

# ProDeploy for Data Protection Suite for VMware

## Service Description

### ProDeploy for Data Protection Suite for VMware

This service provides for the installation and configuration of Avamar, Data Domain (DD), DD Boost, Data Protection Advisor (DPA), and knowledge transfer on Remote Guru Live for RecoverPoint for Virtual Machines (VMs) systems to provide end-to-end data protection for VMware-based environments, including backup and recovery, replication, monitoring, and analysis.

This implementation service covers the integration of one Avamar Virtual Edition (AVE) or Avamar Data Store/Single-Node, one Data Domain Virtual Edition (DDVE) or one Data Domain physical appliance, one DPA instance, integrated with one VMware-based vCenter environment. The service is limited to Dell EMC RecoverPoint guidance knowledge transfer. The configuration includes up to two Avamar proxy hosts, 50 image-based clients, and 10 application plugins within the VMware-based environment.

**Important!** The *Remote Guru Live for RecoverPoint for Virtual Machines* services are limited to guidance knowledge transfer only and no actual implementation work is performed.

## Project Scope

Dell EMC personnel or authorized agents ("Dell EMC Personnel") shall work closely with Customer's staff to perform the services specified below ("Services"), subject to the Customer satisfying the "Customer Responsibilities" detailed in this document.

### ProDeploy for Data Protection Suite for VMware

This service includes the following components (not to exceed the listed values):

- Avamar Servers: 1
- Avamar Clients in Design: 50
- ESX Servers for Integration: 1
- VMware Image Level Backups: 5
- 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
- Data Domain 6300 appliances: 1
- Data Domain Virtual Edition Appliance: 1
- Collection nodes: 1
- Data Protection Advisor collector nodes: 1

During this part of the service, Dell EMC:

- Gathers the information required for the Service.
- Verifies that the environment meets all hardware and software requirements.
- Develops and documents the Avamar solution design and requirements.

- Reviews the *Avamar Pre-Engagement Checklist*.
- Develops and documents the Avamar client design and requirements.
- Develops and documents a client, dataset, groups, and retention policy design and requirements.
- Develops and documents the Avamar and Data Domain integration design.
- Develops and documents Avamar VMware integration design and requirements.
- Completes solution design validation.
- Conducts an implementation review meeting.
- Validates that the equipment is on site at the appropriate location with power and cable requirements met.
- Installs Avamar Rack and Nodes, including physical location, connecting network and power cables.
- Registers Avamar hardware serial numbers.
- 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.
- Installs and configures Avamar Software and activates the Avamar Grid.
- Configures the Avamar System on an existing Secure Remote Services gateway.
- Configures Avamar local authentication.
- Installs, configures, and activates Avamar client agents on any supported host platform.
- Configures vSphere and Avamar Administrator and Authentication.
- Configures VMware Image Backups and Proxies for Avamar.
- Validates VM backups completed in the Data Protection environment.
- Configures the Avamar system for use with the Data Domain as a target backup device.
- Configures datasets on the Avamar systems for the client application plug-in using DD Boost.
- Meets with Customer to ensure that the environment and operational implementation requirements (hardware, software, and infrastructure) are met, and provides Customer with a list of required or beneficial updates.
- Reviews recommendations from previous Dell EMC engagements to ensure design consistency.
- Obtains the business and IT requirements, goals, expectations, and success parameters associated with the engagement.
- Creates a Data Domain architecture design to meet the business and IT requirements, goals, expectations, and success parameters associated with the engagement.
- Plans and estimates a schedule for the conversion configuration tasks for the services.
- Performs the Services as defined in this document.
- Provides Customer with the applicable documentation.
- Documents the proposed architecture in the *Configuration Guide*.
- Develops the *Test Plan*.

- Provides assistance in racking and stacking the Data Domain appliances.
- Connects LAN cables to the Data Domain appliance.
- Performs an initial Data Domain system configuration:
  - Verifies and configures LAN connectivity.
- Configures additional Data Domain 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 Data Domain systems, if necessary.
- Upgrades the Data Domain operating systems, as required.
- Configures the DDR(s) for DD Boost data access:
  - Creates the DD Boost user(s) and logical storage unit(s).
  - Adds the ifgroup(s) with dedicated interfaces, if necessary.
- Verifies that Data Domain auto support and alerts are sending and submitting Customer Support ID information.
- Updates Data Domain asset information, documentation and creates Data Domain Customer Support accounts.
- Performs the tests in the *Test Plan* for Customer.
- Performs the following Data Domain Virtual Edition (DDVE) configuration:
  - Verifies VMware and DDVE software requirements.
  - Reviews vCenter or ESXi Server configuration settings.
  - Verifies the successful installation of the customer-installed DDVE virtual machine.
  - Reviews DDVE configuration settings.
  - Adds additional VMware virtual disks to the virtual machine configuration settings.
- Expands new storage into the Data Domain virtual appliance file system.
  - Configures Data Domain purchased software license, if necessary.
- Demonstrates additional capacity is recognized by the Data Domain storage system.
- Completes and delivers the *Configuration Guide*.
- Completes and delivers the *Test Plan*.
- Conducts a basic Knowledge Transfer.
- Reviews the *Pre-Engagement Checklist*.
- 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.
- Develops the Data Protection Advisor implementation design and requirements in the Configuration Guide.
- 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.
- Configures and validates database maintenance routines.
- Configures the DPA environment with the existing Secure Remote Services environment.
- Completes solution implementation validation.

The following activities included in all services including customer-selected Supplemental Deployment Services, focus on managing the initiation, planning, execution, and closure of the project including coordinating delivery resources and communicating with stakeholders:

- Manages Dell EMC resources assigned to the project.
- Works with the Customer assigned single point of contact to coordinate project tasks and the resources assigned to complete said tasks.
- Acts as the single point of contact for all project communication and escalations.
- Determines the engagement process and schedule.
- Develops a high-level Project Plan with critical path events and milestones.
- Conducts a kickoff meeting to review the project scope, expectations, communication plans, and availability of required resources.
- Conducts periodic status meetings to review project process, issues, and potential risks. The frequency of the meetings will be mutually agreed upon by the Customer and Dell EMC.
- Coordinates project closeout.

### ***Deliverables***

Dell EMC will provide Customer with the following Deliverables in connection with the Services:

- *Pre-Engagement Checklist*
- *Configuration Guide*
- *Knowledge Transfer*
- *Test Plan*
- *Project Completion Form*

### ***Dell EMC Staffing***

Dell EMC will provide appropriate Dell EMC Personnel to perform the Services specified in the “Project Scope” section above.

### ***Customer Responsibilities***

Customer’s timely provision to Dell EMC of office accommodations, facilities, equipment, assistance, cooperation, complete and accurate information and data from Customer officers, agents, and employees, suitably configured computer products, and network access is essential to the performance of the Services set forth in this document. Customer is responsible for ensuring that all Customer data

has been backed-up prior to commencement of the Services. Dell EMC assumes no responsibility or liability for any loss of, loss of access to, or unrecoverable data in connection with the Services.

The following are the additional responsibilities of Customer:

- Assign a primary contact and point of authorization as the Customer project manager. This single point of contact will be responsible for issue resolution, activity scheduling, interview scheduling, and information collection and dissemination. The Project Sponsor is responsible to ensure compliance with Customer obligations.
- Assign a lead technical resource to act as a single technical point-of-contact between Customer and Dell EMC as necessary for the duration of the engagement.
- Provide technical support for implementation teams, all vendors, and third parties as necessary.
- Assume responsibility for all network connectivity, performance, and configuration issues.
- Manage site facility preparation, including but not limited to cabling, HVAC, and power.
- Ensure any site-specific and/or site-to-site network infrastructure required is in place and operational.
- Provide Dell EMC personnel with access to Customer's subject matter experts, systems, and networks (including, without limitation, remote systems/network access) necessary to perform the services during Dell EMC's normal business hours (or other mutually agreed upon times).
- Provide at least one technical contact with system administration responsibilities and appropriate system and information access privileges to perform this service.
- Make appropriate system maintenance window(s) available for Service Personnel as needed to prepare equipment.
- Ensure that all environment, technical, and operational requirements are met prior to commencement of the service.
- Provide support from technical support teams for all vendors and third parties, as necessary.
- Ensure that all customer's data has been backed up prior to commencement of the services. Dell EMC assumes no responsibility or liability for any loss of, loss of access to, or unrecoverable data in connection with the services.
- Provide appropriate personnel to assist with the racking and stacking of equipment.

### **Service Schedule**

Unless otherwise mutually agreed in writing, the anticipated start date of the Services is within two (2) weeks after receipt and approval by Dell EMC of the Customer's purchase order for this Service.

Customer shall have twelve (12) months from the date of Dell EMC's invoice to use the Services described herein ("**Service Period**"). The Services shall automatically expire on the last day of the Service Period, unless otherwise agreed by Dell EMC. Under no circumstances shall Customer be entitled to a credit or refund of any unused portion of the Services.

### **Services Scope Changes**

Any changes to the Services, the schedule, charges or this document must be mutually agreed upon by Dell EMC and the Customer in writing. Depending on the scope of such changes, Dell EMC may require that a separate Statement of Work detailing the changes, the impact of the proposed changes on the charges and schedule, and other relevant terms, be executed by the parties.

### **Services Scope Exclusions**

Dell EMC is responsible for performing only the Services expressly specified in this document. All other services, tasks, and activities are considered out of scope.

Customer will maintain a current version of an anti-virus application continuously running on any system to which Dell EMC is given access and will scan all Deliverables and the media on which they are delivered. Customer shall take reasonable data back-up measures and, in particular, shall provide for a daily back-up process and back-up the relevant data before Dell EMC performs any remedial, upgrade, or other works on Customer's production systems. To the extent Dell EMC's liability for loss of data is not anyway excluded under the Existing Agreement or this document, Dell EMC shall, in case of data losses, only be liable for the typical effort to recover the data which would have accrued if Customer had appropriately backed up its data.

### **Fixed Bid Service Fee and Invoicing Schedule**

The Services described in this document are delivered on consecutive days during Service Provider's normal business hours (8:00 A.M.–6:00 P.M. local time, M–F, excluding Service Provider and local holidays). However, some Services may require scheduling by Service Provider for delivery outside of normal business hours due to the nature of the Services being performed (e.g. on-site hardware deployment).

The Services described in this document are performed on a fixed price basis at the fees specified in the applicable Service Provider quote.

The Services will be delivered using Service Provider's standard delivery model, which may include onsite and/or offsite delivery of the Services. If the Customer requires a different delivery model, the charges, expenses, scope of work and/or schedule are subject to modification in accordance with the "Services Scope Changes" section in this document. If the Customer does not authorize such change(s) in accordance with the "Services Scope Changes" section, Service Provider and the Customer agree that Service Provider's standard delivery model will apply for the Services. (Not applicable to U.S. Government or U.S. State engagements that preclude the use of offsite delivery of services.)

Invoices are issued upon Service Provider's receipt and approval of the Customer's purchase order.

Customer authorizes Service Provider to invoice for and shall pay additional amounts related to changes or exceptions to the Services.

### **PROFESSIONAL SERVICES TERMS AND CONDITIONS**

This document is between the customer defined in the appropriate sale description below ("Customer") and the applicable Dell EMC sales entity ("Dell EMC") specified on your Sales Order and sets forth the business parameters and other matters regarding services that Customer has engaged Dell EMC to provide hereunder.

**Direct Sale from Dell EMC to Customer:** This document and the performance of the Services detailed herein are subject to (i) the most recently signed agreement between Customer and Dell EMC that contains terms and conditions designated to apply to professional services ("Existing Agreement"); or (ii) in the absence thereof, Dell EMC's standard terms and conditions for professional services specified below. In the event of a conflict between this document and your Existing Agreement, this document shall govern.

**Sale by Dell EMC Authorized Reseller to Customer:** If you have purchased the Services detailed herein through a Dell EMC authorized reseller, this document is for descriptive and informational purposes only and does not establish a contractual relationship or any rights or obligations between you and Dell EMC. Such Services are governed solely by the agreement between you and your Dell EMC authorized reseller. Dell EMC has permitted your Dell EMC authorized reseller to provide this document to you. Your Dell EMC authorized reseller may make arrangements with Dell EMC to perform all or a portion of the Services on behalf of the reseller.

**Sale from Dell EMC to Dell EMC Authorized Reseller:** This document and the performance of the Services detailed herein are subject to the professional services terms and conditions between you ("Partner") and Dell EMC that are specified in (i) the signed product and services ordering agreement, if



any; or (ii) the applicable signed stand-alone professional services agreement (“PSA”) if any, and in case both exist, the document having the later effective date shall govern; or (iii) in the absence of the previously described agreements, Dell EMC’s standard terms and conditions for professional services specified below. Partner acknowledges and agrees that: (a) its agreements with its customers (“End-Users”) for the Services detailed herein are not contracts of Dell EMC; (b) Partner has no right or power to bind Dell EMC to any commitments unless otherwise explicitly agreed upon in writing by Dell EMC and shall not represent otherwise or purport to do so; (c) End Users are not third-party beneficiaries of this document or any other agreement between Dell EMC and Partner; (d) all references to “Customer” in this document shall mean the Partner who is purchasing the Services; and (e) where the provision of the Services by Dell EMC is contingent on a Partner obligation, then that obligation may also apply to its End-User with respect to the provision of Services to such End-User. Partner shall ensure that such End-User complies with such obligations where applicable. In the event the End-User fails to meet such an obligation, then Dell EMC shall not be liable for any resulting failure to perform its obligations. In the event of a conflict between this document and the agreements referenced in (i) and (ii) above, this document shall govern.

The following terms and conditions govern this document:

1.1 Term; Termination. This document begins on the date specified in the "Service Schedule" section above, and, unless terminated for breach, continues in accordance with its terms. A party shall notify the other in writing in case of the other's alleged breach of a material provision of this document. The recipient shall have thirty (30) calendar days from the date of receipt of such notice to effect a cure ("**Cure Period**"). If the recipient of such notice fails to effect a cure within the Cure Period, then the sender of the notice shall have the option of sending a written notice of termination, which shall take effect upon receipt.

1.2 Grant of Copyright or License Rights in Deliverables. Subject to Customer’s payment of all amounts due Dell EMC, the parties agree (i) Customer shall own all copyright rights to the portion of Deliverables (defined below) that consists solely of written reports, analyses and other working papers prepared and delivered by Dell EMC to Customer in the performance of Dell EMC’s obligations hereunder, and (ii) for the portion of Deliverables that consists of scripts and code, Dell EMC grants Customer a non-exclusive, non-transferable, irrevocable (except in case of breach of this document) perpetual right to use, copy and create derivative works from such (without the right to sublicense) for Customer’s internal business operations, as contemplated hereunder. The license granted in this section does not apply to (a) Customer furnished materials, and (b) any other Dell EMC products or items licensed, or otherwise provided, under a separate agreement. “**Deliverables**” means any reports, analyses, scripts, code or other work results which have been delivered by Dell EMC to Customer within the framework of fulfilling obligations under this document.

1.2.1 Customer Furnished Materials. Customer does not relinquish any of its rights in materials it furnishes to Dell EMC for use in performing the Services. Pursuant to Customer’s Proprietary Rights (defined below) therein, Customer grants Dell EMC a non-exclusive, non-transferable right to use such solely for the benefit of Customer in fulfillment of Dell EMC’s obligations hereunder.

1.2.2 Reservation of Proprietary Rights. Each party reserves for itself all Proprietary Rights that it has not expressly granted to the other. Dell EMC shall not be limited in developing, using or marketing services or products which are similar to the Deliverables or Services provided hereunder, or, subject to Dell EMC’s confidentiality obligations to Customer, in using the Deliverables or performing similar Services for any other projects. "**Proprietary Rights**" mean all patents, copyrights, trade secrets, methodologies, ideas, concepts, inventions, know-how, techniques or other intellectual property rights of a party.

1.3 Confidential Information; Publicity. "**Confidential Information**" means any information that is marked "confidential", "proprietary" or the like or in relation to which its confidentiality should by its nature be inferred or, if disclosed orally, are identified as being confidential at the time of disclosure

and, within two (2) weeks thereafter, is summarized, appropriately labeled and provided in tangible form. Confidential Information does not include information that is (i) rightfully in the receiving party's possession without prior obligation of confidentiality from the disclosing party; (ii) a matter of public knowledge; (iii) rightfully furnished to the receiving party by a third party without confidentiality restriction; or (iv) independently developed by the receiving party without reference to the disclosing party's Confidential Information. Each party shall (a) use Confidential Information of the other party only for the purposes of exercising rights or performing obligations hereunder; and (b) protect from disclosure to any third parties, by use of a standard of care equivalent to that as used by recipient to protect its own information of a similar nature and importance, and, no less than the use of reasonable care, any Confidential Information disclosed by the other party for a period commencing upon the date of disclosure until three (3) years thereafter, except with respect to (1) Customer data to which Dell EMC may have access in connection with the provision of Services, which shall remain Confidential Information until one of the exceptions stated above applies; and (2) Confidential Information that constitutes, contains or reveals, in whole or in part, Dell EMC proprietary rights, which shall not be disclosed by the receiving party at any time. Notwithstanding the foregoing, the receiving party may disclose Confidential Information (A) to its Affiliate (defined below) for the purpose of fulfilling its obligations or exercising its rights hereunder as long as such Affiliate complies with the foregoing; and (B) to the extent required by law (provided the receiving party has given the disclosing party prompt notice). "Affiliate" means a legal entity that is controlled by, controls, or is under common "control" with Dell EMC or Customer, respectively. "Control" means more than 50% of the voting power or ownership interests. Each party shall not, and shall not authorize or assist another to, originate, produce, issue or release any written publicity, news release, marketing collateral or other publication or public announcement, relating in any way to this document, without the prior written approval of the other, which approval shall not be unreasonably withheld.

1.4 Payment. Customer shall pay Dell EMC's invoices in full and in the same currency as the Dell EMC invoice within thirty (30) days after the date of Dell EMC's invoice, with interest accruing thereafter at the lesser of 1.5% per month or the highest lawful rate. The charges due hereunder are exclusive of and Customer shall pay or reimburse Dell EMC for all value added (VAT), sales, use, excise, withholding, personal property, goods and services and other taxes, levies, customs and duties resulting from Customer's purchase order, except for taxes based on Dell EMC's net income. If Customer is required to withhold taxes, then Customer will forward any withholding receipts to Dell EMC at [tax@emc.com](mailto:tax@emc.com).

1.5 Warranty; Warranty Disclaimer. Dell EMC shall perform the Services in a workmanlike manner in accordance with generally accepted industry standards. Customer must notify Dell EMC of any failure to so perform within ten (10) days after the performance of the applicable portion of Services. Dell EMC's entire liability and Customer's sole remedy for Dell EMC's failure to so perform shall be for Dell EMC to, at its option, (i) correct such failure, and/or (ii) terminate this document and refund that portion of any fees received that correspond to such failure to perform. **EXCEPT AS EXPRESSLY STATED IN THIS WARRANTY SECTION, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, Dell EMC (INCLUDING ITS SUPPLIERS) MAKES NO OTHER EXPRESS WARRANTIES, WRITTEN OR ORAL, AND DISCLAIMS ALL IMPLIED WARRANTIES. IN SO FAR AS PERMITTED UNDER APPLICABLE LAW, ALL OTHER WARRANTIES ARE SPECIFICALLY EXCLUDED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT, AND ANY WARRANTY ARISING BY STATUTE, OPERATION OF LAW, COURSE OF DEALING OR PERFORMANCE, OR USAGE OF TRADE.**

1.6 **LIMITATIONS OF LIABILITY. DELL EMC'S TOTAL LIABILITY AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM OF ANY TYPE WHATSOEVER, ARISING OUT OF OR IN CONNECTION WITH THIS DOCUMENT OR SERVICES PROVIDED HEREUNDER, SHALL BE LIMITED TO PROVEN DIRECT DAMAGES**



**CAUSED BY DELL EMC'S SOLE NEGLIGENCE IN AN AMOUNT NOT TO EXCEED THE PRICE PAID TO DELL EMC FOR THE SERVICES RENDERED HEREUNDER. EXCEPT WITH RESPECT TO CLAIMS REGARDING VIOLATION OF DELL EMC'S INTELLECTUAL PROPERTY RIGHTS, NEITHER PARTY SHALL HAVE LIABILITY TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUES, DATA AND/OR USE), EVEN IF ADVISED OF THE POSSIBILITY THEREOF.**

1.7 Miscellaneous. The parties shall act as independent contractors for all purposes hereunder. Nothing contained herein shall be deemed to constitute either party as an agent or representative of the other, or both parties as joint venturers or partners for any purpose. Neither party shall be responsible for the acts or omissions of the other, and neither party will have authority to speak for, represent or obligate the other party in any way without the prior written approval of the other party. Each party shall comply with all applicable export laws, orders and regulations and obtain all necessary governmental permits, licenses and clearances. Diversion contrary to US law, including US export laws is expressly prohibited. This document shall be governed by the laws of the Commonwealth of Massachusetts for transactions taking place in the United States and the country in which the Dell EMC entity is located for transactions taking place outside of the United States, excluding any conflict of law rules. The U.N. Convention on Contracts for the International Sale of Goods does not apply.

## Appendix A

### Supplemental Deployment Services

Supplemental Deployment Services are additional deployment services which complement a new deployment or supplement an already-deployed Dell EMC Solution. The following Supplemental Deployment Services are sold as add-on(s) to the above-referenced ProDeploy Enterprise Suite offer:

#### **ProDeploy Add-on for Data Protection Suite for VMware**

This 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 implementation covers the integration of one Avamar Virtual Edition (AVE) or Avamar Data Store/Single-Node, one Data Domain Virtual Edition (DDVE) or one Data Domain physical appliance integrated with one VMware-based vCenter environment.

In addition, this replication target configuration includes up to two Avamar proxy hosts but excludes image-based clients and application plug-ins within the VMware-based environment.

**Note:** This service encompasses minimal design and project management tasks. This service is targeted for customers who use an entry level or midsize Data Domain (DD) appliance. It includes only the installation and configuration of a Data Domain system without data storage shelves. For DD systems requiring the installation of DD storage shelves, you must include the following shelf expansion service for each shelf with this Implementation for Data Protection Suite for VMware offering:

- *Installation for Data Domain ES Expansion Shelf*
- *Installation for Data Domain DS Expansion Shelf*

This service includes the following components (not to exceed the listed values):

- Avamar Servers: 1
- Avamar Clients in Design: 50
- ESX Servers for Integration: 1
- VMware Image Level Backups: 5
- 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
- Data Domain 6300 appliances: 1
- Data Domain Virtual Edition Appliance: 1
- Backup servers (including storage nodes/media servers): 1
- Collection nodes: 1
- Data Protection Advisor collector nodes: 1

During this part of the service, Dell EMC:

- Gathers the information required for the Service.
- Verifies that the environment meets all hardware and software requirements.

- Develops and documents the Avamar solution design and requirements.
- Reviews the *Avamar Pre-Engagement Checklist*.
- Completes solution design validation.
- Develops and documents the Avamar client design and requirements.
- Develops and documents a client, dataset, groups, and retention policy design and requirements.
- Develops and documents the Avamar and Data Domain integration design.
- Develops and documents Avamar VMware integration design and requirements.
- Conducts an implementation review meeting.
- Validates that the equipment is on site at the appropriate location with power and cable requirements met.
- Installs Avamar Rack and Nodes, including physical location, connecting network and power cables.
- Registers Avamar hardware serial numbers.
- 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.
- Installs and configures Avamar Software and activates the Avamar Grid.
- Configures Avamar local authentication.
- Installs, configures, and activates Avamar client agents on any supported host platform.
- Configures vSphere and Avamar Administrator and Authentication.
- Configures VMware Image Backups and Proxies for Avamar.
- Validates VM backups completed in the Data Protection environment.
- Configures the Avamar system for use with the Data Domain as a target backup device.
- Configures datasets on the Avamar systems for the client application plug-in using DD Boost.
- Meets with Customer to ensure that the environment and operational implementation requirements (hardware, software, and infrastructure) are met, and provides Customer with a list of required or beneficial updates.
- Obtains the business and IT requirements, goals, expectations, and success parameters associated with the engagement.
- Creates a Data Domain architecture design to meet the business and IT requirements, goals, expectations, and success parameters associated with the engagement.
- Plans and estimates a schedule for the conversion configuration tasks for the services.
- Performs the Services as defined in this document.
- Provides Customer with the applicable documentation.
- Documents the proposed architecture in the *Configuration Guide*.
- Develops the *Test Plan*.
- Provides assistance in racking and stacking the Data Domain appliances.
- Connects LAN cables to the Data Domain appliance.
- Performs an initial Data Domain system configuration:

- Verifies and configures LAN connectivity.
- Configures additional Data Domain 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 Data Domain systems, if necessary.
- Upgrades the Data Domain operating systems, as required.
- Configures CIFS/NFS data access.
- Assists Customer with CIFS/NAS integration into backup-application software.
- Verifies that Data Domain auto support and alerts are sending and submitting Customer Support ID information.
- Updates Data Domain asset information, documentation and creates Data Domain Customer Support accounts.
- Performs the tests in the *Test Plan* for Customer.
- Performs the following Data Domain Virtual Edition (DDVE) configuration:
  - Verifies VMware and DDVE software requirements.
  - Reviews vCenter or ESXi Server configuration settings.
  - Verifies the successful installation of the customer-installed DDVE virtual machine.
  - Reviews DDVE configuration settings.
  - Adds additional VMware virtual disks to the virtual machine configuration settings.
- Expands new storage into the Data Domain virtual appliance file system.
  - Configures Data Domain purchased software license, if necessary.
- Demonstrates additional capacity is recognized by the Data Domain storage system.
- Completes and delivers the *Configuration Guide*.
- Completes and delivers the *Test Plan*.
- Conducts a basic Knowledge Transfer.
- Reviews the *Pre-Engagement Checklist*.
- 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.
- Develops the Data Protection Advisor implementation design and requirements in the Configuration Guide.
- 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.

- Configures and validates database maintenance routines.
- Configures the DPA environment with the existing Secure Remote Services environment.
- Completes solution implementation validation.

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