoverPoint replicas of VMs for local replication at a single site.	✓
Create a consistency group comprising of two (2) test virtual machines and define replication policies.	✓
Monitor consistency groups initialization.	✓
Perform the required tests using the Test Plan.	✓
Complete solution implementation validation.	✓

RecoverPoint for Virtual Machines Remote Replication

Included in Service	**RPVMRR**
This service includes the following components (not to exceed the listed values): Sites: 2 Virtual machines that require protection: 2 Virtual RecoverPoint Appliances (vRPAs): 4 ESXi servers that host the vRPA cluster: 4 ESXi servers that host protected VMs: 2 RecoverPoint for VM systems: 1 ESXi servers that host replica VMs: 2 Virtual RecoverPoint Appliance Clusters: 2 Consistency Groups: 1	✓
Validate prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.	✓
Install and configure two (2) virtual RecoverPoint appliances at a local site.	✓
Install and configure two (2) virtual RecoverPoint appliances at a remote site.	✓

Install and connect two (2) vRPA clusters.	✓
Register vCenter servers in RecoverPoint for VMs system.	✓
License, register, and enable support for RecoverPoint for VMs systems.	✓
Register data stores and ESXi clusters.	✓
Create RecoverPoint replicas of VMs for remote replication between two (2) sites.	✓
Create a consistency group comprising of two (2) test virtual machines and define replication policies.	✓
Monitor consistency groups initialization.	✓
Perform the required tests using the Test Plan.	✓
Complete solution implementation validation.	✓

RecoverPoint for Virtual Machines Implementation Assistance

Included in Service	RPVMGL
Provide implementation assistance for one RecoverPoint for Virtual Machines cluster only.	✓
Engage with Customer during the deployment phase of the RecoverPoint for Virtual Machines.	✓
Provide scheduled technical guidance and expertise to the Customer resource who is handling the deployment.	✓
Provide an additional measure of implementation support for this customer-installable product RecoverPoint for Virtual Machines in Customer's data center.	✓

Data Protection Central

Included in Service	DPCDPS
Verify that the environment meets all hardware and software requirements.	✓
Deploy and configure the Data Protection Central OVA.	✓
Add the customer's existing Data Domain and Avamar systems to DPC Systems Management.	✓
Add Data Protection Advisor server to DPC Systems Management.	✓
Add Data Protection Search server to DPC Systems Management.	✓
Perform tests to confirm successful DPC deployment and configuration.	✓
Create DPC Reports.	✓

Avamar Virtual Edition

Included in Service	AVE
Important! Running the Performance Assurance Tool (PAT) is optional, but it is recommended that the pre-sales benchmark testing must be completed on the customer's targeted ESX Server to ensure that it meets the acceptable minimum performance benchmark results.	✓
This service includes the following components (not to exceed the listed values): Avamar Servers: 1 Avamar Data Nodes: 1 Avamar Clients: 5 Avamar Plugins:	✓
Install and Configure Avamar Download Server software for Avamar support.	✓
Deploy Avamar Virtual Edition Servers within customer VMware environment.	✓
Install and configure Avamar Software and activate the Avamar Grid.	✓
Configures the Avamar System on an existing Secure Remote Services gateway.	✓
Configures Avamar local authentication.	✓
Install and Configure Avamar Application and Database Client Plug-ins.	✓
Complete the tests in the Test Plan and delivers the Test Plan to Customer.	✓
Complete solution implementation validation.	✓

NetWorker

Included in Service	NW
This service includes the following components (not to exceed the listed values): NetWorker servers: 1 NetWorker clients: 10 NetWorker auto changers enabled: 1 NetWorker cluster client connections: 1 NetWorker autochangers: 1 NetWorker tape devices: 4 Data Domain Boost devices: 4 NetWorker Management Console servers: 1 NetWorker disk backup options: 1	✓
Validate that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Install NetWorker software on the NetWorker server.	✓
Install and configure NetWorker Management Console software.	✓
Install the License Server.	✓
Configure the following resources on the NetWorker server: NetWorker media pools NetWorker schedules NetWorker SaveGroups	✓
Install NetWorker software on client servers.	✓
Configure the following device resources on the NetWorker server: NetWorker autochangers, including configuration of: Dynamic drive sharing Virtual tape libraries NetWorker stand-alone devices, including configuration of: NetWorker Data Domain Boost devices Advance file-type devices	✓
Perform the tests in the Test Plan for Customer.	✓
Complete solution implementation validation.	✓

Avamar/Networker Backup Package

Included in Service	AVNWBUDP
This service kit package combines multiple services into one service kit. This service wraps four services into one service kit with one model code. ProDeploy for Avamar Virtual Edition ProDeploy for NetWorker ProDeploy for Data Protection Central ProDeploy for Data Protection Advisor	✓

Avamar/Networker Plus Search Backup Package

Included in Service	AVNWSCHBUDP
This service kit package combines multiple services into one service kit. This service wraps five services into one service kit with one model code. ProDeploy for Avamar Virtual Edition ProDeploy for NetWorker ProDeploy for Data Protection Central ProDeploy for Data Protection Advisor ProDeploy for Data Protection Search	✓

Networker for MS SQL

Included in Service	NMMSQL
This service includes the following components (not to exceed the listed values): Installation of NetWorker Module for Microsoft SQL Database Servers: 1	✓
Validate that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Install the NetWorker Module for Microsoft.	✓
Configure the NetWorker Server to use NetWorker Module for Microsoft for backing up Microsoft SQL Instances	✓
Perform the tests in the Test Plan for Customer.	✓
Complete solution implementation validation.	✓

Networker for MySQL

Included in Service	NMDAMS
This service includes the following components (not to exceed the listed values): Installation of NetWorker Module for MySQL Database Servers: 1	✓
Validate that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Install the NetWorker Module for Databases and Applications.	✓
Configure the NetWorker Server to use NetWorker Module for Databases and Applications for backing up MySQL.	✓
Perform the tests in the Test Plan for Customer.	✓
Complete solution implementation validation.	✓

Networker for Microsoft Exchange Server

Included in Service	NMMEX
This service includes the following components (not to exceed the listed values): Installation of NetWorker Module for Microsoft Exchange Mailbox Servers: 2	✓
Validate that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Install the NetWorker Module for Microsoft.	✓
Configure the NetWorker Server to use NetWorker Module for Microsoft for backing up Microsoft Exchange Mailbox Servers.	✓
Perform the tests in the Test Plan for Customer.	✓
Complete solution implementation validation.	✓

CloudBoost Appliance for NetWorker

Included in Service	CBNW
This service includes the following components (not to exceed the listed values): CloudBoost Appliances: 1 CloudBoost Provider Profiles: 1 NetWorker Backup Clones: 1	✓
Validate that the equipment is on-site at the appropriate location with power and cable requirements met.	✓
Review and validate CloudBoost firewall requirements and changes.	✓
Configure cloud storage profiles to support CloudBoost appliance.	✓
Configure CloudBoost Appliance as a storage node on the NetWorker server.	✓
Configure NetWorker backup clones for CloudBoost appliance.	✓
Complete all required EMC CloudBoost functional and integration testing.	✓

Cloud Adoption Package

Included in Service	PPCLOUDDP
This service includes the following components (not to exceed the listed values): Cloud-based Data Domain Virtual Edition Appliances: 1 Cloud-based Data Domain Management Consoles: 1 Networker Virtual Edition: 1	✓
Performs Data Domain Virtual Edition in the Cloud enablement.	✓
Configures and deploys Data Domain Virtual Edition in Cloud.	✓
Performs Data Domain Management Console in the Cloud enablement.	✓
Configures and deploys Data Domain Management Console in the cloud.	✓
Performs Networker Virtual Edition in the Cloud enablement.	✓
Configures and deploys Networker Virtual Edition in Cloud.	✓
Integrates Networker Virtual Edition with Data Domain Boost devices for basic Backups.	✓

Cloud Boost Appliance

Included in Service	CLOUDBSTDP
This service includes the following components (not to exceed the listed values): Number of CloudBoost Appliances: 1	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Validates the VMware environment readiness for CloudBoost implementation.	✓
Deploys the CloudBoost image file into the VMware environment.	✓
Reviews and configures CloudBoost cache requirements.	✓
Completes powering on the CloudBoost virtual appliance.	✓
Performs network configuration of appliances.	✓

PowerProtect App Direct for Database Applications

Included in Service	PPAPPDBDP
This service includes the following components (not to exceed the listed values): Database application servers: 1 Data Domain appliances with DD Boost: 1 DB2 databases: 1 Oracle databases without SAP: 1 SAP HANA Databases: 1 SAP with Oracle Databases: 1	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Assists with SAN zoning recommendations for DD Boost over FC considerations, if necessary.	✓
Installs FC Target HBA(s) in DDR(s), if applicable.	✓
Configures the DDR(s) for DD Boost data access: Creates the DD Boost user(s) and logical storage unit(s). Configures end points, access croups, initiators, and services, as necessary. Adds the ifgroup(s) with dedicated interfaces, if necessary.	✓
Installs and verifies the successful installation of the PowerProtect App Direct for Database Applications Agent software.	✓
Configures the PowerProtect App Direct for Database Applications Agent software.	✓
Configures the database backup parameters.	✓
Performs and verifies the successful database backup for Customer.	✓

PowerProtect App Direct for Microsoft Applications

Included in Service	PPAPPMSDP
This service includes the following components (not to exceed the listed values): Data Domain appliances with DD Boost: 1 Number of Microsoft Exchange IS Databases: 1 Number of Microsoft SQL databases: 1 Microsoft SQL database servers: 1	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Assists with SAN zoning recommendations for DD Boost over FC considerations, if necessary.	✓
Installs FC Target HBA(s) in DDR(s), if applicable.	✓
Configures the DDR(s) for DD Boost data access: Creates the DD Boost user(s) and logical storage unit(s). Configures end points, access croups, initiators, and services, as necessary. Adds the ifgroup(s) with dedicated interfaces, if necessary.	✓
Installs and verifies the successful installation of the PowerProtect App Direct for Microsoft Applications Agent software.	✓
Configures the PowerProtect App Direct for Microsoft Applications Agent software.	✓
Configures the database backup parameters.	✓
Performs and verifies the successful database backup for Customer.	✓

PowerProtect Cyber Recover 1 MTree

Included in Service	PPCYBER1MDP
This service includes the following components (not to exceed the listed values): Data Domain Appliances: 1 MTrees:1	✓
Installs Cyber Recovery software on management host.	✓

Configures Cyber Recovery policies to manage MTrees, to be replicated into the vault.	✓
Performs hardening of the Data Domain appliance in the customer's vault.	✓
Tests Cyber Recovery to verify operation.	✓

PowerProtect Cyber Recover 3 MTree

Included in Service	PPCYBER3MDP
This service includes the following components (not to exceed the listed values): Data Domain Appliances: 1 MTrees:3	✓
Installs Cyber Recovery software on management host.	✓
Configures Cyber Recovery policies to manage MTrees, to be replicated into the vault.	✓
Performs hardening of the Data Domain appliance in the customer's vault.	✓
Tests Cyber Recovery to verify operation.	✓

PowerProtect Cloud Disaster Recovery

Included in Service	PPCLOUDDRDP
This service includes the following components (not to exceed the listed values): Number of Data Domain: 1 Avamar Servers: 1 vCenters for confirmation: 1 VMs to test PowerProtect Cloud Disaster Recovery to cloud environment: 1 VMs to test PowerProtect Cloud Disaster Recovery to local environment: 1	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Deploys PowerProtect Cloud Disaster Recovery Add-on and Cloud Recovery Server.	✓
Registers Avamar server(s) with PowerProtect Cloud Disaster Recovery.	✓
Registers Data Domain appliance(s) with PowerProtect Cloud Disaster Recovery.	✓
Registers the VMware vCenter with PowerProtect Cloud Disaster Recovery.	✓
Configures Avamar to perform a backup to the cloud using PowerProtect Cloud Disaster Recovery.	✓
Performs a test of disaster recovery of a virtual machine to a cloud environment.	✓
Performs a test of disaster recovery of a virtual machine to a local environment.	✓

PowerProtect Data Manager

Included in Service	PPDATAMGRDP
This service includes the following components (not to exceed the listed values): Number of PowerProtect Data Manager published protection plans: 3	✓
Validates PowerProtect Data Manager installation and configuration.	✓
Configures PowerProtect Data Manager and discovers Data Manager assets.	✓
Organizes and assigns PowerProtect Data Manager assets.	✓
Creates PowerProtect Data Manager protection plans with stages and assigns them to tenants and assets.	✓

PowerProtect Package

Included in Service	PPPWRPROTDP
This service kit package combines multiple services into one service kit. This service wraps five services into one service kit with one model code. ProDeploy for PowerProtect Data Manager ProDeploy for PowerProtect App Direct for Database Application ProDeploy for PowerProtect App Direct for Microsoft Application ProDeploy for PowerProtect Storage Direct ProDeploy for PowerProtect Cloud Disaster Recovery ProDeploy for PowerProtect Cyber Recovery - 1 MTree ProDeploy for PowerProtect VM Replication	✓

PowerProtect Storage Direct

Included in Service	PPSTORDP
This service includes the following components (not to exceed the listed values): Data Domain Appliances:1 PowerProtect Storage Direct application hosts:1 VMAX Storage Arrays:1 PowerProtect Storage Direct configuration files:1 Database Instances for Backup:1 XtremIO Storage Arrays: 1 Database Instances for Restore Validation:1	✓
Uses VMAX and Data Domain subject matter experts (SMEs) for the creation of a PowerProtect Storage Direct high-level implementation plan.	✓
Uses VMAX and Data Domain SMEs for the creation of a server host and database instance high-level implementation plan.	✓
Uses XtremIO, RecoverPoint and Data Domain subject matter experts (SMEs) for the creation of a high-level implementation plan.	✓
Uses XtremIO, RecoverPoint, and Data Domain SMEs for the creation of a server host and database instance high-level integration plan.	✓
Conducts an implementation review meeting.	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Assists with SAN zoning recommendations between the VMAX3 and the Data Domain appliance, if necessary.	✓
Verifies that the Data Domain operating system(s) is (are) at the supportability mode to successfully integrate with PowerProtect Storage Direct.	✓
Verifies physical fiber connections to the Data Domain appliance(s).	✓
Verifies physical fiber connections to the VMAX3.	✓
Configures Data Domain end points, access groups, initiators, and services, if necessary.	✓
Configures the Data Domain appliance to support the PowerProtect Storage Direct configuration.	✓
Confirms that appropriate licenses for PowerProtect Storage Direct enablement are applied.	✓
Confirms that appropriate services for PowerProtect Storage Direct enablement are enabled.	✓
Assists with SAN zoning recommendations between the XtremIO(s), RecoverPoint appliance(s) and the Data Domain appliance(s).	✓
Verifies Solutions Enabler host connectivity.	✓
Installs the PowerProtect Storage Direct file agent or database agent software on Customer's PowerProtect Storage Direct management host(s).	✓
Modifies the PowerProtect Storage Direct file agent or database agent configuration files.	✓
Performs an initial backup of the file or database instance.	✓
Confirms the replication is initialized, if appropriate.	✓
Performs the customer-approved PowerProtect Storage Direct file or database instance restore or recovery.	✓

PowerProtect VM Replication

Included in Service	PPVMREPDP
This service includes the following components (not to exceed the listed values): Sites: 2 Virtual machines that require protection: 1 Virtual RecoverPoint Appliances (vRPAs): 4 ESXi servers that host the vRPA cluster: 2 ESXi servers that host protected VMs: 1 Virtual RecoverPoint Appliance Clusters: 2 vCenter servers: 2 RecoverPoint for VM systems: 2 ESXi servers that host replica VMs: 1 Consistency Groups: 1	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Validates prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.	✓
Installs and configures virtual RecoverPoint appliances (vRPAs).	✓
Installs and connects vRPA clusters.	✓
Registers vCenter servers in RecoverPoint for VMs system.	✓
Licenses, registers, and enables support for RecoverPoint for VMs systems.	✓
Registers data stores and ESXi clusters.	✓
Creates RecoverPoint replicas of virtual machines.	✓

Creates consistency groups and defines replication policies.	✓
Monitors consistency groups initialization.	✓
Performs custom scripting, if required.	✓
Performs the required tests using the Test Plan.	✓

Add-on for PowerProtect Solution Package

Included in Service	PPSPDP
Validates and documents the Customer environment requirements and Customer expectations.	✓
Prepares a high-level integration plan of the PowerProtect Solution Package components that are applicable to the Customer's environment.	✓
Validates the required product licenses, services, and resource skills.	✓
Identifies the additional solution components that the Customer must purchase.	✓
Presents and explains to Customer the features, functionality, and integration of the purchased PowerProtect Solution Package components.	✓
Presents to the Customer the value add of services purchased.	✓
Addresses technical concerns of the Customer, if any, with regard to the PowerProtect Solution Package purchase.	✓

Add-on for Avamar Single Node

Included in Service	AVSNBUDP
This service includes the following components (not to exceed the listed values): Avamar Servers: 1 Avamar Clients in design: 1 Avamar Oracle plugins: 1 Avamar DB2 plugins: 1 Avamar Exchange plugins: 1 Avamar Microsoft SQL plugins: 1 Avamar Microsoft SharePoint plugins: 1 Avamar Domino plugins: 1 Avamar Clients for implementation: 5	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Registers Avamar hardware serial numbers.	✓
Installs and configures Avamar Download Server software for Avamar support.	✓
Installs and configures Avamar Software and activates the Avamar Grid.	✓
Configures Avamar IP addresses and host names for Customer's network.	✓
Configures Avamar remote management and monitoring network interface.	✓
Copies software packages to prepare Avamar Grid for implementation and configuration of Avamar features.	✓
Configures the ConnectEMC feature.	✓
Configures the Avamar System on an existing Secure Remote Services gateway.	✓
Configures Avamar Enterprise Authentication.	✓
Installs, configures, and activates Avamar client agents on any supported host platform.	✓
Installs Avamar Application Plug-in agents and configures agents for backup.	✓

Add-on for Avamar Multi-Node

Included in Service	AVMNBUDP
This service includes the following components (not to exceed the listed values): Avamar Servers: 1 Avamar Clients in design: 1 Avamar Oracle plugins: 1 Avamar DB2 plugins: 1 Avamar Exchange plugins: 1 Avamar Microsoft SQL plugins: 1 Avamar Microsoft SharePoint plugins: 1 Avamar Domino plugins: 1 Avamar Clients for implementation: 5	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Registers Avamar hardware serial numbers.	✓

Installs and configures Avamar Download Server software for Avamar support.	✓
Installs and configures Avamar Software and activates the Avamar Grid.	✓
Configures Avamar IP addresses and host names for Customer's network.	✓
Configures Avamar remote management and monitoring network interface.	✓
Copies software packages to prepare Avamar Grid for implementation and configuration of Avamar features.	✓
Configures the ConnectEMC feature.	✓
Configures the Avamar System on an existing Secure Remote Services gateway.	✓
Configures Avamar Enterprise Authentication.	✓
Installs, configures, and activates Avamar client agents on any supported host platform.	✓
Installs Avamar Application Plug-in agents and configures agents for backup.	✓

Add-on for Cloud Boost Networker Integration

Included in Service	CBNWIG
This service includes the following components (not to exceed the listed values): Number of CloudBoost Appliances: 1 Number of CloudBoost Provider Profiles: 1 Number of NetWorker Backup Clones: 1	✓
Reviews and validates CloudBoost firewall requirements and changes.	✓
Validates the VMware environment readiness for CloudBoost implementation.	✓
Deploys the CloudBoost image file into the VMware environment.	✓
Reviews and configures CloudBoost cache requirements.	✓
Completes powering on the CloudBoost virtual appliance.	✓
Performs network configuration of appliances.	✓
Configures cloud storage profiles to support CloudBoost appliance.	✓
Configures CloudBoost Appliance as a storage node on the NetWorker server.	✓
Configures NetWorker backup clones for CloudBoost appliance.	✓

Add-on for DPA Federated Reporting

Included in Service	DPAFRDP
This service includes the following components (not to exceed the listed values): Federated DPA servers: 1	✓
Reviews and validates Customer requirements and planned use of DPA modules, features, and functions, ensuring that all are appropriately leveraged to give Customer greatest value.	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Verifies that the requirements for the Data Protection Advisor implementation within the existing backup, recovery, and replication environments are detailed.	✓
Installs and configures the DPA server software, creating a DPA server (instance) for supported backup software products.	✓
Configures and enables DPA licensed modules.	✓
Configures DPA Users and Roles.	✓
Installs, configures, and implements DPA collectors on supported backup servers, host clients, and appliance nodes.	✓
Configures collector nodes for each appliance, application, or host type for data monitoring.	✓
Configure federated reporting.	✓
Configures and validates database maintenance routines.	✓
Configures the DPA environment with the existing Secure Remote Services environment.	✓

PowerProtect DD - Base

Included in Service	PPDDIBDP
This service includes the following components (not to exceed the listed values): PowerProtect DD9900 appliances: 1	✓
Configures replication on PowerProtect DD Appliance.	✓
Performs an initial PowerProtect DD system configuration.	✓

Verifies and configures LAN connectivity.	✓
Configures additional PowerProtect DD software, if necessary.	✓
Configures system administration for auto support and alerts.	✓
Configures MTrees and quotas, if necessary.	✓
Configures data movement policies on all applicable MTrees on PowerProtect DD systems, if necessary.	✓
Upgrades the PowerProtect DD operating systems, as required.	✓
Configures CIFS/NFS data access.	✓
Assists Customer with CIFS/NAS integration into backup-application software.	✓

PowerProtect DD Pre-Racked System

Included in Service	PPDDPHDP
This service includes the following components (not to exceed the listed values): PowerProtect DD pre-racked system racks: 1	✓
Performs an initial PowerProtect DD system configuration.	✓
Verifies and configures LAN connectivity.	✓
Configures additional PowerProtect DD software, if necessary.	✓
Configures MTrees and quotas, if necessary.	✓
Configures system administration for auto support and alerts.	✓
Verifies that PowerProtect DD auto support and alerts are sending and submitting Customer Support ID information.	✓
Configures CIFS/NFS data access.	✓

PowerProtect DD System Controller Upgrade

Included in Service	PPDDCUUP
This service includes the following components (not to exceed the listed values): DD system controller upgrades: 1 PowerProtect DD9900 appliances: 1	✓
Upgrades the PowerProtect DD operating systems, as required.	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Performs a system controller upgrade for the PowerProtect DD appliances.	✓
Verifies the successful upgrade of the PowerProtect DD system controller.	✓
Verifies that PowerProtect DD auto support and alerts are sending and submitting Customer Support ID information.	✓
Updates PowerProtect DD asset information and documentation and creates PowerProtect DD Customer Support accounts.	✓
Upgrades the PowerProtect DD operating systems, as required.	✓

PowerProtect DD Code Upgrade

Included in Service	PPDDCCHX
This service includes the following components (not to exceed the listed values): PowerProtect DD operating system upgrade on existing PowerProtect DD appliances: 2	✓
Downloads PowerProtect DD operating system updates to the customer's environment.	✓
Upgrades the DDOS to the most recent GA release on exisiting PowerProtect DD Appliances	✓
Verifies that PowerProtect DD auto support and alerts are sending and submitting Customer Support ID information.	✓
Updates PowerProtect DD asset information and documentation, and creates PowerProtect DD Customer Support accounts.	✓

PowerProtect DD Installation for DS Expansion

Included in Service	PPDDDSXHX
This service includes the following components (not to exceed the listed values): PowerProtect DS expansion shelves: 1	✓
Installs and configures PowerProtect DD expansion shelves.	✓
Applies an ELMS PowerProtect DD shelf capacity license.	✓

Expands new storage into the PowerProtect DD Appliance file system.	✓
Demonstrates additional capacity is recognized by PowerProtect DD storage system.	✓

PowerProtect DD Installation for ES Expansion

Included in Service	PPDDESXHX
This service includes the following components (not to exceed the listed values): PowerProtect ES expansion shelves: 1	✓
Installs and configures PowerProtect ED expansion shelves.	✓
Applies an ELMS PowerProtect ED shelf capacity license.	✓
Expands new storage into the PowerProtect DD Appliance file system.	✓
Demonstrates additional capacity is recognized by PowerProtect DD storage system.	✓

PowerProtect DD Installation for Storage Expansion Disk Packs

Included in Service	PPDDDSPHX
This service includes the following components (not to exceed the listed values): Number of DS shelves targeted for Disk Pack installation: 1 Number of DS Disk Packs to install: 3	✓
Validates that the equipment is on site at the appropriate location with power and cable requirements met.	✓
Installs PowerProtect DD DS disk storage pack into functional DS shelf(s)	✓
Applies an ELMS PowerProtect DD shelf capacity license.	✓
Confirms disk storage packs are recognized by DDOS.	✓
Adds disk storage packs to the active storage tier and cloud storage tier.	✓
Expands new storage into the PowerProtect DD Appliance file system.	✓
Demonstrates additional capacity is recognized by PowerProtect DD storage system.	✓

Unity Unified Snapshots

Included in Service	UXSNAP
This service includes the following components (not to exceed the listed values): LUNs for Snapshot: 20 File Systems for Snapshot: 20	✓
Implement the Dell EMC Unity Snapshot feature configuring Snapshot sessions, meeting Customer requirements.	✓

Unity Antivirus

Included in Service	UXAVDP
This service includes the following components (not to exceed the listed values): File Systems for Antivirus: 1	✓
Perform configuration on the Antivirus Engine and Domain Controller	✓
Implement the Dell EMC Unity Antivirus, meeting customer requirements.	✓

Unity Cloud Tiering Software

Included in Service	CTASWDP
This service includes the following components (not to exceed the listed values): Cloud Tiering Appliance(s): 2 Cloud Tiering Appliance Virtual Edition(s): 2 Total shares and exports: 4 Archive policies: 4	✓
Install and configure the Cloud Tiering Appliance(s).	✓
Import and configure the Cloud Tiering Appliance Virtual Edition software.	✓
Configure the supported primary storage to utilize the software.	✓
Configure the supported destination (cloud provider or target storage) to utilize the repository for archiving.	✓
Configure the defined Cloud Tiering Appliance callback daemon.	✓
Configure secondary callback services for HA configuration.	✓
Define pre-existing file systems for archival using Cloud Tiering Appliance archive policies (CIFS or NFS), by working with the Customer.	✓

Work with the Customer to define data migration policies for file systems.	✓
Configure archiving policies for defined file systems for archiving.	✓
Review archive policy criteria and schedule requirements with the Customer.	✓
Configure the archiving expression.	✓
Configure the schedule per the Customer's requirements.	✓

Advanced OpenManage and SupportAssist

Included in Service	OMESA
This Service includes the following components: • Installation and configuration of OpenManage Enterprise • Discovery and configuration of up to 100 devices • Installation and configuration of SupportAssist Enterprise (SAE) • Installation and configuration of Repository Manager (RM) • Configuration of OpenManage Mobile application (OMM) The Add-on Service includes ONE of the following: • Installation of a secondary OME appliance, discovery and configuration of up to 100 devices OR • Discovery and configuration of up to 400 devices	✓
Deploy OME virtual appliance • Configure discovery ranges and perform device discoveries • Configure SNMP settings on discovered devices • Configure inventory scheduling • Configure and update Repository Manager catalog Configure and test SAE if applicable	✓
Apply firmware and driver updates as needed using online or repository manager catalog • Configure a default Warning and Critical Email Alert Action	✓
Demonstrate configuration of SNMP trap forwarding and filtering	✓
Demonstrate how to detect and manage configuration drift of a device	✓
Create and Deploy up to 2 Device Configuration Templates when applicable	✓
Deploy Network ISO Image for Bare Metal Deployment when applicable	✓
Help the customer install and setup OpenManage Mobile application (optional)	✓
Provide a list of undiscovered devices and possible reason of discovery failure	✓

Excluded from Service	OMESA
Upgrade of existing OME environment to support the new solution	✖
Configuration or troubleshooting of any networking or firewall issues on customer environment that's preventing any device discovery	✖
Configuration of OME Stateless Deployment and Virtual IO pools	✖
Installation of OpenManage Server Administration (OMSA) software	✖
Configuration on non-Dell equipment	✖
Product training – must be purchased separately	✖
Any activities other than those specifically noted in this Service Description	✖

System testing and validation

Included in Service	Storage	Server	Networking	Solutions
Capture equipment status and configuration report	✓	✓	✓	✓
Create Dell Support request to update configuration information.	✓	✓	✓	✓
Verify that server components have network connectivity to customer network (assigning IP address).		✓		✓
Perform basic verification tests (ping, traceroute, show commands).			✓	✓

Test basic product failover capability, if applicable.	✓	✓	✓	✓
Verify configuration aligns with the design	✓	✓	✓	✓
For HPC solutions - Cluster benchmarking Run High Performance LINPACK ("HPL") Benchmark tools across nodes and verify connectivity and functionality leveraging Stream, OSU-bibw, OSU-mpi_alltoall				✓

Excluded from Service	Storage	Server	Networking	Solutions
Performance testing or benchmarking	×	×	×	×
Custom HPC performance testing or benchmarking	×	×	×	×

Configuration Detail transfer to Dell technical support

Included in Service	Storage	Server	Networking	Solutions
Relevant engagement or technical details tied to the Dell components installed during the engagement. This could include items such as design documents, customer contact information, and detail capture or other documents detailing configuration.	✓	✓	✓	✓
A copy of design documents (including, SID, NDW, EOE. CAF and verification report) will be logged to the support tool by your deployment team ensuring support have access to your as deployed configuration for future reference	✓	✓	✓	✓
A copy of HPC benchmarking results will be logged to the support tool by your deployment team.				✓

Excluded from Service	Storage	Server	Networking	Solutions
Awareness of any customer changes post deployment that are not project managed by Dell	×	×	×	×

Project documentation with Product Orientation

Included in Service	Storage	Server	Networking	Solutions
Orientation about the product(s) deployed and configured	✓	✓	✓	✓
Common management tasks, if applicable	✓	✓	✓	✓
Best practices	✓	✓	✓	✓
HPC compute node deployment and job submission				✓
HPC benchmarking protocol				✓
Reference materials, if available	✓	✓	✓	✓
As-deployed documentation	✓	✓	✓	✓

Excluded from Service	Storage	Server	Networking	Solutions
Customer Training	×	×	×	×
Custom documentation	×	×	×	×

Exhibit B
Supplemental Deployment Services

Supplemental Deployment Services are additional deployment services which complement a new deployment or supplement an already deployed Dell Hardware Platform. Supplemental Deployment Services are sold as either an Add-on to an existing ProDeploy Enterprise Suite offer or as a standalone offer. The Order Form will include the name of the service(s) and available service options purchased.

Each Supplemental Deployment Service includes project management, pre-deployment planning, implementation, post-deployment, exclusions, and customer responsibilities as outlined below.

Project Management

1. If the Supplemental Deployment Service contains sub-service options, Customer will notify Project Manager the sub-service option(s) selected up to the quantity purchased for each Supplemental Deployment Service.
2. If the Supplemental Deployment Service is purchased as an Add-On Service, integrate the activities within the Supplemental Deployment Service with the Primary Service.
3. If the Supplemental Deployment Service is purchased as a Primary Service, the following will be performed:
    a. Review the site environmental and technical readiness requirements.
    b. Schedule an outage window, if necessary.
    c. Confirm readiness review and installation dates and highlight dependencies on complete customer site readiness and product ship dates to meet the planned installation schedule.
    d. Confirm deliverables and overall plan are reviewed and agreed to by customer.
    e. Customer to provide a contact to allow timelines and processes to be completed on schedule.
    f. Ensure that the customer reviews, accepts and abides by the terms and conditions of this Add-on Service.

Pre-Deployment Planning

4. Review and obtain the site technical requirements with the Customer, as applicable.
    a. Power
    b. Networking
    c. Rack space
    d. Software and licensing
5. Verify that the existing configuration meets the minimum hardware and software requirements, if applicable.
6. Create a valid implementation plan based on the Customer's hardware and software configuration.
7. Define/confirm that the configuration meets the minimum hardware and software requirements for the environment.
8. Perform any Additional Pre-Deployment Planning as identified in the specific Supplemental Deployment Service.

Implementation

9. Perform implementation as outlined in the specific Supplemental Deployment Service.

Post-Deployment

10. Project documentation with Product Orientation
11. System testing and verification

Exclusions

12. Any activities other than those specifically noted in the Supplemental Deployment Services section.
13. Any specific Supplemental Deployment Services exclusions.
14. Service Exclusions as outlined in the Terms and Conditions section.

Customer Responsibilities

15. Any specific Supplemental Deployment Services customer responsibilities.
16. All Service Specific Customer Responsibilities as outlined in the Terms and Conditions section.
17. All General Customer Responsibilities as outlined in the Terms and Conditions section.

Add or Upgrade Storage Hardware Component

This Supplemental Deployment Service provides for the installation and/or configuration of a storage hardware component. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased. This Supplemental Deployment Service includes **one (1)** of the following installation and configuration sub-services as identified by the capitalized letters A-F:

A. Add or upgrade memory ("RAM") in an existing single or dual controller Dell storage system.

Implementation

1. Upgrade storage system software/firmware, if required, to support new hardware.
2. Label any interconnect cables that will be removed or replaced during the upgrade process.
3. Install and configure the RAM as per the installation instructions.
4. Verify the product has been successfully upgraded and there is storage array connectivity.

B. Add or upgrade up to four (4) tape drives or I/O blades to a single Dell storage tape library (excludes Expansion Module "EM" for ML Series).

Implementation

1. Install additional tape drive(s)
    i. Install the tape drive(s) as per the included instructions.
    ii. Upgrade the library and/or drive firmware, as needed.
2. Install I/O blade(s):
    i. Upgrade the library firmware, as needed.
    ii. Install the I/O blade as per the included instructions.
3. Label and Cable the drives to the new I/O blade(s):
4. Connect the blades to the fabric(s), as per the design.
5. Configure the I/O blade(s) as per the design.
6. Configure (re-zone) the switches as per the design.
7. Validate that the hosts show the tape drives as functioning devices.

C. Add or upgrade up to four (4) supported I/O cards into a single existing Dell storage system.

Implementation

1. Upgrade storage system software/firmware if required, to support new hardware.
2. Label any interconnect cables that will be removed or replaced during the upgrade process.
3. Install and configure the I/O card as per the installation instructions.
4. Verify the product has been successfully upgraded and there is storage array connectivity.

D. Add or upgrade up to two (2) supported HBAs into a single existing Dell server.

Implementation

1. Install the HBA(s) and update firmware and driver(s).
2. Install, route, and label all the host to array connectivity cables.
3. Configure the host.
    i. Modify zones or iSCSI connections as needed on the switch fabrics.
    ii. Create and/or assign up to 3 volumes.
4. Verify host to LUN connectivity.
5. Power cycle the host to ensure proper boot cycle.

E. Add up to forty-two (42) disks into a Dell storage system (excludes enclosure installation or disk replacement).

Implementation

1. Upgrade storage system software/firmware, if required, to support new hardware.
2. Install and configure the new disks, as per the plan:
    i. Create or Expand Storage Pools or Profiles, as necessary.
    ii. Create or Expand Volumes (Does not include changes to the file system on hosts):
        (a) Assign volumes to the appropriate storage profile and/or hosts.

(b) Create volume replay schedules as necessary.
(c) Verify storage connectivity.

Exclusions

- Physical installation of server(s).
- Installation or configuration of any network switch(es).
- Installing cables external to the rack.
- De-installation or re-installation of product(s) or application(s).
- Clustering of the servers.
- Installation of Network Operating System ("NOS").
- Installation of HBAs or NICs into non-Dell hardware.
- Installation of any component or driver into a non-Dell device.
- Installation of any product into an unsupported rack.
- Any configuration/re-configuration of tape backup software.
- Any activities to existing Ethernet or Fibre Channel networks or non-Dell switches.
- Adding expansion module "EM" to ML Series tape library.

Add or Upgrade Storage Software Component

This Supplemental Deployment Service provides for the installation and configuration of a storage software component. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased. This Supplemental Deployment Service includes **one (1)** of the following installation and configuration sub-services as identified by the capitalized letters A-G:

A. Implementation of Dell Auto Snapshot Manager ("ASM") or Replay Manager on one (1) existing SAN-attached host with integration into one (1) of the following: Microsoft SQL, Microsoft Exchange, Microsoft Hyper-V, Oracle or VMware ESX.

Additional Pre-Deployment Planning

1. Validate available space on array to accommodate snapshots/replays.
2. Verify the storage array and host environment is at the supported interoperability levels.
3. Define ASM or Replay Manager configuration:
   i. Applications
   ii. Jobs
   iii. Schedules

Implementation

4. Prepare the host, as per the design:
   i. Verify HIT Kit software and update as necessary.
   ii. Install/Upgrade Dell Replay Manager software as necessary.
   iii. Install licensing for Dell Replay Manager feature.
5. Create ASM or Replay Manager jobs as per the design.
6. Show/test the configuration.

Customer Responsibilities

- Provide detailed information regarding the hosts that will be running ASM or Replay Manager, including details about the OS, applications and service packs along with information relating to the Customer environment elements to be replicated, such as mailboxes and databases.
- Ensure VMware Virtual Center and VMware ESX systems are running supported versions.

B. Implementation of Application Protection Manager ("APM") for Oracle.

Additional Pre-Deployment Planning

1. Outline APM Requirements

Implementation

2. Install APM Explorer
3. Install one agent to Oracle host for testing
4. Add and connect APM Orchestrator

Customer Responsibilities

- All Oracle tasks outside of installation of one agent for testing
- Scheduling, scripting or documentation for Disaster recovery
- Working with more than one host for the purpose of testing / demonstration

C. Implementation of SAN management vCenter plug-in.

Implementation

1. Import the virtual appliance.
2. Power on and configure.
3. Test and confirm functionality.

D. Implementation of VMware ESX or Microsoft Hyper-V on one (1) existing server for use in a new Dell Storage Area Network ("SAN").

Additional Pre-Deployment Planning

1. Define the server, storage and virtual machine allocation.

Implementation

2. Install VMware ESX: (Install latest major code release as per the plan).
3. Install Microsoft Windows Server: (Install latest major code release as per the plan).
    i. Enable the Hyper-V role.
4. Configure servers:
    (a) Configure virtual networking.
    (b) Configure vMotion or Live Migration, as applicable.
5. Connect Dell storage:
    (a) Configure storage connections, as needed.
    (b) Configure and assign storage per the plan.

Customer Responsibilities

- Locate OS certificates and register them online in order to generate the appropriate license keys.
- Setup and configuration of all suggested and required Virtual LANs (VLANs) for iSCSI, management network, VMotion, Live Migration, and other inter-connectivity on non-stand-alone physical switches.
- Load any patches or updates that may have been released subsequently after this Service is complete.

E. Installation and configuration of VMware vCenter Server or Microsoft SCVMM.

Additional Pre-Deployment Planning

1. Discuss vCenter Server or SCVMM basic functionality and best practices.
2. Determine if a database resource ("DBA") will be available during the installation portion of this Service, if connecting to an existing SQL database for vCenter or SCVMM, and schedule as appropriate.
3. Determine the vCenter or SCVMM server requirements and storage allocations:
    i. If not a virtual appliance, define Microsoft Windows® server for hypervisor manager.
    ii. Define Active Directory integration plan for the hypervisor manager.
4. Define server, storage, and virtual machine allocation.

Implementation

5. Either create a new VM to serve as the vCenter Server or SCVMM Server, or use a physical server supplied by the customer.
6. Optionally, import the vCenter Server Virtual Appliance and configure with the embedded database, per the plan.
7. Install and configure the hypervisor management application per the plan.

Customer Responsibilities

- Locate OS certificates and register them online in order to generate the appropriate license keys.
- Make certain that a fully functioning and supported Microsoft Windows based server is installed and available for the installation of the vCenter or SCVMM software, if applicable.
- Provide all applicable licenses for vSphere, vCenter and Microsoft Windows.
- Ensure that a supported version of Microsoft SQL Server or Oracle database is available and operational prior to this Service being executed. For vCenter Server only, if no enterprise database will be available, the included SQL Express Edition can be deployed.
- Setup and configuration of all suggested and required Virtual LANs (VLANs) for iSCSI, management network, VMotion, Live Migration, and other inter-connectivity on non-stand-alone physical switches.
- Load any patches or updates that may have been released subsequently after this Service is complete.
- Troubleshoot any database connectivity issue during vCenter or SCVMM install.
- Ensure that an existing Microsoft Active Directory is available for the SCVMM server, if applicable.

F. Implementation of up to four (4) additional Application Agents into a BPR solution.

Implementation

1. Install the application module.
2. Configure any necessary settings on the application and the application module component.
3. Perform a test backup to ensure that both the application module and the application behave as appropriate for the functionality provided using a limited set of non-production data (100MB or less).

Customer Responsibilities

- Make certain that any installation, re-installation or upgrade of CommVault® software is completed and functional prior to the delivery of this sub-service.
- Ensure that the installation requirements and installation pre-requisites, as defined in the manuals provided for this CommVault® component, have been met prior to the start of the installation activity.

G. Upgrade of firmware on one (1) existing Dell Storage array.

Implementation

1. Verify that storage array is at minimum supported software version.
    i. Upgrade array software.
    ii. Upgrade array management software on a single Windows-based system.
    iii. Verify that product has successfully been upgraded.

Exclusions

- Reconfiguration, re-implementation, or reallocation of volumes on existing nodes.
- Services of any kind relating to replication.
- Creating of any Virtual Machines or virtual templates.
- Creation or configuration of vCenter Resource Pools.
- Advanced HA or DRS configuration.

Remote Software Configuration of Disks in an Existing SC Series Storage Environment

This Supplemental Deployment Service provides for the remote implementation of up to forty-two (42) disks into an existing Dell storage system. This Supplemental Deployment Service is defined and limited to the description in the Supplemental Deployment Service purchased.

Implementation

1. Upgrade storage system software/firmware, if required to support new hardware.
2. Configure the new disks.
3. Create or expand Storage Pools or Profiles, as necessary.
4. Create or expand Volumes (does not include changes to the file system on hosts):
    a. Assign volumes to the appropriate storage profile and/or hosts.

b. Create volume replay schedules as necessary.
c. Verify storage connectivity.

Exclusions

1. Physical installation of disks.

Replication Services for Dell Storage

This Supplemental Deployment Service provides for the implementation of replication between two supported* Dell Storage systems. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased.

*** Note:** Replication between every storage system is not supported. Please consult with your Dell sales representative to determine if replication between your storage systems is available. Supported replication between storage systems includes, but may not be limited to:

- MD Series SAN to MD Series SAN
- ME Series SAN to ME Series SAN
- PS Series to PS Series
- PS Series to SC Series
- SC Series to SC Series
- SC Series to PS Series
- FS7XXX to FS7XXX
- FS8XXX to FS8XXX

Implementation

1. Configure replication on the source and target storage systems, as set forth in the implementation plan:
   a. Establish replication relationship between two supported* storage products.
   b. Setup and configure replication of up to four volumes.
   c. Enable and configure SC Series Live Volume (block only).
      i. Convert replicated volume to Synchronous Mode and enable auto-failover on test volume.
      ii. Test manual failover (only for net new Storage Centers).
         (a) Utilize single host with connectivity to two (2) Live Volume licensed Storage Centers.
   d. Conduct end-to-end replication demonstration on a small (100MB) volume.

Customer Responsibilities

- Provide detailed information regarding the replication environment, including details about the operating system (“OS”), applications and Service packs along with information relating to the Customer environment elements to be replicated.
- Provide site to site IP link and operational communications links (with proper cables, routers as needed and connectors) and proper port count between the two storage systems.
- Obtain a valid Remote Replication license, if applicable.
- Provide network infrastructure capable of supporting the bandwidth requirements of replication.

Exclusions

- Disaster recovery design and planning.
- Integration of replication software into any host-based application.
- OS level stretch or geo-cluster configuration.
- Replication via the Portable Volume or Manual Transfer Utility features.
- Waiting for all replication pairs to finish initial synchronization state.

Add Additional Host(s) to Dell Storage

This Supplemental Deployment Service provides for the configuration of the specified number of additional hosts connected to Dell Storage. This Supplemental Deployment Service is defined and limited to the description in the Supplemental Deployment Service purchased.

Additional Pre-Deployment Planning

1. Define the storage volumes and server assignments.
2. Discuss the recommended local area network (LAN) configurations for new iSCSI hosts with the Customer.
3. Discuss the recommended configurations for all hosts with the Customer, if applicable:
    a. Define additional zones for Fibre Channel switches.
    b. Define port and vLAN configuration for iSCSI switches.

Implementation

4. Configure network connectivity for existing SAN-attached host.
    a. Physical installation of Host Bus Adapters (HBA) or Network Interface Cards (“NIC”) into Dell servers only, as necessary.
    b. Install, route, and label host to storage connectivity cables.
    c. Install/update drivers and firmware. On non-Dell hardware, ensure that the Customer updates as necessary.
    d. Configure network parameters as required.
    e. Configure supported Multi-Path I/O (“MPIO”) and failover software.
    f. Configure supported switches sold by Dell, as necessary, for host connectivity.
    g. Assign/map volumes/virtual disks to servers.
    h. Partition and format assigned volumes/virtual disks.
5. If purchased as an Add-on Service to a supported ProDeploy Plus Storage Hardware Platform, one additional host will be added to the defined host limit for the Service Feature Data Migration analysis and recommendation, if applicable.

Exclusions

- Physical installation of server(s).
- Installing cables external to the rack.
- De-installation or re-installation of product(s) or application(s).
- Clustering of the servers.
- Installation of Networking Operating System (“NOS”)
- Installation of HBAs or NICs into non-Dell hardware.

Data Migration Services for Storage

This Supplemental Deployment Service provides for data migration services. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased. Customer may be asked to execute a separate acknowledgement of the terms and conditions applicable to Data Migration Services provided by Dell.

This Add-on Service includes **one (1)** of the following migration sub-services as identified by the capitalized letters A-B:

A. Physical to Virtual (P2V) server migration of four (4) existing physical servers with a combined total of one (1) TB to a VMware vSphere or Microsoft Hyper-V virtualization environment.

Additional Pre-Deployment Planning

1. P2V specific guidelines:

i. For the Physical Source Servers involved in the P2V portion of this service the following are out of scope:
   (a) Domain Controllers
   (b) Servers that are members of a Cluster
   (c) Servers with total combined used disk space greater than 1TB
ii. Source server OS needs to be supported by Double-Take Move (for Hyper-V project), Microsoft Virtual Machine Converter (for Hyper-V project), or VMware Converter (for vSphere project).
iii. Source servers must adhere to guidelines outlined in the guides for VMware Converter (for vSphere project) and Customer must have appropriate licenses in place.
iv. Hardware issues which prevent P2V with source servers which are non-Dell or not covered under warranty may be excluded.
v. This includes any connectivity issues to external storage.
vi. Servers which fail a P2V migration after two attempts via up to two tools/methods will be reverted back to the physical server.

2. Common scenario of which Customer should be aware and may need to address prior to Dell being able to perform the Service:
   i. Source server has Microsoft® Windows OEM license.
      (a) Microsoft Windows OEM license becomes invalid after a physical server is converted to a virtual server. Customers with ELA/VLA (Volume Licensing) agreements may be able to call Microsoft to activate the virtual server(s) after P2V activity is complete.
      (b) This is a customer responsibility and Dell does not accept liability for Customer licensing.
      (c) Microsoft contact information can be obtained here: http://www.Microsoft.com/licensing/contact-us.aspx
3. Gather, verify, and document all relevant information regarding Physical P2V candidate host.
4. Create a valid implementation plan based on the Customer's hardware and software configuration.

Implementation

5. Pre-stage server for P2V:
   i. Stop applications and services running on the server.
   ii. Review any error messages in the server Event Viewer.
6. Perform the P2V migration and post-migration cleanup and verification.

Customer Responsibilities

- Submit a completed P2V Survey during planning.

B. Migration of one (1) TB of data on up to four (4) hosts to a Dell Storage array.

Additional Pre-Deployment Planning

1. Conduct Data Migration Survey and review the site environmental and technical readiness requirements, if applicable.
2. Review and analyze physical environment and connectivity to support data migration.
3. Inventory servers designated for migration.
4. Create a valid migration plan based on the Customer's hardware and software configuration.
5. Define volume migration priorities.
6. Verify all target volumes meet sizing requirements for data migration from source volumes.

   Note: Based on the source, target array requirements and customer environment, Dell may choose to employ array-based or host-based software, an appliance, or a combination to execute the migration project.

Array-based Migration Implementation

7. Implement physical (cabling) and logical (zoning) connectivity for the new physical environment.
8. Configure FC zones as necessary to enable data migration.
9. Verify that Customer can validate source data integrity before the migration begins.
10. Perform volume import.
11. Attach host to new Dell storage array as per the integration plan.
12. Bring hosts back online and test failover.
13. Clean up any FC zoning or iSCSI port configurations used for migration.

Note: Customer is responsible for bringing applications into a production state after migration.

Host-based Migration Implementation

14. Attach hosts to new Dell storage array for migration as per the integration plan.
15. Configure/verify target volumes as per the integration plan on the Dell storage array.
16. Install migration software on hosts if necessary.
17. Migrate data from source LUN(s) to target LUN(s) on new Dell storage array.
18. Customer validates that data migrated properly.
19. Perform post migration clean-up.

Note: Customer is responsible for bringing applications into a production state after migration.

Appliance-based Migration Implementation

20. Deploy and configure the data migration appliance.
21. Physically install appliance hardware in a location accessible to power, LAN management port(s), and Fibre Channel and/or iSCSI SAN switches as required.
22. Insert appliance into data path.
23. Create appliance-based source-to-target data migration jobs and start mirroring process.
24. Re-map host initiators/IQNs from source to target storage array, register host(s) with target array, install MPIO software as necessary and configure hosts for attachment to target array (host downtime required).
25. Verify connectivity to target volumes/LUNs. Customer will validate data migrated properly and production applications are operating normally.
26. Remove appliance from environment and clean up any FC zoning or iSCSI port configurations used for appliance.

Note: Customer is responsible for bringing applications into a production state after migration.

NAS-based Migration Implementation

27. Prepare target NAS storage for migration.
28. Validate authentication and permission settings.
    i. Confirm/Modify user access is equivalent on source and target.
    ii. Confirm appropriate permissions are set on the target NAS Shares/Exports.
29. Migrate data from source Shares/Exports to target NAS.
    i. Map/Mount source and target on migration host.
    ii. Create migration jobs and schedules, if applicable.
30. Perform cutover to target NAS storage and customer validates that data migrated properly.
31. Enable end user access to target Shares/Exports.
    i. Modify target NAS storage per integration plan, if applicable.
    ii. Customer confirms connectivity to Shares/Exports.

Customer Responsibilities

- Any remediation required of the source storage array environment is the Customer's responsibility, except for Dell supported storage platforms with valid warranty and service contracts applicable to such remediation;
- Customer is responsible for bringing applications into a production state after migration.
- Customer is responsible for shutting down host/server applications prior to start of data migration.

Exclusions

- Migrations to/from any Content-Addressable Storage (“CAS”)
- Migrations to any non-Dell storage system.
- P2V services of UNIX based systems.
- P2P, V2V, or V2P migrations.
- Application installation, re-installation, configuration, or migration.
- Migration to/from remote datacenters.
- Migration training, orientation, or detailed instructions.
- Migration software licensing for any data not migrated by Dell as part of this service.
- Physical installation of components into any non-Dell branded hardware.

Treatment of Protected Health Information, Personal Data, Confidential, Proprietary or Sensitive Data on Customer Systems

Customer warrants and represents that prior to providing Dell access to any Customer equipment which has been used for processing and/or storage of health information subject to privacy laws in the Customer's location ("Protected Health Information" or "PHI"), personal data or personally identifiable information subject to privacy laws in the Customer's location ("personal data"), or other confidential, proprietary or sensitive data, all PHI, personal data or other confidential, proprietary or sensitive data has been rendered unusable, unreadable or indecipherable to unauthorized individuals through the use of a technology or methodology required by the privacy laws in Customer's location. Customer shall be responsible for confirming compliance and any updates to guidance from the appropriate governmental entity on how to secure PHI, personal data or other confidential, proprietary or sensitive data in order to render it unusable, unreadable, or indecipherable, to unauthorized individuals and will comply with any applicable guidance as it relates to PHI, personal data or other confidential, proprietary or sensitive data found on equipment or materials submitted to Dell.

Implementation of Software Defined Storage

This Supplemental Deployment Service provides for the installation and configuration of software-defined storage as an add-on to an existing ProDeploy server offer. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased.

A. Implementation of VMware Virtual SAN ("vSAN"):

Additional Pre-Deployment Planning

1. Verify the equipment list to ensure it matches the supported hardware for the solution.
2. Review the customer-completed vSAN survey questionnaire and ensure that all required information is documented.
3. Validate vSAN-specific network switch settings in customer existing environment.
    i. If network deployment services are sold in conjunction with this service, include the vSAN-specific settings.
4. If required, validate Remote Office Branch Office (ROBO) topology and configuration

Implementation

1. Validate vSAN-specific network switch settings.
2. Perform the additional host configuration steps, including:
    i. Virtual switch configuration.
    ii. NTP, DNS, routing, etc.
3. Configure disk groups on new nodes to be added to the vSAN datastore.
4. Add nodes to the cluster.
5. Validate functionality.

Customer Responsibilities

- Complete the vSAN survey questionnaire provided by Project Manager
- All equipment must meet implementation requirements for vSAN per the VMware Compatibility Guide: https://www.vmware.com/resources/compatibility/search.php?deviceCategory=vsan
- For ROBO implementations, the Dell EMC recommendation for the required witness is the VMware Virtual Witness Appliance which must be hosted on a ESX 5.5 or higher cluster and accessible from the datacenter hosting the ROBO implementation.

Exclusions

- vSAN stretched cluster.

B. Implementation of Microsoft Azure Stack HCI:

Additional Pre-Deployment Planning

1. Deliver the Microsoft Azure Stack HCI survey questionnaire to the customer in advance of a planning session.
2. Upon receipt of the returned survey, schedule the planning session.
3. Verify the equipment list to ensure it matches the supported hardware for the solution.
4. Review the returned, customer-completed S2D survey questionnaire and ensure that all required information is documented.
5. Verify if the customer will be using SCVMM and discuss the possibility if it's supported or not.
6. Provide the Customer documentation about S2D-specific network settings for Customer existing environment.
    i. If network deployment services are sold in conjunction with this service, include the S2D-specific settings.

Implementation

1. Verify with the customer that Microsoft Azure Stack HCI-specific network switch settings have been applied
    i. If network deployment services are sold in conjunction with this service, validate the Microsoft Azure Stack HCI-specific settings
2. Perform initial configuration of Microsoft Server 2016/2019 Datacenter hosts
    i. Install and configure necessary roles and features
3. Configure Microsoft System Center Virtual Manager (SCVMM) if applicable
4. Perform the additional configuration steps, including:
    i. Configure Switch Embedded Teaming (SET)
    ii. Create Microsoft Failover Cluster
    iii. Enable S2D
    iv. Enable Network Quality of Service (QoS) on each cluster node if applicable
    v. Configure RDMA settings on each cluster node
5. Configure Storage Pools and virtual disks
6. Add nodes to the cluster
7. Validate functionality
8. Add S2D Management Packs to existing System Center Operations Manager (SCOM) if applicable
9. Install and configure Windows Admin Center for Windows 2019 and the Dell OpenManage Plugin for Microsoft Windows Admin Center

Customer Responsibilities

- Complete the S2D survey questionnaire provided by Project Manager
- All nodes must be Dell EMC Microsoft Storage Spaces Direct Ready Nodes (S2DRN) and all equipment must comply with implementation of Microsoft Azure Stack HCI guidance per the Dell EMC Microsoft S2DRN Support Matrix: http://en.community.dell.com/techcenter/extras/m/white_papers/20443714

Exclusions

- S2D Cluster configuration among nodes not in the same datacenter
- Remote configuration of 2 Nodes Remote Office Branch Office (ROBO) cluster. ROBO clusters require ProDeploy Plus.
- Expanding a 2-node cluster.

Implementation of VxRail Stretched-cluster

This Supplemental Deployment Service provides for the configuration of a single VxRail Stretched-cluster as an add-on to an existing ProDeploy or ProDeploy Plus VxRail deployment offer, and is defined and limited to the description and quantity in the Supplemental Deployment Service purchased.

A. Implementation of VxRail Stretched-cluster, per node:

Additional Pre-Deployment Planning

1. Review the customer-completed VxRail survey questionnaire and ensure that all required information is documented.
2. Validate Stretched-cluster-specific network configuration in customer existing environment.
3. Verify the witness and all nodes can be configured from the primary location.

Implementation

1. Validate Stretched-cluster-specific network switch settings.
2. Deploy and configure the vSAN virtual witness appliance, or physical witness host as applicable.
3. Configure static routes between hosts in the data sites and the witness.
4. Configure Fault Domains & Stretched Cluster.
5. Configure Advanced parameters on hosts for Stretched-cluster as applicable.
6. Create one Host Group for the Preferred site, and one for the Secondary site.
7. Create one VM Group for the Preferred site and one for the Secondary site.
8. Create two temporary VMs for testing.
    i. Operating system install is not necessary for these test VMs; the test will be to confirm the virtual disk component placement.
9. Create one VM/Host Rule for the Preferred site, and one for the Secondary site.
10. Configure vSphere HA Admission Control and vSphere HA Isolation Settings for Stretched-cluster.
11. Configure up to one Optional VM Storage Policy Affinity Rule, as applicable.
12. Confirm successful Virtual SAN Health Check for the Stretched Cluster.
13. Verify the VM/Host rules function as expected.
14. Provide overview of the VM/Host Rule feature.

Customer Responsibilities

- Complete the VxRail survey questionnaire provided by Project Manager.
- Facilitate necessary configuration modifications on the new cluster in vCenter, if leveraging a customer supplied/existing vCenter Server.
    i. Also facilitate rectifying any vCenter issues with expired certificates or 3rd party certificates as needed, if leveraging a customer supplied/existing vCenter Server.
- Upgrade of vCenter to supported level as needed prior to the deployment, if leveraging a customer supplied/existing vCenter Server.
- Provide Stretched-cluster requirements, such as:
    i. A witness site with appropriate hardware, software, and networking. A dedicated witness host is required for each Stretched Cluster.
    ii. Deployment and supportability is bound to the requirements outlined by VMware and the Dell EMC VxRail Stretched Clusters Planning Guide.
        (a) In case of any discrepancies between those posted guides and listed here, the posted guides prevail.
        (b) Some highlights:
            (i) VSAN communication between the data sites over stretched Layer 2 (L2).
            (ii) Additionally L2 networking is required for management and vMotion.
            (iii) VSAN communication between the data sites and the witness site is routed over Layer 3.
            (iv) Data Site to Data Site Network Latency or RTT < 5msec.
            (v) Data Site to Witness Network Latency or RTT < 200msec.
            (vi) Data Site to Data Site Bandwidth: For most workloads, VMware recommends a minimum of 10Gbps or greater bandwidth between sites.

Exclusions

- Performance testing.
- Custom host naming and/or IP addressing which may not be handled via VxRail Manager.

Add-on for HPC Nodes

This Supplemental Deployment Service provides for the installation and configuration of HPC hardware components including head nodes, compute nodes, H-series switches and N-series switches as an add-on to an existing base

deployment for HPC offer. This Supplemental Deployment Service is defined and limited to the description and quantity in the Supplemental Deployment Service purchased.

Included in Service	HPC
Unpack and inspect hardware	✓
Rack, mount, and/or position the product & components	✓
Install solution specific components (graphics processing units (GPUs), accelerators)	✓
Install Customer-provided Dell-branded PDU(s), as needed for proper power configuration	✓
Install and route power cables	✓
Install and route data cables	✓
Print and apply labels to newly-installed cables	✓
Power on equipment	✓
Confirm server boots, check for error lights and obvious issues	✓
Configure an IP address on CMC / iDRAC	✓
Configure first time boot info in preparation for cluster inclusion	✓
Prepare head nodes for CMS installation	✓
Provision access to head node from Customer network	
Update drivers, firmware, and BIOS, including chassis firmware if applicable	✓
Move used packaging materials to trash and recycling facility or other designated area within the immediate installation location	✓

Excluded from Service	HPC
Configuration as it relates to OS clustering, redundancy, or failover	×
Data validations, migration, snapshots, or cloning	×
Liquid cooling pumps, cabling and manifolds	×

Add-on for HPC M1000e

This Supplemental Deployment Service provides for the installation and configuration of HPC hardware components in a Dell M1000e chassis as an add-on to an existing base deployment for HPC offer. This Service will rack mount the M1000e chassis and up to a full complement of sixteen blades and required switches. This Supplemental Deployment Service is defined and limited to the description and quantity of one (1) M1000e enclosure per Deployment Service purchased.

Included in Service	HPC
Unpack and inspect hardware	✓
Rack, mount, and/or position the product & components	✓
Install Ethernet, IO aggregators, and components within a single enclosure, up to the capacity of the enclosure	✓
Install server blades, nodes, or sleds within a single enclosure, up to the capacity of the enclosure	✓
Update chassis switch firmware	✓
Install and route power cables	✓
Install and route data cables	✓
Print and apply labels to newly-installed cables	✓
Power on equipment	✓
Confirm server boots, check for error lights and obvious issues	✓

Configure an IP address on CMC / iDRAC	✓
Configure first time boot info	✓
Configure first time boot info in preparation for cluster inclusion	✓
Prepare head nodes for CMT installation	✓
Update drivers, firmware, and BIOS, including chassis firmware if applicable	✓
Move used packaging materials to trash and recycling facility or other designated area within the immediate installation location	✓

Excluded from Service	HPC
Configuration as it relates to OS clustering, redundancy, or failover	×
Data validations, migration, snapshots, or cloning	×
Storage Sleds (PS-M series)	×
Custom documentation	×

Add-on for HPC Storage

This Supplemental Deployment Service provides for the installation and configuration of the Dell Ready Bundles for HPC storage components in an HPC environment as an add-on to an existing base deployment for HPC offer.

Product Line	Solution	Category	Hardware Installation	Additional Configuration
HPC	Dell EMC Ready Bundle for HPC NFS Storage	NFS High Availability (server pair)	Two (2) servers and up to two (2) MD storage enclosure(s)	Red Hat® Enterprise Linux (RHEL) x86_64 NFS software configuration and client connectivity Dell HPC solution networking configuration MD Software Configuration
	Dell EMC Ready Bundle for HPC Lustre Storage	Lustre Metadata (server pair)	One (1) Management server (IML) and two (2) metadata servers (MDS) with associated MD storage arrays	Intel® Enterprise Edition Lustre (IEEL) configuration Dell HPC solution networking configuration MD Software Configuration
		Lustre Object Storage (server pair)	Two (2) Lustre Object Storage Server (OSS) and four (4) MD Object Storage Target (OST) storage arrays	

Note: One SKU required per server pair for either Ready Bundle for HPC Storage.

Included in Service	HPC
Unpack and inspect hardware	✓
Rack, mount, and/or position the product & components	✓
Install Ready Bundle solution specific components	✓
Install Customer-provided Dell-branded PDU(s), as needed for proper power configuration	✓
Install and route power cables	✓
Install and route data cables	✓
Print and apply labels to newly-installed cables	✓
Power on equipment	✓
Confirm server boots, check for error lights and obvious issues	✓
Configure an IP address on iDRAC	✓
Configure first time boot info	✓
Attach storage enclosure to servers	✓

Update drivers, firmware, and BIOS, including chassis firmware if applicable	✓
Configure storage software	✓
Define storage configuration	✓
Define file system(s)	✓
Define redundant array of inexpensive disks (RAID) sets	✓
Define shares	✓
Configuration of shares per implementation plan	✓
Mount NFS exports on up to 5 designated NFS clients	✓
Validate NFS Storage Solution (NSS) functionality with input/output (I/O) zone test (if applicable)	✓
Verify HA functionality by causing a failure on primary node (if applicable)	✓
Optional installation and configuration of Dell PowerVault Disk Storage on MDS or OSS nodes	✓
Move used packaging materials to trash and recycling facility or other designated area within the immediate installation location	✓

Excluded from Service	HPC
Data validations, migration, snapshots, or cloning	×
Custom storage performance tuning, system optimization, or other similar activities.	×
Liquid cooling pumps, cabling and manifolds	×

Implementation of Data Protection Suite for VMware Replication

This Supplemental Deployment Service provides for the installation and configuration of a second replicated Avamar, Data Domain, and DD Boost system instance to provide end-to-end data protection for VMware-based environments, including backup and recovery and as a replication target to an already installed primary site. This Supplemental Deployment Service is defined below and limited to the following:

1. Data Domain Virtual Edition Appliance: 1
2. Data Domain Appliance: 1
3. Avamar Servers: 1
4. Avamar Clients in Design: 50
5. ESX Servers for Integration: 1
6. VMware Image Level Backups: 5
7. Collection nodes: 1
8. Data Protection Advisor Collector Nodes: 1
9. Avamar Clients for Implementation: 50
10. Avamar VMware Image Proxies: 2
11. Avamar Servers Configured for use with Data Domain: 1
12. Avamar application plug-ins with DD Boost: 10

Pre-Deployment Planning

1. Meets with Customer to ensure that the environment and operational implementation requirements (hardware, software, and infrastructure) are met by Customer, and provides Customer with a list of required or beneficial updates.
2. Plans and estimates a schedule for the conversion configuration tasks for the services.
3. Performs the Services as defined in this document.
4. Provides Customer with the applicable documentation.
5. Verifies that the environment meets all hardware and software requirements.
6. Obtains the business and IT requirements, goals, expectations, and success parameters associated with the engagement.
7. Creates a Data Domain architecture design to meet the business and IT requirements, goals, expectations, and success parameters associated with the engagement.

8. Gathers the information required for the Service.
9. Develops and documents the Avamar solution design and requirements.
10. Reviews the Avamar Pre-Engagement Checklist.
11. Develops and documents the Avamar client design and requirements.
12. Develops and documents a client, dataset, groups, and retention policy design and requirements.
13. Develops and documents the Avamar and Data Domain integration design.
14. Develops and documents Avamar VMware integration design and requirements.
15. Reviews the Pre-Installation Checklist.
16. Reviews and validates Customer requirements and planned use of DPA modules, features, and functions, ensuring that all are appropriately leveraged to give Customer greatest value.
17. Develops the Data Protection Advisor implementation design and requirements in the Configuration Guide.
18. Documents the proposed architecture in the Configuration Guide.
19. Completes solution design validation.
20. Conducts an implementation review meeting.
21. Validates that the equipment is on site at the appropriate location with power and cable requirements met.

Implementation

1. Performs the following Data Domain Virtual Edition (DDVE) configuration:
    a. Verifies VMware and DDVE software requirements.
    b. Reviews vCenter or ESXi Server configuration settings.
    c. Verifies the successful installation of the customer-installed DDVE virtual machine.
    d. Reviews DDVE configuration settings.
    e. Adds additional VMware virtual disks to the virtual machine configuration settings.
2. Expands new storage into the Data Domain virtual appliance file system.
3. Performs an initial Data Domain system configuration:
    a. Verifies and configures LAN connectivity.
    b. Configures Data Domain purchased software license, if necessary.
    c. Configures system administration for auto support and alerts.
    d. Configures MTrees and quotas, if necessary
4. Configures data movement policies on all applicable MTrees on Data Domain systems, if necessary.
5. Demonstrates additional capacity is recognized by the Data Domain storage system.
6. Configures replication on Data Domain Appliance.
7. Verifies that Data Domain auto support and alerts are sending and submitting Customer Support ID information.
8. Performs the tests in the Test Plan for Customer.
9. Provides assistance in racking and stacking the Data Domain appliances.
10. Connects LAN cables to the Data Domain appliance.
11. Configures additional Data Domain software, if necessary.
12. Upgrades the Data Domain operating systems, as required.
13. Configures the DDR(s) for DD Boost data access:
    a. Creates the DD Boost user(s) and logical storage unit(s).
    b. Adds the ifgroup(s) with dedicated interfaces, if necessary.
14. Updates Data Domain asset information and documentation, and creates Data Domain Customer Support accounts.
15. Installs Avamar Rack and Nodes, including physical location, connecting network and power cables.
16. Registers Avamar hardware serial numbers.
17. Configures Avamar IP addresses and host names for Customer's network.
18. Configures Avamar remote management and monitoring network interface.
19. Copies software packages to prepare Avamar Grid for implementation and configuration of Avamar features.
20. Installs and configures Avamar Software and activates the Avamar Grid.
21. Configures Avamar local authentication.
22. Installs, configures, and activates Avamar client agents on any supported host platform.
23. Configures vSphere and Avamar Administrator and Authentication.
24. Configures VMware Image Backups and Proxies for Avamar.

25. Validates VM backups completed in the Data Protection environment.
26. Configures the Avamar system for use with the Data Domain as a target backup device.
27. Configures datasets on the Avamar systems for the client application plug-in using DD Boost.
28. Verifies that the requirements for the Data Protection Advisor implementation within the existing backup, recovery, and replication environments are detailed.
29. Installs and configures the DPA server software, creating a DPA server (instance) for supported backup software products.
30. Configures and enables DPA licensed modules.
31. Configures DPA Users and Roles.
32. Installs, configures, and implements DPA collectors on supported backup servers, host clients, and appliance nodes.
33. Configures collector nodes for each appliance, application, or host type for data monitoring.
34. Configures and validates database maintenance routines.
35. Configures the DPA environment with the existing ESRS environment.
36. Completes solution implementation validation.
37. Completes and delivers the Configuration Guide.
38. Completes and delivers the Test Plan.
39. Conducts a basic Functional Overview.

Implementation of RecoverPoint for Virtual Machines Local Replication

This Supplemental Deployment Service provides for the design, installation, and implementation of the RecoverPoint for Virtual Machines (RP4VM) product for local replication in a customer's VMware environment. Dell EMC installs a single vRPA cluster comprising two vRPAs at a single site, validates the prerequisites for implementation, and showcases basic replication, failover, and failback operations limited to two test virtual machines only (excluding vRPA VMs). The service scope is limited to the configuration of a single local replica. This Supplemental Deployment Service is defined below and limited to the following:

1. Sites: 1
2. Virtual machines that require protection: 2
3. Virtual RecoverPoint Appliances (vRPAs): 2
4. ESXi servers that host the vRPA cluster: 2
5. ESXi servers that host protected VMs: 2
6. RecoverPoint for VM systems: 1
7. ESXi servers that host replica VMs: 2
8. Virtual RecoverPoint Appliance Clusters: 1
9. Consistency Groups: 1

Pre-Deployment Planning

1. Gathers the information required for the engagement.
2. Performs planning and design for implementation of RecoverPoint for Virtual Machines.
3. Develops the Test Plan.
4. Meets with Customer to ensure that the environment and operational implementation requirements (hardware, software, and infrastructure) are met by Customer, and provides Customer with a list of required or beneficial updates.
5. Plans and estimates a schedule for the installation and configuration tasks for the Services.
6. Completes solution design validation.
7. Validates prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.

Implementation

1. Installs and configures two (2) virtual RecoverPoint appliances in a single (1) vCenter server.
2. Installs and configures a single (1) vRPA cluster.
3. Licenses, registers, and enables support for RecoverPoint for VMs systems.
4. Registers data stores and ESXi clusters.
5. Creates RecoverPoint replicas of VMs for local replication at a single site.
6. Creates a consistency group comprising of two (2) test virtual machines and defines replication policies.
7. Monitors consistency groups initialization.
8. Performs the required tests using the Test Plan.
9. Completes solution implementation validation.

Implementation of RecoverPoint for Virtual Machines Remote Replication

This Supplemental Deployment Service provides for the design, install, and implementation of the EMC RecoverPoint for Virtual Machines (RP4VM) product for remote replication in a customer's VMware environment. The service scope is limited to the configuration of a single remote replica. This Supplemental Deployment Service is defined below and limited to the following:

1. Sites: 2
2. Virtual machines that require protection: 2
3. Virtual RecoverPoint Appliances (vRPAs): 4
4. ESXi servers that host the vRPA cluster: 4
5. ESXi servers that host protected VMs: 2
6. RecoverPoint for VM systems: 1
7. ESXi servers that host replica VMs: 2
8. Virtual RecoverPoint Appliance Clusters: 2
9. Consistency Groups: 1

Pre-Deployment Planning

1. Gathers the information required for the engagement.
2. Performs planning and design for implementation of RecoverPoint for Virtual Machines.
3. Develops the Test Plan.
4. Meets with Customer to ensure that the environment and operational implementation requirements (hardware, software, and infrastructure) are met by Customer, and provides Customer with a list of required or beneficial updates.
5. Plans and estimates a schedule for the installation and configuration tasks for the Services.
6. Completes solution design validation.
7. Validates prerequisites for RecoverPoint for Virtual Machines implementation including compatibility, licenses, credentials, data stores, and networks.

Implementation

1. Installs and configures two (2) virtual RecoverPoint appliances at a local site.
2. Installs and configures two (2) virtual RecoverPoint appliances at a remote site.
3. Installs and connects two (2) vRPA clusters.
4. Registers vCenter servers in RecoverPoint for VMs system.
5. Licenses, registers, and enables support for RecoverPoint for VMs systems.
6. Registers data stores and ESXi clusters.
7. Creates RecoverPoint replicas of VMs for remote replication between two (2) sites.
8. Creates a consistency group comprising of two (2) test virtual machines and defines replication policies.
9. Monitors consistency groups initialization.
10. Performs the required tests using the Test Plan.
11. Completes solution implementation validation.