VMware Network Virtualization Deployment Service

Overview
The VMware Network Virtualization Deployment Service entails a rapid installation, configuration, and high-level deployment validation of a reference design for virtualized networking infrastructure using VMware NSX-T™ Data Center.

This service takes a validated architecture with a predefined design and deliverables to provide a foundation for getting started with virtual networking.

This service is ideal for organizations who are just starting out with VMware NSX-T Data Center but are not yet ready for leveraging micro-segmentation.

Project Scope
The scope of the service includes the following:

**Deploy a Network Virtualization Foundation**

Deployment of a network virtualization solution based on NSX-T™ Data Center according to a VMware standard architecture that is implemented and verified in the Customer environment. The service includes technical verification of platform prerequisites, the deployment of network virtualization using NSX-T Data Center, functional testing and a knowledge transfer session for the Customer.

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>PARAMETERS</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>NSX-T Foundation</td>
<td></td>
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<tr>
<td>Data Center Location(s)</td>
<td>Up to one (1)</td>
<td>Data center deployment of NSX-T components.</td>
</tr>
<tr>
<td>NSX Manager Cluster</td>
<td>Up to one (1)</td>
<td>Management cluster of three (3) NSX Managers providing high availability of the user interface, API services and central control plane function.</td>
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<tr>
<td>Hypervisor Hosts Configured as Transport Nodes</td>
<td>Up to ten (10)</td>
<td>Hypervisor hosts (ESXi or KVM) with NSX-T modules installed, registered to the NSX-T management plane and configured as transport nodes.</td>
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</table>
### Logging and Monitoring
Direct logging output to a pre-installed end customer-designated syslog target such as VMware vRealize™ Log Insight™.

### Role-Based Access Control
Integration of NSX-T to VMware Identity Manager™ and role-based access control (RBAC) configuration for users that vIDM manages. If absent from the environment, a VMware Identity Manager standalone appliance with an embedded database will be deployed.

### Network Virtualization

<table>
<thead>
<tr>
<th>Component</th>
<th>Count</th>
<th>Description</th>
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<tbody>
<tr>
<td>NSX® Edge™ VMs Deployed and Configured</td>
<td>Up to two (2)</td>
<td>NSX Edge VMs deployed and configured as a transport node.</td>
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<tr>
<td>NSX-T Tier-0 Gateway(s)</td>
<td>Up to one (1)</td>
<td>Tier-0 gateway(s) to process traffic between the logical and physical networks using static or dynamic routing (BGP) peering.</td>
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<td>NSX-T Tier-1 Gateway(s)</td>
<td>Up to one (1)</td>
<td>Tier-1 gateway(s) configured to connect to one Tier-0 gateway for northbound connectivity and one or more overlay networks for southbound connectivity. A Tier-1 gateway can be an active-standby cluster that provides stateful services.</td>
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<tr>
<td>NSX Segments</td>
<td>Up to four (4)</td>
<td>Segments configured to provide virtual Layer 2 switching for VM and gateway interfaces. A segment is also known as a logical switch.</td>
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</table>

### Estimated Schedule
VMware estimates that the duration of this project will not exceed three (3) weeks. VMware consulting services will be performed according to a schedule agreed to by both parties. Typically, consulting services are performed during normal business hours and workdays (weekdays and non-holidays).
**Project Activities**

The activities for this engagement are organized in phases as shown in the following table.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>WEEK 1</th>
<th>WEEK 2</th>
<th>WEEK 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: Initiate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2: Plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 3.1: Execute: Implement</td>
<td></td>
<td></td>
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<td>Phase 3.2: Execute: Knowledge Transfer</td>
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<td></td>
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<tr>
<td>Phase 4: Close</td>
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**Phase 1: Initiate**

The VMware Project Manager hosts one (1) project initiation call with key Customer and VMware stakeholders. Topics to be discussed include the following:

- Project business drivers, scope, and objectives.
- Project deadlines, estimated timelines, scheduling, and logistics.
- Identification of key Customer team members with whom VMware will work to perform the tasks defined in this SOW.
- Participating team members are confirmed, and contact details are exchanged to schedule the project kickoff meeting.

**Deliverables**

- One (1) project initiation call

**Phase 2: Plan**

VMware leads one (1) project kickoff meeting with Customer project sponsors and stakeholders to review expectations about the purpose of the engagement, the delivery approach, and estimated timelines. The following are the objectives of the meeting:

- Introducing the VMware team, roles, and responsibilities.
- Describing the project goals, phases, and key dates.
- Agreeing on communication and reporting process and creating a communications plan.
- Validating the project expectations and clarifying roles and responsibilities.
- Confirming prerequisites are met as detailed in the solution checklist for specified solutions.
- Presenting the solution overview for specified solutions including expected project results and deliverables.
- The VMware Project Manager and the Customer Project Manager collaborate to develop the project plan.

**Deliverables**

- Communications plan
- One (1) project kickoff meeting
Phase 3: Execute
The key activities for this phase are organized in the following sub-phases:

• Implement
• Knowledge Transfer

Phase 3.1: Implement
VMware implements the solution according to the VMware solution specification. VMware does the following:

• Implements the specified solutions as detailed in the specification workbooks.
• Verifies the implementation and documents results in the verification workbooks for the specified solutions.

Deliverables
• Solution specification workbook
• Solution verification workbook

Phase 3.2: Knowledge Transfer
VMware conducts knowledge transfer sessions covering the design, implementation, and operational considerations relating to the scope of this project. VMware does the following:

• Conducts up to eighteen (18) hours of knowledge transfer sessions for appropriate Customer representatives.
• Provides an adoption guide document(s) containing operational guidance for the specified solutions.

Note: For the avoidance of doubt, the Knowledge transfers herein do not comprise VMware product training or certification courses as offered by the VMware Education unit – (http://mylearn.vmware.com/mqrreg/index.cfm).

Deliverables
• Adoption guide document
• Knowledge transfer workshop presentation
• Up to eighteen (18) hours of knowledge transfer sessions

Phase 4: Close
The VMware Project Manager conducts one (1) closure meeting with Customer covering project status, next steps, and how to engage further with VMware.

Deliverables
• Engagement summary presentation
• One (1) closure meeting
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.

Deploy a network virtualization foundation
- Stateful services attached to a tier-0 or tier-1 logical router (such as NAT, load balancing, edge firewall or DHCP services).

Appendix – Service Checklist
Customer is responsible for executing all items discussed in the Service Checklist prior to arrival of VMware consultants on site.

The participation of the following Customer stakeholders is required for the Service to be performed:
- Network Architecture team leads
- Network Operations team leads
- Infrastructure Architect
- VMware operations team leads
- Enterprise Architect

The following prerequisites are required to enable VMware to perform this Service:
- Software Requirements: Customer will have the required software installed and configured as required and communicated in the Service Checklist.
- MTU Size required. Defined minimum: 1700 (9000 recommended)
- Number of IP subnets required. Defined minimum: 1
- Minimum number of hosts required of. Defined minimum: 4
Virtualized CPU Capacity (GHz). Defined minimum: Enough CPU capacity must be available to deploy three (3) NSX Manager nodes and two (2) NSX Edge VMs.

Virtualized RAM Capacity (GB). Defined minimum: Enough memory capacity must be available to deploy three (3) NSX Manager nodes and two (2) NSX Edge VMs.

Shared Storage must be provisioned. Defined minimum: Enough storage capacity must be available to deploy three (3) NSX Manager nodes and two (2) NSX Edge VMs.

Shared storage maximum disk access latency. Maximum: 10ms.

Network latency between NSX Managers in a Manager Cluster. Maximum: 10ms.

Network latency between NSX Managers and Transport Nodes. Maximum: 150ms.

NTP must be setup and time verified to be correct.

DNS must be configured and tested for forward, reverse, short and long name resolution.

FIPS compliant SFTP server to store NSX-T backups.

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