VMWARE vSAN SMALL-SCALE DEPLOYMENT SERVICE

AT A GLANCE

VMware vSAN is a fast, resilient, easy-to-manage software-defined storage platform that delivers flash-optimized, hyper-converged storage for any application at a fraction of the cost of traditional solutions. The VMware vSAN Small-Scale Deployment Service remotely configures vSAN, ESXi Hosts, vCenter Server (and supporting components), VMware vSphere High Availability (HA), VMware vMotion, and VMware Distributed Resource Scheduler (DRS).

KEY BENEFITS

- Accelerates responsiveness to changing business demands with simplified infrastructure, automated management, flash optimizations, and granular scaling
- Reduces the total cost of ownership by consolidating core data center functions on x86 hardware and vSphere
- Creates an IT environment that is prepared for future IT needs by delivering a software-defined infrastructure that leverages the latest hardware technologies

Overview

The *VMware vSAN Small-Scale Deployment Service* provides a foundational deployment of VMware vSAN™ and the underlying supporting virtual infrastructure. A VMware consultant provides this service remotely using the capabilities provided by VMware vSphere®. This service includes configuring vSAN, VMware ESXi™ hosts, VMware vCenter Server® and supporting components, VMware vSphere High Availability, VMware vSphere vMotion®, and VMware vSphere Distributed Resource Scheduler™ (DRS). This project includes the following modules:

- **ESXi Host Deploy.** Deployment of the ESXi hosts to support the virtualization solution according to a VMware standard architecture that is implemented and validated in the Customer environment.
- **vCenter Infrastructure Deploy.** Deployment of the VMware vCenter Server infrastructure (including the VMware Platform Services Controller™) for the virtualization solution according to a VMware standard architecture that is implemented and validated in the Customer environment.
- **vSphere Network Infrastructure Deploy.** Deployment of the core network configuration for the virtualization solution according to a VMware standard architecture that is implemented and validated in the Customer environment.
- **vSAN Deploy.** Deployment of the environment using VMware vSAN for shared storage according to a VMware standard architecture that is implemented and validated in the Customer environment.

The following high-level activities are included in this project:

- **Deploy.** Deployment of the VMware standard architecture and validation of technology components.
- **Knowledge Transfer.** VMware vSAN and vSphere knowledge transfer information.

This project requires the following VMware products:

- VMware vSphere®
- VMware vSAN™

Service Capabilities

This service contributes to the full development of the following capabilities:

Virtual Infrastructure

- Virtualization of compute, storage, and network assets
- Automatic recovery from hardware failures

IT Outcomes Developed

The service being delivered by VMware Professional Services contributes to the following IT outcomes:

• Data center virtualization and hybrid cloud extensibility

Project Scope

The scope of the service includes the following:

ESXi Host Deploy

SPECIFICATION	PARAMETERS	DESCRIPTION
ESXi Host Deployment		
ESXi hosts deployed	Up to four (4)	ESXi host(s) deployed and configured.

vCenter Infrastructure Deploy

SPECIFICATION	PARAMETERS	DESCRIPTION
vCenter Infrastructure Deployment		
Physical sites deployed	Up to one (1)	Physical Data Center locations deployed and configured.
vCenter Server Appliance instances deployed	Up to one (1)	VMware vCenter® Server Appliance™ instances deployed and configured with an embedded Platform Services Controller.
vSphere HA clusters configured	Up to one (1)	vSphere HA enabled clusters configured.
vMotion enabled hosts configured	Up to four (4)	vMotion enabled hosts configured.
vSphere DRS clusters configured	Up to one (1)	DRS enabled clusters configured.

vSphere Network Infrastructure Deploy

SPECIFICATION	PARAMETERS	DESCRIPTION
Virtual Network Infrastructure Deployment		
vSphere distributed switches	Up to one (1)	VMware vSphere Distributed Switch™ creation and configuration.
Network port groups	Up to four (4)	Network port groups are created and configured.
VMkernel network adapters	Up to three (3)	VMkernel network adapters and IP Addresses needed per host.

vSAN Deploy

SPECIFICATION	PARAMETERS	DESCRIPTION
vSAN Deployment		
vSAN clusters	Up to one (1)	vSAN enabled clusters deployed.

Out of Scope

The following are the out of scope items for this project.

General

- Installation and configuration of custom or third-party applications and operating systems on deployed virtual machines.
- Operating system administration including the operating system itself or any operating system features or components.
- Management of change to virtual machines, operating systems, custom or third-party applications, databases, and administration of general network changes within Customer control.
- Remediation work associated with any problems resulting from the content, completeness, accuracy, and consistency of any data, materials, or information supplied by Customer.
- Installation or configuration of VMware products not included in the scope of this document.
- Installation and configuration of third-party software or other technical services that are not applicable to VMware components.
- Installation and configuration of Customer-signed certificates.
- Configuration of VMware products used for the service other than those implemented for the mutually agreed to use cases.
- Customer solution training other than the defined knowledge transfer session.
- Documentation and deliverables not in the English language.

ESXi Host Deploy

- Planning or designing a custom virtualization solution.
- Documenting or performing any migration activities, such as physical-to-virtual or virtual-to-virtual migration.
- Business continuity / disaster recovery design and deployment beyond the core capabilities of vSphere.
- Capacity analysis for physical servers.
- Deploying vSphere from the Unified Extensible Firmware Interface (UEFI).

vCenter Infrastructure Deploy

- Planning or designing a custom virtualization solution.
- Documenting or performing any migration activities, such as physical-to-virtual or virtual-to-virtual migration.
- Business continuity / disaster recovery design and deployment beyond the core capabilities of vSphere.
- Capacity analysis for physical servers.
- VMware NSX® design.
- Planning or designing a custom high availability design.
- Configuring external systems, such as networking and storage, to support vSphere HA and VMware vSphere Fault Tolerance features.
- Planning or designing a custom dynamic resourcing design.
- Configuring external systems, such as networking and storage, to support the vSphere vMotion, DRS, or VMware vSphere Distributed Power Management™ (DPM) features.

vSphere Network Infrastructure Deploy

- Planning or designing a custom network infrastructure solution.
- Documenting or performing any migration activities between networks.
- Business continuity / disaster recovery design and deployment beyond the core capabilities of vSphere.
- VMware NSX design.

vSAN Deploy

- Planning or designing a custom vSAN solution.
- Configuring vSAN stretch clustering.
- Configuring custom storage policies.
- Configuring vSAN Native Encryption.

Estimated Schedule

This is a fixed fee service, requiring an estimated twenty-four (24) hours of effort over a duration of thirty (30) days after project kick-off. VMware Professional Services will be performed during normal VMware business hours and workdays (weekdays and non-holidays).

Project Activities

Phase 1: Initiate

VMware hosts a project initiation call with key Customer stakeholders.

The topics to be discussed on the call include:

- Project business drivers, scope, and objectives.
- Project deadlines, timelines, and scheduling.
- Identification of key Customer team members with whom VMware will work to accomplish the tasks defined in the Service Description.
- Customer technology prerequisites necessary for a successful project, including review of the Service Checklist for the VMware solution.

Deliverables

- Project initiation meeting
- Prerequisites checklist

Phase 2: Plan

VMware leads a project kickoff meeting with Customer to assess prerequisite completion readiness, review the VMware standard architecture, and confirm project milestone dates.

The objectives of the meeting are as follows:

- Describing the project goals, phases and key dates.
- Review of technical prerequisites completion readiness.
- Explaining the expected project results and deliverables.

Deliverables

- Project kickoff meeting
- VMware standard architecture
- vSAN Deploy kickoff presentation

Phase 3: Execute

VMware deploys the VMware standard architecture and validates the technology components.

VMware does the following:

- Installs and configures the VMware technologies according to the VMware standard architecture.
- Finalizes the Configuration Workbook with physical design elements.
- Executes service and service component functional test validation.
- Conducts technical knowledge transfer sessions for administrators and operators.

Deliverables

- Virtualization Deploy *Configuration Workbook*
- Virtualization Deploy Installation and Configuration Procedures document
- Knowledge Transfer presentation

Phase 4: Close

VMware conducts a closure meeting with the Customer covering project status, reviewing completions, next steps and how to engage VMware support.

Deliverables

- Project closure meeting
- Transition to customer support

Appendix – Service Checklist

The following are the prerequisites for this service engagement.

- Physical hardware, including servers, storage, and networking, must have been procured, installed, and confirmed to be operational.

The following are required for component installation (ESXi host, and vCenter Server) before VMware begins the project:

- Static IP address assignment.
- Configured DNS entries.
- Host names tested for forward, reverse, short name, and long name resolution.
- Access to an NTP server that can be used for configuration.
- Physical network provisioned for the appropriate VLANs for ESXi configuration completed. Standard configuration of ESXi hosts includes distributed virtual switches and VMkernel ports configured and tested to support management traffic on a dedicated VLAN, vMotion on a dedicated VLAN, and vSAN traffic on a dedicated VLAN.
- The hardware must be supported as listed on the VMware vSAN Compatibility List.
- Supported remote access protocols must be configured (such as DRAC, ILO, and so on).

The following customer stakeholders are required to deliver this service:

- Storage team leads.
- Enterprise Architect.
- Infrastructure Architect.
- Network Architect team leads.

The following are the technical prerequisites required to deliver this service:

- Number of Hosts 4.
- vCenter Version 6.5.0d.
- ESXi Version 6.5.0d.
- DNS must be configured and tested for forward, reverse, short and long name resolution.
- Active Directory Required.
- Number of 10 Gb Ethernet Physical NIC interfaces required interfaces required 1.
- Number of IP subnets required 3.
- Number of VLANS required 3.

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http://www.vmware.com/products, or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the documentation.

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VMware Professional Services transform IT possibilities into business outcomes. Our comprehensive portfolio of services uncovers and exploits the unique opportunities made possible by VMware technology. Drawing on our unparalleled product expertise and customer experience, we collaborate with your team to address the technical, people, process, and financial considerations for IT transformation to deliver results that are positive, tangible, and material to IT and your business.

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