VMware Micro-Segmentation and Security Design and Deploy Service

Overview

The VMware Micro-Segmentation and Security Design and Deploy Service delivers a functioning Micro-Segmentation solution using VMware NSX for vSphere. The ability to provide centrally managed distributed security containers significantly expands the security protections and capabilities within the virtual data center, as well as the automation of those capabilities. This service provides rapid deployment of Micro-Segmentation within a production environment by leveraging a phased methodology.

VMware will work with Customer to do the following:

• Conduct information gathering workshops to determine design requirements.

• Validate design requirements and constraints.

• Identify and discuss use cases and security models.

• Conduct architecture design workshops.

• Design a Micro-Segmentation solution to meet selected use cases.

• Implement the solution in an environment that meets pre-engagement qualifications.

• Validate the solution according to the technical validation plan.

• Turn over the solution to Customer teams for functional testing and operation.

• Conduct a knowledge transfer session on the implemented solution.

The scope of this datasheet allows for the assessment, design, and deployment of VMware's Micro-Segmentation solution in one (1) production environment. Key components of the solution consist of:

• Deployment of up to one (1) NSX for vSphere manager.

• Deployment of Distributed Firewall (DFW) kernel modules for up to fifty (50) VMware ESXi™ hosts.

• Deployment of up to one (1) Layer 3 Edge firewall.

• Up to thirty (30) firewall rules included, to be split between edge, distributed, and identity firewalls.

• Up to ten (10) security groups defined.

At the conclusion of the engagement, VMware will provide the deliverables listed in the Deliverables section. The resulting NSX deployment from this engagement is an operational Micro-Segmentation solution at the Customer site, which enables Customer to evaluate the security protections and begin evolving their environment and processes.

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Standard Use Cases

The scope of this datasheet includes the assessment, design, and deployment of NSX for vSphere in a production environment. The following Micro-Segmentation and security use cases are included in the scope of this datasheet.

• Micro-Segmentation using distributed firewall (DFW) functionality – Stateful firewall functionality between tenant virtual machines within the same ESXi host or across different ESXi hosts using the DFW functionality.

• Activity monitoring – Demonstration of the ability to view activity on monitored virtual machines through the NSX for vSphere solution, and how this can be used to create application network flow models for future rule development and for troubleshooting and optimization.

• Identity firewall – Providing the capability to enforce security rules based on external directory service membership.

• Basic service composer functionality – Define and apply security policies based on service profiles for NSX firewall rules.

• Logging and Monitoring – Direct logging output to a pre-installed customer-designated syslog target such as VMware vRealize® Log Insight™.

Project Scope

The scope of this project entails the assessment, design, and deployment of the VMware Micro-Segmentation solution in one (1) production environment:

• One (1) pre-existing production VMware vCenter Server instance that support workloads leveraging NSX capabilities.

• Up to fifty (50) existing ESXi hosts supporting production workloads.

Estimated Schedule

VMware estimates that the duration of this project will be four (4) weeks. VMware consulting services will operate 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 services provided in this datasheet are organized in the following phases:

• Phase 1: Planning
• Phase 2: Kickoff
• Phase 3: Assess
• Phase 4: Design

• Phase 5: Deploy
• Phase 6: Validate
• Phase 7: Knowledge Transfer
• Phase 8: Conclusion

Phase 1: Planning

VMware conducts a pre-engagement planning call with Customer to initiate the project. Topics to be discussed include the following:

• Project scope and objectives.
• Business drivers.
• Project timelines, scheduling, and logistics.
• Identify key Customer project team members to work with the VMware team.
• Identify and agree to key Customer activity completion dates.
• Review the Service Checklist and progress toward completing it.
• Availability of appropriate facilities including meeting rooms, work locations, whiteboards, projectors, special access needs, any other pertinent information needed prior to VMware arriving on site.
• Prerequisites and other preparation required before the project kickoff.

Customer will complete the prerequisites specified in the Service Checklist prior to the arrival of VMware consultants on site.

Phase 2: Kickoff

VMware will lead Customer project sponsors and stakeholders in a project kickoff meeting to review expectations about the engagement, the delivery approach and timelines, the amount of time and effort required from the participants, and the expected activities and deliverables. The following are the objectives of the meeting:

• Introducing the VMware team, roles, and responsibilities.
• Describing the project goals, phases, and key dates.
• Explaining the expected project results and deliverables.
• Agreeing on communication and reporting processes.
• Validating the project expectations and clarifying roles and responsibilities.

Further in this phase, VMware and Customer will discuss the high-level capabilities of NSX for vSphere in Customer's environment. These discussions create a common language that the teams will utilize going forward, they are not in-depth discussions; rather, an overview to familiarize Customer with VMware products and the capabilities of the VMware team.

The VMware team takes notes and considers how NSX for vSphere can be used to address Customer needs. If any additional work is required, it must be scoped and added to the engagement according to the standard engagement and delivery processes. Extra work will not commence until it is agreed to by all parties and the SOW is amended accordingly.

Attendance by key representatives from the server administration, network, storage, and security teams is required.

Phase 3: Assess

VMware conducts requirements review and use case definition workshops to ascertain Customer's business and technology goals and requirements. The result of these workshops is combined with the materials in the Service Checklist to establish functional design parameters. These design parameters are used to develop the design for the selected use cases.

In addition to the requirements review, VMware also conducts a vSphere and physical network validation review. These activities are performed to verify that the vSphere environment is prepared for the NSX components and that physical network configurations are appropriately designed to support the target security services. Any parameters that impact design options will be discussed in the workshops. Where applicable, VMware presents options and make best practice recommendations for resolution.

VMware will determine gaps between current state, future state requirements, determined use case, and the scope of this datasheet, documenting the finalized requirements and use cases in the Solution Requirements document.

Phase 4: Design

VMware will work with Customer project stakeholders and the assigned technical team to develop an architecture design for the Micro-Segmentation solution based on the mutually agreed to requirements and use cases from the Assess phase. To accomplish the objective, VMware performs the following facilitated workshops and design documentation activities:

- Facilitate design sessions that focuses on the following:
  – Virtual network architecture
  – Security architecture
  – Firewall policy
  – Data classification guidelines
  – Trust boundary topologies

- Develop the Architecture Design document, including:
  – Virtual Network diagrams
  – NSX Edge firewall services
  – Workload network topology
  – Diagrams for NSX for vSphere components and management

- Layer 3 edge firewall operational requirements
- Distributed firewall operational requirements
- Firewall policy
- Security group design
- Service composer use and interaction
- Rule bases for distributed firewall, Layer 3 edge firewall, and identity firewall as appropriate
- Logging and monitoring guidelines

- Review and finalize the design
- Define design success factors to include validation test cases and target results
- Define validation test cases and expected results
- Document the validation test cases and expected results in the Validation Review
- Review and finalize the Validation Review.
- Review the hardware and software requirements for the deployment

Phase 5: Deploy

The objective of this phase is to build out the VMware NSX components of the design in a production environment and to assist Customer while Customer executes validation testing. To accomplish this, VMware works with Customer on the following:

- Create a test plan – Develop a test plan with Customer, based on the design, to meet success criteria for a production environment based on the Validation Workbook.
- Create a deployment plan.
- Determine that the production environment is ready and capable to start the NSX deployment.
- Pre-deployment review meeting.
- Installation, configuration, and validation of core management components for VMware NSX Manager™. According to the design, key features of NSX will be configured and validated, which might include the following:
  – NSX Manager
  – NSX Edge gateway
  – Distributed firewall
  – Identity firewall

Phase 6: Validate

Validation activities confirm that all agreed to product configuration and use case configuration requirements have been completed to the satisfaction of all parties. These activities include execution of the validation plan created and agreed to during the Design phase of the engagement:

- Execute test cases to validate the design.

- Validation review of the environment and discussion of testing results.
- Update and finalize the Architecture Design document.
- Execute test cases to validate the design with Customer test workloads. If Customer does not supply test workloads, VMware will perform standard rule testing with pre-built virtual machine templates.

Phase 7: Knowledge Transfer

VMware provides a knowledge transfer session about the design, deployment, and system capabilities of the Micro-Segmentation solution. Specifically, the knowledge transfer phase consists of the following:

- Up to two (2) days of onsite knowledge transfer, for up to eight (8) people, to include best practices in the following areas:
  - Deployed NSX infrastructure components.
  - NSX logical networks and security.

Note: The knowledge transfer phase is not a substitute for VMware training courses, such as the Install, Configure, and Manage, or Operational Readiness.

Phase 8: Conclusion

The project review and conclusion activities include a presentation that summarizes the engagement activities performed for the resulting Micro-Segmentation solution.

Deliverables

- Pre-engagement call(s) to discuss project objectives, scope, requirements, prerequisites, schedules, and logistics.
- Service Checklist document.
- Kickoff meeting.
- Solution Overview presentations.
- Solution Requirements document.
- Architecture Design document.
- Deployed production NSX Micro-Segmentation solution environment as defined in the Deploy phase.
- Configuration Workbook.
- Validation Workbook.
- Knowledge transfer workshop.

Out of Scope

The following are out of scope for this service:

- Implementation or configuration of VMware vShield Endpoint™ or NSX Data Security.

- Configuration of the VMware vCloud Suite® products used for the NSX for vSphere solution beyond those implemented for the mutually agreed to use cases.
- Integration with Customer's existing environment, except authentication system and network infrastructure.
- Design and/or Integration with third-party systems and applications.
- Remediation work associated with any problems resulting from the content, completeness, accuracy, and consistency of any data, materials, or information supplied by Customer.
- Third-party software or any technical services that are not applicable to VMware components.
- Integration with any cloud management suite product (such as VMware vRealize™ Automation or VMware vRealize™ Orchestrator™) not specifically defined in this datasheet.
- Application coding and/or API scripting.
- Analyzing Customer workloads for use with an NSX for vSphere environment.
- Customizing any of the NSX software infrastructure components.
- Configuring, tuning, or troubleshooting of Customer's server, storage, or network environment.
- Installing and configuring third-party software.
- Resolving physical/underlying network or storage connectivity issues.
- Designing physical/underlying network to support NSX for vSphere.
- Operationalizing NSX for vSphere production environment.
- Customer solution training outside of the defined Knowledge Transfer session previously described.

Prerequisites
Technical Requirements
- Hardware Requirements: Customer will have the required hardware installed and configured as required and communicated in the Service Checklist.
- Software Requirements: Customer will have the required software installed and configured as required and communicated in the Service Checklist.

Role Descriptions
VMware Project Team
The VMware team will be comprised of multiple roles and might vary in the level of effort. VMware will utilize the following resources to deliver the consulting services outlined in this datasheet.

Engagement Manager

VMware will assign an Engagement Manager to the engagement when the project starts. The Engagement Manager identifies personnel resources, project structure, communication plan, project plan tools, and overall project management techniques to be used to manage the engagement: objectives for duration, cost, and provider commitment. The Engagement Manager will support the Customer Project Manager and assist with the following:

• Provides overall Customer relationship and project management.

• Provides escalation triage and maintains risk register.

• Provides final versions of all project documents.

• Identifies the project team, roles and responsibilities and assignment dates.

• Identifies final deliverables.

• Establishes the communication plan, directs formal Customer communication and coordination with Customer Project Manager.

• Reports project status and holds weekly update meetings.

• Schedules resources.

• Maintains the project timeline, including deliverables, activities, duration, and task owners.

• Handles planning and pre-engagement preparation.

• Oversees logistics, including security, remote access and facility access.

Senior Consultant

• Leads requirements, use case, and design workshop.

• Deploys and configures the NSX components that are part of the solution.

• Runs validation activities on the installed environment.

• Prepares the project documents for delivery to the client during the Conclusion phase.

Customer Project Team

Customer will provide a Project Manager knowledgeable in pertinent internal Customer processes and able to collaborate with the VMware Project Manager as specified in this datasheet.

Customer's Project Manager must have the authority to make project decisions and represent Customer in all matters related to this datasheet. Customer's Project Manager will provide a single consolidated response to any review, approval, change, or decision request.

Customer will support and provide representation at project review meetings at a mutually agreed upon time and location to discuss the project status, issues, new requirements and overall project satisfaction. These meetings may also cover performance status updates, schedule updates, pending changes, open issues, and action items.

Customer will actively participate in this engagement, and individuals with relevant domain, business, and/or technical expertise will be available as required. These participants are the acknowledged spokespersons for the areas they represent, and the VMware project team requires regular and timely access to them. If participants are unable to attend a scheduled meeting, then the Customer Project Manager becomes the final authority on all items of discussion.

The following list shows the customer stakeholders typically required for the engagement:

• Security team

• Compliance team

• Network team

• Compute team

• Virtualization team

• Operations team

• Application Owners

Responsibilities

VMware Responsibilities

VMware will coordinate activities of all VMware resources and will be providing Customer with VMware resources that have the skills and expertise necessary to properly execute the requirements and services set forth in this datasheet.

Assumptions and Customer Responsibilities

This section describes the responsibilities of Customer to VMware with regard to this project.

• Customer will provide at least three (3) existing ESXi hosts in a separate management cluster to maintain control plane / data plane separation.

• Customer is responsible for, and assumes any risk associated with any problems resulting from the content, completeness, accuracy and consistency of any data, materials and information supplied by Customer.

• Any change to the scope of work explicitly described in this datasheet, and any associated additional fees, must be mutually agreed upon in writing.

• Customer will provide access to facilities and computer systems as required by VMware team to perform tasks as outlined in this datasheet.

• For engagement activities that need to occur at Customer work locations, VMware expects Customer to make reasonable facilities accommodations for our project team at the Location. These accommodations will include a desk/cubicle, voice telephone, Internet connection (for Web browser access), permission to operate mobile telephone within Customer work locations, and shared access to laser printer, copier, fax, and conference room facilities.

- Customer will provide a suitable environment for knowledge transfer session(s) (overhead projector and conference facilities).

- Customer will be solely responsible for procuring product support for all software to be used in connection with this datasheet. Such product support will be in place and available no later than when VMware consultants first arrive on site.

- Customer has previously engaged a VMware Network Virtualization Accelerator or Proof of Concept service.

- Customer is responsible for the design and implementation of all infrastructure necessary to support the deployment of VMware NSX including vSphere, physical infrastructure, migration of workloads to the new environments, requisite physical network architecture and implementation changes, and virtual machine workloads for testing and production.

- Customer will provide existing physical networking and security baseline data to be used for staging and production validation. This includes providing iterative baselines as applicable.

- All documentation provided by VMware will be in VMware standard format in Microsoft Word, PowerPoint, Excel, and Project, or PDF.

- Knowledge transfer assumes customer resources have attended VMware NSX product training. Knowledge transfers for this engagement are not a replacement for, or intended to be, VMware NSX product training.

- Customer is responsible for executing all items discussed in the Service Checklist before arrival of VMware consultant on site. Any additional time required for VMware personnel to perform the actions specified in this datasheet because of Customer's lack of completion of these checklist items will be considered billable time payable by Customer.

- Customer will provide documentation on the following before the start of this engagement:

  – Security policies for firewall rules
  – Security policies for network separation
  – Security policies for data classification
  – Security policies for separation of duties
  – Administrative access control policies
  – Existing vSphere architecture
  – Network diagrams

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