LOGICAL CONFIGURATION FOR VXBLOCK SYSTEM - STORAGE ARRAY ADD-ON

PSVC-VLBS-00-A01

Service Overview

Logical Configuration for VxBlock System - Storage Array Add-On (PSVC-VLBS-00-A01) ("Service"):

- Provides the expertise to complete the logical configuration in the factory of one (1) storage array for a VxBlock System 1000 in accordance with documented requirements provided by the customer.

- Is performed at the customer location. For the storage array, the service configures connectivity to the associated VxBlock System 1000 converged infrastructure system.

- Is available only available for new storage arrays purchased from the factory.

For the storage array, the service adds another storage type to a VxBlock System 1000 to expand the storage subsystem.

Service Scope

Subject to customer meeting its obligations outlined in "Customer Responsibilities," VCE personnel or authorized agents shall work closely with the customer to perform the following activities as part of the Service:

- VxBlock System 1000 SAN components:

    - Generate and apply port and additional licenses per BOM.
    - Verify VSAN Name/ID, ports assigned against the LCS and port map.
    - Verify FLOGI database entries.
    - Create Zoning script(s).
    - Execute Zoning script(s).
    - Verify Active Zoneset.
- Configures one (1) of the following storage array technologies:

    - Additional Storage Array – VMAX:
        - Configure VxBlock System 1000 Storage components.
        - Verify Drive Count matches between LCS and BOM.

- Generate SLC credentials.
- Login to Remote Anywhere and verify VMAX version.
- Upload Enguinity to VMAX from FTP Site.
- VMAX Enguinity upgrade process.
- Verify Unisphere for VMAX.
- Licensing of Unisphere for VMAX.
- eMGMT Configuration.
- eNAS Configuration.
- Create IG, PG and SG for host clusters.
- Provision Data LUNs.
- Configure and verify FAST and FAST. Cache, if applicable.
- Perform health check on VMAX.
- Generate Array Configuration & Health Report.
- Validate Configuration Against LCS.
- Additional Storage Array – Unity:
    - Configure VxBlock System 1000 Storage components.
    - Verify Drive Count matches between Logical Configuration Survey (LCS) and the Build of Materials (BOM).
    - Verify Unity version against the *VCE Release Certification Matrix* (RCM).
    - Upgrade Unity if required.
    - Disable SSH.
    - Accept EULA.
    - Change the password of user account and service account.
    - Generate License from LAC.
    - Apply License and verify features 'Never' expire.
    - Configure and verify FAST and FAST Cache, if applicable.
    - Configure and verify Storage Pools.
    - Create Hosts and Register FC Initiators.
    - Provision Data LUNs.
    - Generate Array Configuration & Health Report.
    - Validate Configuration Against LCS.

- Backup Configuration Files.
- Additional Storage Array – XtremIO:
  - Configure VxBlock System Storage components.
  - Verify Drive Count and X-brick configuration with LCS and BOM.
  - Verify Encryption configuration.
  - Download OVA file for deployment XMS.
  - Deploy and configure the XMS server.
  - Download upgrade files for XMS and X-bricks if applicable.
  - Upgrade the XMS and X-bricks as per RCM if applicable.
  - Create Cluster.
  - BBU Connectivity check.
  - Configure initiator groups.
  - Configure Storage Volumes Folders.
  - Provision Data LUNs.
  - Configure and verify DNS, NTP and Timezone.
  - Generate Array Configuration & Health Report.
  - Validate Configuration Against LCS.
- Virtualization components for additional storage array:
  - Configure VxBlock System 1000 Virtualization components.
  - Verify datastore naming configuration.
  - Provision data LUNs as VMFS datastores to all ESXi Hosts.
  - Validate Configuration Against LCS.
- Completes all internal quality and process requirements, including:

  - Gather all required information using methods documented in logical build engineering QA Process.
  - Secure latest version of approved customer LCS document.
  - Secure latest version of logical build standards documentation.
  - Ensure all logical configuration activities are completed by the assigned resource.
  - Addressed and resolve all issues found during logical configuration, review, and update checklist.
  - Re-run all reports to capture updated information inclusive of Software Configuration Report (SCR) output.
  - Record any non-standard configurations in notes section of checklist.

The following activities focus on managing the initiation, planning, execution, and closure of the project including coordinating delivery resources and communicating with stakeholders:

- Manages 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 EMC.
- Coordinates project closeout, review, and sign-off.

Roles and Responsibilities

- VCE Project Manager: Plans and coordinates all VCE engagement-related activities.
- VCE Consultant: Conducts engagement including preparation, assessment and expansion of hardware resources as outlined in the scope statement.
- Customer Project Manager: Plans and coordinates all customer engagement-related activities. Provides needed access to technical resources, hardware, network and software as needed to perform work as outlined.
- Customer Technical Lead: Responsible for providing system, storage, and network information for the customer's environment.

Key Activities

The following table represents the key tasks delivered as part of the Service and responsible parties.

Task	Responsibility
Project kickoff	All
Create upgrade plan	VCE
Perform assessment/remediation	VCE
Upgrade and configure software	VCE
Verify upgrade results	VCE
Complete documentation	VCE
Wrap-up call	All

VCE Staffing

VCE provides appropriate on-site and/or off-site representatives to perform the Services specified in the Service Scope section.

Customer Responsibilities

The customer shall:

- 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.

- Provide technical support for implementation teams, all vendors, and third parties as necessary.

- Manage all internal change control procedures and documentation including coordination with application and business owners.

- Provide VCE with reasonable access to Customer functional, technical, and business staff as necessary for VCE to perform the Services.

- Provide VCE personnel with access to Customer systems and networks (including, without limitation, remote systems and networks access), current processes and procedures, workflow diagrams, architectural designs (Visio or equivalent), and resource personnel who will participate in the Functional Overview.

- Assign a lead technical resource to act as a single technical point-of-contact between Customer and VCE as necessary for the duration of the engagement.

- Supply a list of all Customer-provided hardware to be used in the implementation to the VCE project team to allow VCE to verify the equipment conforms to the VCE Release Certification Matrix (RCM.).

- Ensure that all required site preparations have been successfully met for any new non-VCE system components. Customer will also ensure its facilities (or facilities provided through a third-party) are capable of accepting and supporting any new products ordered from VCE before the project start date. This includes, but is not limited to, adequate HVAC, power, floor space, security, etc.

- Obtain and provide, at its own cost and expense, all third party licenses and maintenance agreements necessary for VCE to complete the project.

- Obtain licenses and related maintenance support under separate contract for any necessary VCE products before the commencement of Services.

- Allow VCE to post any documents necessary for VCE to provide Services in compliance with the law at any site at which Services are performed.

- Complete questionnaires supplied by VCE within required timelines.

- Be responsible for, and assume any risk associated with any problems resulting from the accuracy, content, completeness, and consistency of any data, materials, or information supplied by the customer.

- The Service will be performed subsequent to receipt and approval by VCE of the customer's purchase order for this Service, provision of a completed Logical Configuration Survey or per mutually agreed-upon schedule.

- Any changes to the Service, the schedule, charges, or this Service Scope must be agreed upon in writing by VCE. Until changes are agreed to in writing, VCE will continue to perform the Service as provided in this document and such Service is deemed to be in accordance with the obligations of VCE.

- Provide VCE personnel, as required, with workstation(s) to enable VCE and/or its agents to gain access to the software identified in the Project Scope section.

Service Schedule

The anticipated on-site Service start date is four (4) weeks after receipt and approval by VCE of the customer's purchase order for this Service or as mutually agreed upon. Delivery of this Service excludes local public holidays. The Customer shall have twelve (12) months from the date of purchase to complete the Service ("Service Period"). No refund will be due or paid to the customer for unclaimed or incomplete work.

Service Scope Changes

Any changes to the Service, the schedule, charges, or this Service Scope must be agreed upon in writing by VCE. Until changes are agreed to in writing, VCE will continue to perform the Service as provided in this document and such Service is deemed to be in accordance with the obligations of VCE.

Service Scope Exclusions

Only the work stated in this document is included, and any additional work is out of scope of the Service and must be purchased separately. Specifically excluded services include, but are not limited to, the following:

- Procurement of the Technology Extension, as well as any additional hardware and software.

- Any change to the standard Technology Extension hardware configurations (with options if applicable), as described in the product data sheets.

- Upgrades to a compatible *Release Certification Matrix* level.

- Installation of additional hardware or software to meet SAN or AMP minimum requirements.

- Design of any leaf-spine network architecture and the associated configuration policies.

- Configuration of any Software-Defined Networking (SDN) policy.

- Routing configuration for external connectivity to the customer's existing data center.

- Modification of the customer's application software.

- Development of custom solutions including, without limitation, scripting.

- Multiple, basic installation services requiring project management services.

- Third-party application support.

- Operational process documentation or "Run Books".

- Any database/application installation and/or replatforming.

Terms and Conditions

- Customer's issuance of an order to purchase the Service signifies its agreement to the terms and conditions in this document and its acknowledgment that the Service is provided under and is governed by either (a) a separate written agreement between the parties for the delivery of professional services, or in lieu of a signed agreement, (b) the standard VCE Professional Services Terms and Conditions available at: http://www.vce.com/serviceterms (the "Governing Agreement").

- VCE licensed software is subject to the VCE standard end-user license agreement available at http://www.vce.com/noindex/legalterms. License rights for any third-party software pass directly from the third-party supplier to customer and are subject to such third party's software terms, which customer authorizes VCE to accept on its behalf or on behalf of its end users as a condition of installing or using such software.

- This document constitutes a Service Order, or SOW, as defined in the Governing Agreement. This is a fixed-price order. VCE will bill and invoice customer at its standard time and material rates plus travel expenses for any additional services beyond the Service including, but not limited to, any remediation services performed by VCE as deemed necessary by VCE, or any costs incurred for customer's failure to meet its responsibilities specified in this document. All project activities will be conducted in English and all documentation supplied to VCE by customer to support the delivery of the Services will be provided in English.

- Unless otherwise provided in the Governing Agreement, customer is deemed to accept the Service rendered if no objection is raised within 10 (ten) days after customer is presented with a milestone completion form or other statement of completion by VCE. VCE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS DOCUMENT.

Effective for orders placed on or after February 10, 2018.

For More Information

More information about Dell EMC solutions and services is available from www.dellemc.com from your local representative.

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