



Cisco Data Center Virtualization Assessment Service

Prepare for End-to-End Virtualization of Your Data Center

Building a Foundation for Virtualization

Virtualization projects that focus on servers alone often realize lower-than-expected benefits if the network and storage infrastructure are not also considered. Without careful oversight, increased resource utilization, and change in traffic patterns as well as lack of visibility, accountability, and consistency caused by virtualization can stress the overall virtualized data center environment and degrade performance. A truly virtualized data center must simultaneously deploy an integrated server, network, network services, security, and storage virtualization solution.

Achieving effective virtualization starts with a comprehensive IT infrastructure assessment. This assessment should examine the cost and power advantages of migrating to a virtualized infrastructure and identify relevant network configuration and security issues. By taking a proactive approach to virtualization that includes network and storage infrastructure optimization, you can maintain the high level of application performance, security, availability, and manageability that your business requires.

Integrated Networking Services Help Increase Virtualization Benefits

The Cisco® Data Center Virtualization Assessment Service helps you prepare for an end-to-end virtualization solution by identifying gaps in your server, storage, and network infrastructure that could limit the return on your virtualization investment, while improving the security profile of your virtualized environment. The gap analysis helps you understand cross-infrastructure management and operations actions required to achieve an effective virtualization implementation and manage risk associated with highly mobile and increasingly complex virtual machine environment by working closely with subject matter experts. The assessment also provides recommendations to help you evolve your data center to a next-generation design using technologies and solutions from Cisco and our partners.

Cisco brings together the needed skill sets that include enterprise and solution architects, virtualization experts, and project managers. These experts work collaboratively with you to provide consulting services that span your technical, business, and financial requirements. A single point of contact for Cisco and our partners facilitates communication as you take this important step in your data center evolution.

A proactive approach to virtualization helps maintain the application performance, security, availability, and manageability that your business requires.

The Cisco Data Center Virtualization Assessment Service includes two evaluations that help you create a virtualization strategy, obtain financial modeling and justification, identify gaps in your environment, and develop a new architectural vision. These assessments by Cisco are part of a suite of service offerings spanning the Cisco Data Center Virtualization Services solution.

- **Server consolidation and virtualization assessment:** This assessment helps you to assess your existing virtualized environment to optimize your infrastructure and evaluate the virtualization opportunities for server consolidation and containment, financial effect, power and cooling, and the management advantages of migrating to a virtualized infrastructure. The evaluation also includes security and policy enforcement of the virtualized server architecture and its compatibility with secure network infrastructure features and storage security practices.
- **Network discovery and infrastructure assessment:** This assessment will assist you with identifying how your infrastructure components can be reconfigured to help increase the return on your virtualization investment to the extent possible and increase the security of your virtualized network and storage infrastructure. It also will help with management and operations by assessing the viability and effects of virtualization by using tools such as Cisco VN-link, which helps enable consistent policy-driven network capabilities such as mobility of security properties across all servers while helping enable a nondisruptive operational model, and Cisco FlexAttach, which helps facilitate server and configuration management.

Server Consolidation and Virtualization Assessment

This assessment provides a clear view of server consolidation opportunities within your physical IT infrastructure. Cisco provides an assessment of the current server landscape to determine potential costs and savings and better prepare a rollout of the virtualized infrastructure. You benefit from having the collaboration between Cisco and its partners to deliver a well integrated solution. (See Table 1.)

Table 1. Server Consolidation and Virtualization Assessment Activities, Deliverables, and Benefits

Activities and Deliverables	Benefits
<p>Activities:</p> <ul style="list-style-type: none"> • Use tools to collect virtual machine capacity data over a 30-day period • Analyze data for existing Microsoft Windows servers • Provide analysis of Linux services • Gather server inventory and performance data • Interview primary stakeholders; identify security business goals, objectives, and requirements • Review existing server security architecture and design documentation • Identify policy-based virtual machine connectivity for network and storage security <p>Deliverables:</p> <ul style="list-style-type: none"> • Server consolidation and virtualization report with findings and recommendations that include: <ul style="list-style-type: none"> – System and performance data analysis on existing Windows and Linux servers in your environment – A high-level financial assessment of the benefits of server consolidation and total cost of ownership – Assessment of server security infrastructure – Identification of vulnerabilities in virtualized server environments with regard to mobility and policy enforcement for virtual machines – Authentication, admission, and access control assessment in virtual machine environment 	<ul style="list-style-type: none"> • Access tools for virtual machine data collection, scenario creation, and optimization analysis • Estimate potential server consolidation cost savings • Estimate required server hardware and other Infrastructure licenses • Accelerate the assessment process with proven server consolidation experience • Confirm the mobility of server security properties over virtualized infrastructure

Network Discovery and Infrastructure Assessment

This assessment examines the components in your network infrastructure that influence the effectiveness of your virtualization implementation. With the help of Cisco experts, you will determine which aspects of your network can be improved to provide the better performance and security as your applications share resources across the network. (See Table 2.)

Table 2. Network Discovery and Infrastructure Assessment Activities, Deliverables, and Benefits

Activities and Deliverables	Benefits
<p>Activities:</p> <ul style="list-style-type: none"> • Conduct an onsite discovery session to understand the current data center infrastructure, including the general data center environment, data center security practices, and future network requirements, including: <ul style="list-style-type: none"> – Interviewing appointed personnel within your organization – Installing Cisco Network Collector to capture information on Cisco product configurations – Reviewing existing network/storage security architecture and design documentation – Evaluating the effectiveness of each Cisco Security Architecture Framework control present in the infrastructure – Identifying vulnerabilities in the infrastructure and the impact of security policies in virtualized environment <p>Deliverables:</p> <ul style="list-style-type: none"> • Provide an assessment report outlining findings and recommendations for improvements to enhance your existing environment, including: <ul style="list-style-type: none"> – Infrastructure technologies to identify and analyze – Network (Layer 2/Layer 3 infrastructure) – Network transport and application call flows – Security networking (firewall design) – SAN security – Server load balancing – Web caching within the data center – Secure Sockets Layer (SSL) offload – Evaluate whether each of the recommended controls in the Cisco Security Architecture Framework are present in the security infrastructure – Provide a report that documents control gaps, security risk analysis, and prioritized recommendations for remediation gaps in virtualized network and storage environment 	<ul style="list-style-type: none"> • Understand what is needed to optimize and virtualize your data center infrastructure • Identify virtualization opportunities within the existing network, network services, security, and storage virtualization solutions • Assess security infrastructure vulnerabilities for network and storage and understand security gaps
<p>Activities:</p> <ul style="list-style-type: none"> • Present findings and recommendations, based on Cisco best practices <p>Deliverables:</p> <ul style="list-style-type: none"> • Onsite discussion 	<ul style="list-style-type: none"> • Improve the return on your investment by identifying the data center architecture that will best meet your business requirements

Benefits

The Cisco Data Center Virtualization Assessment Service helps you to:

- Obtain a clear understanding of the gaps in your environment
- Manage risk by working closely with subject matter experts in networking and virtualization
- Understand the security requirements in virtualized environment
- Increase application uptime and performance to the extent possible
- Bring new applications online faster with automated resource provisioning
- Enhance application availability, scalability, and manageability using any-to-any connectivity

Prerequisites

Since many customers consolidate the data center before virtualizing, two services are recommended but not mandatory prior to the Cisco Data Center Virtualization Assessment Service:

- **Cisco Data Center Consolidation Service**, which combines resource consolidation with infrastructure planning
- **Cisco Architecture Value Analysis Service**, which helps determine how consolidation and virtualization can help reduce costs in your servers, operating systems, and storage infrastructure while delivering new capabilities

Follow-On Services

Cisco Data Center Virtualization Assessment Service can be followed by Cisco Virtualization Planning and Design, which accelerates your deployment of an end-to-end virtualized architecture.

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. Cisco and our industry-leading partners deliver intelligent, personalized services that accelerate the transformation of your data center. Using a unique, network-based perspective and a unified view of data center assets, Cisco takes an architectural approach to help you efficiently consolidate, virtualize, and manage data center resources. Cisco Data Center Services help transform, optimize, and protect your data center to reduce costs, deliver high availability, and improve application performance.

Cisco and Partner Expertise

Cisco and our industry-leading partners use best practices and proven methodologies to help you quickly and efficiently plan and deploy a high-performance, resilient, and scalable virtualized architecture for your business.

The Cisco Data Center Virtualization Services are delivered by Cisco experts who hold a wide array of industry certifications and are subject matter experts in business and technology architecture and data center technologies. They have direct experience in planning, designing, and supporting virtualization solutions. Cisco offers the following expertise:

- Data center solutions architect
- Layer 2 and Layer 3 infrastructure architect
- SAN architect
- Layer 4 to Layer 7 architect
- Professional consultants certified on VMware
- Information security expert
- Network management architect
- Customer system architect and administrator
- Project manager

Cisco product and technology expertise is continually enhanced by hands-on experience with real-life networks and broad exposure to the latest technology and implementations.

Availability

Cisco Data Center Virtualization Assessment Service is widely available. Contact your local Cisco account manager about availability in your area.

To Find Out More

For more information about Cisco Data Center Virtualization Assessment Service, as well as the broad array of Cisco Services for the data center, contact your local Cisco account manager or visit www.cisco.com/go/dcservices.



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