

STATEMENT OF WORK

EMC VSPEX and Data Domain Installation and Implementation Services

LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES

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INTRODUCTION

This document defines the requirements, deliverables, tasks, and scope of the work to be delivered by a qualified VENDOR to the LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES (LAC DHS). VENDOR shall provide the services necessary to accomplish all of the tasks and subtasks in this Statement of Work (SOW) and to successfully install, configure, test, and implement all of the solution components including, but not limited to, all associated software and/or firmware, patches/fixes, and interfaces, post implementation support, technical and end-user training. VENDOR is responsible for all acts, and services required to provide LAC DHS with a fully functional System in accordance with the Manufacturer's Specifications, whether or not the acts or services required to do so are specifically identified as a task, subtask, or deliverable in this Statement of Work, and unless otherwise expressly stated, all work described in this Statement of Work shall be performed by VENDOR.

LAC DHS is responsible for procuring and taking delivery of all required solution components prior to commencement of installation and engineering services.

VENDOR QUALIFICATIONS

All configuration and integration work must be completed by VENDOR with the following credentials. VENDOR must be an authorized EMC GOLD LEVEL BUSINESS PARTNER AND CISCO PREMIER PARTNER with UCT (Unified Computing Technology) Specialization. In the event technical support or other services are required during or after the end of the project due to problems resulting from this project, one of VENDOR's certified engineers must be able to respond on site within four hours for diagnosis and problem resolution or escalation.

All equipment must be supplied in brand new, unused, condition. All equipment must come from the manufacturer or an authorized EMC and Cisco Reseller with full USA manufacturer warranty and USA manufacturer technical support. Equipment shall not be gray market.

PROJECT OVERVIEW

The SOW includes EMC VSPEX and Data Domain Installation and Implementation Services. This service covers the installation, implementation and configuration of an EMC VSPEX reference architecture with Cisco UCS Servers, EMC VNX storage arrays and Data Domain backup appliances.

Project Scope

Vendor personnel or authorized agents shall work closely with customer staff to perform the following services:

Solution Architecture Scope Details

The service provides the Customer with up to eighty (80) hours block of time from a Solutions Architect, whose ultimate goal will be to design the solution to be implemented. Tasks include:

- Verifies the Customer's hardware and software requirements.
- Design of an EMC Enterprise Backup and Recovery solution or, alternatively, validates a Customer-provided design of such solution. Specifically, the Solution Architect focuses on the advanced design of:
 - Verifying that the environment meets all hardware and software prerequisites for the implementation.
 - Identify and confirm all required network and Host accounts and passwords needed
 - A relevant IP addressing scheme to fit the solution.
 - Relevant naming conventions.
 - Verify that the customer profile and network details have been collected
- Reviews and consultations on system implementation/cut-over plans.

Cisco UCS Installation and Implementation Scope Details

- Rack and stack of up to two (2) fabric interconnects.
- Rack and stack of up to two (2) 5108 chassis and up to ten (10) blades.
- Cable, power up and assign IPs to Cisco UCS.
- Firmware patch update.
- Configure authentication.
- Setup UCS Manager – KVM.
- Create Resource Pools - WWN, WWPN, MAC, IP, and Server (UUID).
- Create Policies - boot, firmware, scrub, vNIC, vHBA.
- Create VLANs, VSANs and setup port channels.
- Create Templates - OS - Array type.
- Create Service Profiles.
- Verify the test Service Profiles.
- Install boot-to-SAN OS of choice.
- Basic OS configuration.

- Present storage to the new Cisco UCS cluster.
- Verify and test network connectivity.

VNX Rack, Stack, and Implementation Scope Details

- Removes from crate and physically place the VNX Storage Array into the EMC VSPEX compliant rack.
- Racks VNX storage system with additional DAEs.
- Cables the equipment.
- Powers-up the storage system and verify the status.
- Enables software on the VNX storage array.
- Installs and configures Unisphere Management Suite software.
- Connects the storage system to the Management Station.
- Initializes the storage system.
- Checks system health.
- Verifies if Block OE code is at latest supported version based on EMC Support Matrix.
- Installs any layered applications enabler.
- Enables a RAID storage configuration on the array.
- Set up ESRS IP Client or add to existing ESRS installation and configure ConnectHome.

VNX Block Configuration Scope Details

- Configures block storage connectivity for up to ten (10) hosts, either FC, FCoE or iSCSI protocol.
- Configures a maximum of ten (10) hosts using a common operating system with a maximum of two host bus adapters (HBA) or converged network adapters (CNA) or iSCSI HBAs per host
- Creates up to ten (10) storage groups, and assign LUNs for each host. Note: This service covers a total of up to four LUNs per host.
- Creates up to total of 20 zones for all ten hosts.
- Installs Unisphere Service Manager.
- Validates FC, FCoE, or iSCSI host connectivity to storage system.
- Validates that host can access newly presented LUNs.

Fibre Channel Switch Installation Scope Details

- FC cable routing between FC switch and storage array.
- Rack and stack of up to two (2) Cisco MDS 9148S FC switch, initialize, assign management IP and update to the latest supported firmware.
- Implementation of up to ten (10) attached, Fibre Channel hosts with installed operating systems.

Cisco UCS Director Installation and Implementation Scope Details

- Install latest version of Cisco UCS Director to the customer's current virtual environment.
- Apply all applicable licenses.
- Create logical datacenters.
- Discover converged infrastructure: compute, network and storage.
- Run and validate pre-defined workflows.
- Populate dashboard with relevant information.
- Configure alerts and reporting.
- Perform basic functional overview.

Data Domain with ES30 Shelf Rack, Stack, and Implementation Scope Details

- Removes from crate and physically place Data Domain & 3x ES30 Shelves into Customer-provided rack.
- Cables the equipment. Powers-up the Data Domain and verify the status.
- Install and configure Data Domain & 3x ES30 Shelves.
- Verify that the firmware is up to the current support version on Data Domain System.
- Verify that the Data Domain host names are resolvable within the DNS.
- Verify that the entire Static host IP addresses, Subnet Masks, and Gateway addresses are received, including the IPMI IP addresses.
- Verify that the Domain Name System (DNS) server IP address is received.
- Verify that the SMTP Server IP address is received.
- Verify that the IP addresses are assigned, and configured to all NICs.
- Checks system health.
- Set up ESRS IP Client or add to existing ESRS installation and configure EMC ConnectHome.

Project Management

The Project Manager resource will maintain a combination of best practice standards for Project Management, specialized certifications/degrees and experiential knowledge of the Storage domain. One (1) part-time Project Manager will be assigned to coordinate all relevant Customer, EMC, and Cisco personnel in accordance with the project, escalate issues in a timely manner and provide a weekly status to LAC Health Services.

Responsibilities

- Project time management
- Change Management and Change Requests
- Project field documentation management (timesheets, expense reports, etc.)
- Status Reporting & Communication according to Project Communication Plan

Advanced Services

VENDOR shall provide a well-defined series of analytical exercises for the Data Use Steering Committee to follow to achieve the desired results. The process centers on teaching collaborative teaming skills in an actual work situation. VENDOR shall attend regular monthly meetings of the committee to teach the committee better and more productive ways of working together.

The process involves three regular steps. VENDOR shall work with the committee leadership to construct an agenda where the members can learn new ways of interacting. Once the agenda is set, VENDOR shall prepare materials and exercises that impart the desired skills and competencies to the committee at the meeting. These materials and exercises will provide a hands-on approach where committee members can learn new skills in real time while working on actual business problems.

VENDOR shall present the materials and lead training exercises addressing the critical components for establishing a collaborative operating structure and creating the long-term agreements to ensure the committee continues to successfully operate after the end of this project. The materials and exercises will be incorporated into the regular committee meeting work so as to minimize disruptions to the flow of the work. The key deliverables for this service will include:

- ***Collaborative Framework***
VENDOR will create a collaborative framework for action detailing specific activities each committee member can follow to convey the results of the work back into each DHS department.
- ***Committee Member Commitment***
VENDOR will secure a commitment of each committee member to support the work of the committee and to act as a conduit of information back to their specific operating unit.
- ***Team Skills and Competencies***
VENDOR will provide a set of collaborative teaming skills to each participant that can be used across DHS.

Deliverables

The following deliverables are provided in connection to the services outlined in the "Project Scope" section:

- *Vendor Project Completion Form.*
- *EMC Test Plan*, which may include a basic Functional Overview to demonstrate product functionality and capabilities.
- *Configuration Guide* documenting the implementation described in the "Project Scope" mentioned above.

LAC DHS Responsibilities

- Provide at least one technical contact with system administration responsibilities and appropriate system/information access privileges.
- Provide vendor onsite/offsite personnel and authorized agents with access to the dept's systems and networks (including, without limitation, remote systems and remote network access) as necessary to perform the services during Vendor's normal business hours, or at mutually agreed times.
- Provide support from technical support teams for all vendors and third parties, as necessary.
- Responsible for network connectivity, performance, and configuration issues.

ADDITIONAL INFORMATION

Location of installation and configuration: LA COUNTY DEPARTMENT OF HEALTH SERVICES- LAC+USC Data Center, Los Angeles, CA 90033

Hours of installation: TBD. Site preparation can be completed 8-5 Monday-Friday with scheduling approval from Los Angeles DEPARTMENT OF HEALTH SERVICES staff. Any disruptive work that affects access to the SAN or attached production servers will be scheduled for weekend hours.

Solution must be delivered no later than **June 30, 2015**.

