



Virtualizing the Data Center

What Challenges Can a Virtual Data Center Solve?

Underutilized Resource

Most data centers use less than 15 percent of available compute, storage, and memory capacity. This underutilization of resources increases costs and creates a more complex and disparate environment that can be difficult to manage. Virtualization technology facilitates automation, which can help reduce provisioning time from as much as six weeks to just a few minutes. End-to-end virtualization lets IT organizations host and access applications anywhere across server, network, and storage infrastructures. By virtualizing your data center, you could realize tremendous cost savings on capital and operational expenses, increase agility, and improve service levels.

Mobile Work Environments

Making sure that sensitive business data is secure in an increasingly mobile work environment while also reducing the cost of supporting and upgrading an organization's personal computers is a challenge faced by many of today's IT managers. Desktop virtualization (DV) technology offers a solution. With DV, virtual desktops are hosted in the data center, which users access through thin clients. Thin clients have minimal software and little intelligence, so they are less expensive and easier to administer. In addition, each virtual desktop becomes an endpoint in the enterprise cloud. Absorbing desktops into the cloud architecture lets IT administrators deploy and provision new applications very quickly and at a reduced cost, while securely controlling access to corporate resources.

What Are Cisco Virtualization Services?

Cisco helps IT organizations combine server, desktop, network, network services, security, rich media applications, and storage virtualization. Cisco's holistic approach to virtualization delivers Cisco networking and virtualization expertise to help protect application performance and support the automation tools needed to manage an end-to-end virtualized environment. These services also provide a simplified way to engage subject matter experts, who work collaboratively to help you devise and deploy an overarching data center virtualization strategy and roadmap.

Cisco® desktop virtualization (DV) solutions deliver an optimal virtual desktop user experience from anywhere, using any device, over any media. Cisco Desktop Virtualization Services use a comprehensive approach that encompasses people and the organizational structures in which they work, the processes and governance that promote daily operations, and the tools and underlying metrics that dictate and subsequently measure the success of the operational environment.

How Can Cisco Support My Virtualization Efforts?

Cisco brings together the needed skill sets (enterprise and solution architects, certified virtualization experts, and project managers) to help assess, plan, and design a customized virtualized infrastructure. Cisco professionals work collaboratively with you to provide consulting services that span your technical, business, and financial

requirements to help ensure that the entire solution is compliant with your company's best practices.

What Problems Do These Services Address?

- Reducing equipment, facilities, and operating costs
- Provisioning new applications quickly
- Meeting high-availability service-level agreement requirements
- Identifying security solution goals and future requirements for the virtualized environment
- Coordinating management and operations across virtualization silos
- Managing secure data in a mobile work environment
- Controlling costs for supporting and upgrading personal computers

What Activities Do the Cisco Virtualization Services Include?

The Cisco Virtualization Services help you create a phased virtualization roadmap; develop financial justification; accelerate the adoption of your virtualization solution; and lay the foundation for security to manage the policy changes and compliance issues across the server, desktop, network, video, voice, and storage components. These services include the following.

Virtualization Strategy

Cisco's virtualization strategy services help you ease the transition to a virtualized environment so you can achieve virtualization benefits more quickly and be confident that

your new infrastructure will support growth, business change, and technology evolution. These services incorporate technology, processes, and people elements to create an end-to-end framework that prepares your data center and desktop infrastructure to take full advantage of virtualization technology. These virtualization strategy services include:

- [Data Center Virtualization Assessment Service](#): Identifies gaps in your server, storage, and network infrastructure that could limit the return on your virtualization investment
- [Desktop Virtualization Strategy Service](#): Develops a strategic plan that prepares your environment for desktop virtualization, identifies CapEx and OpEx reduction opportunities, and simplifies your desktop operations management
- [Architecture Value Analysis Service](#): Determines how consolidation and virtualization can reduce costs in your servers, operating systems, and storage infrastructure while delivering new capabilities
- [Application Dependency Mapping Service](#): Rapidly provides an understanding of your data center to minimize the risk associated with initiatives and identify opportunities to reduce total cost of ownership
- [Virtualization Operations Management Assessment Service](#): Defines the activities that can tune your organizational structure and management models to the requirements of operating a virtualized environment

Virtualization Planning and Design

To realize the full benefits of virtualizing your data center, planning and implementation must be coordinated among server, storage, network, desktop, and application stakeholders. The Cisco Virtualization Planning and Design Service helps you smoothly develop and deploy a comprehensive data center virtualization strategy that is customized to your IT and business needs. The [Cisco Virtualization Planning and Design Service](#) includes:

- Virtualization planning: Gather requirements, help create a high-level secure virtualized architecture design, extend existing security policies to a virtual environment, enable consistent virtual machine network and storage security, and enable knowledge transfer
- Virtualization design and implementation: Create a low-level design, including securing the virtualized environment. Depending on needs, the service helps create plans to:
 - Test and validate your solution
 - Identify product acquisition needs
 - Implement virtualization over a phased time frame
 - Address your rollout and migration requirements

Unified Computing Virtualization

For those businesses adopting the Cisco Unified Computing System™ (Cisco UCS™), the Cisco Unified Computing Virtualization Services provide server virtualization expertise and best practices to help you incorporate the Cisco UCS into your end-to-end virtualization initiative. These services provide a clear

view of server consolidation opportunities within the data center's physical IT infrastructure and accelerate success of virtualization efforts. The [Cisco Unified Computing Virtualization Services](#) include:

- Unified Computing Virtualization Assessment Service: Provides comprehensive analysis of server consolidation opportunities and design assistance, including automated data collection followed by an interactive facilitated design session
- Unified Computing Virtualization Accelerator Service: Provides expert guidance through the design and deployment of a virtual server environment on the online Cisco Unified Computing System (Cisco UCS), including development and implementation of an exhaustive test plan
- Unified Computing Server Virtualization Mobility and Management Service: Provides in-depth planning and design for end-to-end data center virtualization strategy and enhanced provisioning and management of virtual machines; applies management and movement best practices for eliminating common virtual machine deployment problems

Desktop Virtualization

Cisco Desktop Virtualization Services help you smooth your transition to a Cisco DV solution by providing the expertise and leading practices you need every step of the way. Skilled Cisco professionals work with you to develop a strategy and business justification based on a comprehensive cost analysis of existing and targeted infrastructures, your business and user requirements, and

your applications. It is based on a customized, next-generation data center architecture and uses detailed discovery to calculate potential savings in capital and operating expenses.

The [Cisco Desktop Virtualization Services](#) include:

- Desktop Virtualization Strategy Service: Understand the value that a DV solution can bring to your organization and develop the metrics that you need to validate the investment.
- Desktop Virtualization Planning and Design Service: Plan how to best virtualize your desktop and branch-office infrastructure and assess which applications, including video and voice, are suitable for a virtualized infrastructure. The service helps you develop a financially viable solution, create a phased roadmap, and smooth design and deployment. This integrated approach is vital to increasing response times and productivity.
- Desktop virtualization optimization: Provides the key performance and utilization metrics of a customer's desktop and application environments. Our review of best practices for the evolving desktop virtualization environment is designed to support growth, improve productivity and IT operational processes, accelerate change, and develop a future deployment roadmap, including recommendations for the architecture for your desktop virtualization deployments.

What Benefits Can I Expect to Gain from Cisco Virtualization Services?

Cisco Virtualization Services help you create an end-to-end virtualization solution that supports you in:

- Understanding the gaps in your IT environment
- Developing and deploying a DV strategy that can reduce costs, provide secure access anywhere, and lay the foundation for a rich user experience
- Managing risk by working closely with experts in networking and virtualization
- Increasing application uptime and performance to the greatest extent possible
- Establishing a robust solution for a virtualized infrastructure network, storage, and server that will provide a secure application environment
- Bringing new applications online more quickly with automated resource provisioning
- Enhancing application availability, scalability, and manageability using any-to-any connectivity
- Lowering ongoing operating costs to the extent possible
- Making sure of successful deployment of rich media and collaboration applications

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.

For More Information

For more information about the Cisco Virtualization Services, visit www.cisco.com/go/dcservices or contact your Cisco service account manager.

Cisco services. smarter *together*