



Cisco Nexus 1000V Planning and Design Service

Create a More Secure, Efficient, and Resilient Virtual Data Center Architecture.

Data center managers are rapidly adopting virtualization technology to reduce costs and increase data center efficiency. But realizing the operational efficiencies and cost-saving potential of a virtualized data center requires proper planning and technology support. A data center-wide plan that coordinates network and server administration tasks is necessary to manage the growing base of virtual machines, and a strong network foundation is critical to maintaining performance and security. Implementing virtualization too quickly can result in virtual machine sprawl that is difficult to manage and not adequately secured.

The Cisco Nexus™ 1000V Planning and Design Service helps you realize the highest possible return on your virtualization investment by deploying the Cisco Nexus 1000V into your virtualized data center architecture.

Increase the Return on Your Virtualization Investment

The Cisco Nexus™ 1000V is a software-based switch that can help you efficiently and securely support a complex virtual machine infrastructure. The Cisco Nexus simplifies virtual machine environments by delivering policy-based virtual machine connectivity, facilitating network and security property mobility, and supporting a nondisruptive operational model.

The Cisco Nexus 1000V Planning and Design Service uses internal Cisco® experience and intellectual property to help you deploy the Cisco Nexus 1000V in your existing or planned virtual machine architecture, so that you can realize the highest possible return on your virtualization investment. Throughout the deployment, Cisco experts will help you take advantage of the flexibility of the Cisco Nexus 1000V in the areas of policy, mobility, and continuance; plan a strategy to incorporate advanced features that allocate the various server and network tasks to the correct groups; and transfer knowledge to your server and network administration teams so they can efficiently take advantage of your data center's new capabilities. These activities will deliver industry-leading designs and implementation plans that can help you more quickly realize the benefits of the Cisco Nexus 1000V and increase your data center security, efficiency, and resiliency.

The Cisco Nexus 1000V Planning and Design Service includes the following activities:

- **Virtualization infrastructure network assessment:** Evaluates the gaps between your current server virtual infrastructure and your desired architecture.
- **Architecture design:** Defines an architecture that meets your business and technical goals by enhancing your current virtual machine design by taking advantage of the Cisco Nexus 1000V.
- **Implementation and migration plan:** Creates a plan for migrating from your existing virtual machine implementation to an implementation that utilizes the advanced features of the Cisco Nexus 1000V.
- **Knowledge transfer:** Provides recommendations to help you achieve your secure virtualization goals.

Virtual Infrastructure Network Assessment

In this service component, Cisco experts review your existing data center server architecture and virtual machine design, and identify areas in which the Cisco Nexus 1000V can provide benefits. This gap analysis can help you:

- Understand where you can secure your virtual machine design, using best practices developed by Cisco's team of experts.
- Identify areas of virtual machine management where you can simplify operational procedures and improve virtual machine mobility.

The assessment results are provided in a customer requirements document that includes a detailed analysis of your existing virtual machine environment, a gap analysis between your current environment and an infrastructure based on the Cisco Nexus 1000V, and recommendations based on internal Cisco intellectual property and industry-leading best practices.

Architecture Design

The architecture design service component determines how you can enhance your current virtual machine design by taking advantage of the Cisco Nexus 1000V features while retaining compatibility with your current infrastructure and hosted applications. Service component activities include reviewing your current server and virtual machine design, providing recommendations for applying the advanced feature set of the Cisco Nexus 1000V, and documenting recommendations to help ensure that your VMware Virtual Center is configured to integrate correctly with the new Cisco Nexus 1000V instances.

The architecture design service component provides the following deliverables:

- Architectural review of your existing environment based on best practices in Cisco Nexus 1000V adoption.
- Architecture design document that describes how to integrate the Cisco Nexus 1000V into your virtual machine environment.

Implementation and Migration Plan

This service component can help you develop a detailed implementation plan or a migration plan. Both plans help create an implementation that uses the advanced features of the Cisco Nexus 1000V to increase the security, mobility, and operational simplicity of your data center.

The implementation and migration plan service component provides the following deliverables:

- Recommended configuration of the Cisco Nexus 1000V to be applied to both existing and new virtual machines.
- Migration plan outlining insertion of the Cisco Nexus 1000V into existing virtual machines.
- Step-by-step procedures for implementation or migration.
- Hardware and software resource assessments and recommendations.
- Recommended implementation or migration sequence and scheduling.
- Assessment of the effects of changes on the existing environment, architecture, and management practices.

Knowledge Transfer

In this service component, Cisco will conduct a training session to transfer knowledge about Nexus 1000V design best practices to your IT organization and facilitate operational readiness for the new architecture. The training will include collateral on Cisco Nexus 1000V management, such as how to create new port profiles.

Table 1 lists the activities, deliverables, and benefits of the Cisco Nexus 1000V Planning and Design Service.

Table 1. Cisco Nexus 1000V Planning and Design Service Activities, Deliverables, and Benefits

| Activities and Deliverables | Benefits |
|--|--|
| <p>Virtual Infrastructure Network Assessment</p> <ul style="list-style-type: none"> • Perform a gap analysis to determine where you can secure your virtual machine design and identify areas of virtual machine management where you can simplify operational procedures and improve virtual machine mobility • Identify opportunities to streamline operational processes between server and network teams in the data center <p>Deliverable: Customer requirements document</p> | <ul style="list-style-type: none"> • Accelerates your adoption of Cisco Nexus 1000V advanced features • Identifies how capabilities of the Nexus 1000V can make your data center operations more efficient, secure, and agile |
| <p>Architecture Design</p> <ul style="list-style-type: none"> • Review architecture of your existing server virtualization environment based on future business requirements in conjunction with Cisco Nexus 1000V capabilities <p>Deliverable: Architectural design document</p> | <ul style="list-style-type: none"> • Helps you prepare for an implementation of the Cisco Nexus 1000V that enhances the security, mobility, resilience, and operational simplicity of your virtual machine design • Delivers an architecture that implements best practice virtual machine security and mobility |

| Activities and Deliverables | Benefits |
|---|---|
| Implementation and Migration Plan <ul style="list-style-type: none"> • Recommend configuration of new virtual distributed switch environments based on the Cisco Nexus 1000V • Develop migration plan outlining configuration and topology changes • Provide step-by-step procedures for implementation or migration • Provide hardware and software resource assessments and recommendations • Recommend implementation or migration sequence and scheduling • Provide assessment of the effects of changes on the existing environment and architecture • Consult on operational procedures | <ul style="list-style-type: none"> • Helps you more quickly deploy Cisco Nexus 1000V advanced features and realize the resulting benefits • Helps you avoid potential errors and services impact • Helps you learn to manage and troubleshoot issues as they arise |
| Knowledge Transfer <ul style="list-style-type: none"> • Informal onsite training throughout the project • Presentation of findings and recommendations, based on Cisco best practices • Onsite discussion | <ul style="list-style-type: none"> • Increases productivity and collaboration by bridging skills gaps among server, network, and storage staff within your IT organization |

Benefits

The Cisco Nexus 1000V Planning and Design Service helps you take advantage of Cisco internal knowledge and experience to begin the process of creating a next-generation data center architecture that features continuous availability, integrated virtualization, enhanced operational manageability, and cabling and power efficiency. With the Cisco Nexus 1000V and the experience of Cisco subject matter experts using proven methodologies, you can create a state-of-the-art data center that meets your business and application needs.

The Cisco Nexus 1000V Planning and Design Service helps you to:

- Design a solution that enhances your overall virtualization goals
- Increase the security of your virtual machines
- Implement network policies that move along with virtual machines
- Increase business agility through services that are optimized for virtual machines
- Maintain business continuity and investment protection of your existing infrastructure

Cisco Expertise

Cisco uses leading practices and proven methodologies to help you quickly realize the benefits of the Cisco Nexus 1000V for your data center server virtualization architecture. The Cisco Nexus 1000V Planning and Design Service is delivered by Cisco server and data center architects who hold a wide array of industry certifications and are subject matter experts in business and technology architectures and data center technologies. They have direct experience in planning, designing, and supporting a wide range of data center solutions, including technologies such as virtualization, unified computing, Cisco Application Control Engine (ACE), Cisco Wide Area Application Services (WAAS), and SAN solutions. Our product and technology expertise is continually enhanced by hands-on experience with customer networks and broad exposure to the latest technology and implementations.

Why Cisco Data Center Services?

Today, the data center is a strategic asset in a world that demands better integration among people, information, and ideas. Your business and your data center work better when technology products and services are aligned with your business needs and opportunities. Using a unique, network-based perspective and a unified view of data center assets, Cisco and our industry-leading partners deliver services that accelerate the transformation of your data center. Cisco takes an architectural approach to help you efficiently integrate and manage data center resources. Cisco Data Center Services help you reduce costs, deliver high availability and application performance, and better meet your service-level agreements.

Complementary Services

These services are complementary to the Cisco Architecture Value Analysis service and Cisco Virtualization services, Virtualization Strategy and Roadmap Services, and Virtualization Operations Management Assessment (VOMA).

Pre-requisite Services

Customers opting for this service are expected to have planned (but not yet implemented) a migration from earlier VMware Virtual Infrastructure versions (ESX 3.5 or earlier), to the VMware vSphere 4.0 release with the Enterprise Plus package (or later, as supported by the Cisco Nexus 1000V). This service is available for any supported server platform, as specified in the VMware Hardware Compatibility list (HCL) at <http://www.vmware.com/resources/compatibility/search.php>. For customers planning a new virtualization deployment based on VMware vSphere release 4.0, Cisco will assume that those customers have plans to install and validate this release.

Follow-on Services

After the service activities are completed, you will implement the recommended design based on the Cisco Nexus 1000V and migrate the designated virtual machines. Cisco recommends that you perform an end-to-end test of your environment and applications to determine your operational readiness.

Availability

The Cisco Nexus 1000V Planning and Design Service is available as a statement of work (SOW)-based service and is widely available. Contact your local Cisco representative about availability in your area.

For More Information

For more information about Cisco Nexus 1000V Planning and Design Service, as well as the broad array of Cisco Services for the data center, contact your local Cisco representative or visit www.cisco.com/go/dcservices. For more information about data center solutions, visit: www.cisco.com/go/datacenter.

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