

# Cisco Virtualization Services



Whether you are planning to start with server virtualization, extend virtualization across your data center, or implement a desktop virtualization solution, Cisco® Services provide a comprehensive architectural approach that helps you reduce costs, protect application performance, and secure the virtualized infrastructure.

## Accelerate Your End-to-End Virtualization Initiative with a Cohesive, Business-Influenced Strategy and Design

### Challenge

#### Underutilized Resources

Most data centers use less than 15 percent of available compute, storage, and memory capacity. By underutilizing these resources, companies deploy more servers than necessary to perform a given amount of work. Additional servers increase costs and create a more complex and disparate environment that can be difficult to manage: a scenario that often results in reduced availability and failure to meet service-level agreements. To sustain an efficient data center environment with fast application deployment, predictable performance, and smooth growth, data centers must increase resource utilization while making sure of security to protect the infrastructure, applications, and data integrity.

Many data center managers are turning to virtualization, which abstracts server, network, rich media applications, and storage resources so they can be shared across the network. Virtualization technology also facilitates automation, which can help reduce provisioning time from as much as six weeks to just a few minutes or seconds. Yet virtualization of data center infrastructure can bring with it an increase in security issues surrounding privacy, compliance, and business continuity. As workloads migrate to virtual machines, security, voice, and video policies must be maintained while maintaining segmentation and identity. Careful oversight and planning are required to make sure that virtualization increases end-to-end hardware and application performance as well as efficient resource sharing while providing a secure virtualized infrastructure. Organizations often overprovision to address the problems of siloed implementations, thus perpetuating the cost and management overhead that virtualization was supposed to reduce.

## Increasingly Mobile Work Environment

Another challenge IT executives face is reducing the cost of supporting and upgrading their organization's personal computers, while making sure that sensitive data is secure in an increasingly mobile work environment. Many executives are evaluating desktop virtualization (DV) technology. 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, easier to administer, and more secure than personal computers. But the real payoff of a DV solution is that 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. Despite its promise, a DV project can stall or fail without initial planning for new expertise, processes, and user requirements; an understanding of application usage; and comprehensive cost analysis of existing and targeted infrastructures.

## Solution

### A Holistic Approach

Cisco Virtualization Services combine Cisco networking and virtualization expertise to help you develop and deploy a secure end-to-end virtualization strategy. Cisco Virtualization Services simplify the communications process with subject matter experts, giving you a single point of contact for fast access to comprehensive support. Cisco takes a holistic approach that protects data center infrastructure and application performance, supports the automation tools you need to efficiently manage a virtualized environment and helps accelerate your virtualization initiative.

Cisco brings together the needed skill sets, which might include enterprise and solution architects, certified virtualization experts, and project managers. These experts work collaboratively with you to provide consulting services that span your technical, business, and financial requirements. They also provide detailed total cost of ownership (TCO) and return on investment (ROI) analyses to help you quantify potential cost savings. Cisco recommends the right technology solutions for your particular challenges and provides end-to-end service delivery and task coordination to help you achieve a successful implementation.

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, network, voice, video, and storage components. These services can also help you plan and deploy a DV to replace your traditional desktop environment with a virtual desktop solution. Cisco's DV solution simplifies desktop and application management, reduces operational costs, helps secure important company data, and helps lay the foundation for a rich user experience.

Cisco Virtualization Services include:

- Virtualization strategy
- Data Center Virtualization Planning and Design
- Desktop Virtualization
- Unified Computing Virtualization

### **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.

You will begin by working with Cisco experts to define a strategy that spans your unique technical, business, and financial requirements and to analyze your ROI. Then, the team will evaluate the current data center and desktop infrastructure to identify consolidation opportunities to reduce capital and operational expenses. These efforts produce a realistic business case for investing in a next-generation data center.

Cisco experts help design an appropriate architecture and define the cross-infrastructure management and operations actions needed to achieve virtualization while effectively managing risk. Cisco helps you achieve these objectives with a new operating model that defines the organization, processes, people, governance, and metrics needed to support the virtualized environment. Finally, Cisco's highly skilled team of consulting and technology experts will help you implement the full solution and bring your virtualized, service-based, highly productive data center and desktop environment state to reality.

Cisco virtualization strategy services include:

- [Data Center Virtualization Assessment Service](#): 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.
- [Desktop Virtualization Strategy Service](#): Develop 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](#): Determine how consolidation and virtualization can help reduce costs in your servers, operating systems, and storage infrastructure while delivering new capabilities.
- [Application Dependency Mapping Service](#): Rapidly obtain an understanding of your data center to minimize risk associated with initiatives and identify opportunities to reduce total cost of ownership.
- [Virtualization Operations Management Assessment Service](#): Define 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. Cisco enterprise architects work with you during your planning cycle to help you create the business and financial justification for virtualization and recommend technical solutions based on your business problems. We offer preliminary TCO and ROI analyses resulting from server consolidation to help you quantify the potential cost savings of consolidating hardware assets.

The [Cisco Virtualization Planning and Design Service](#) includes:

- **Virtualization planning:** Cisco experts gather requirements, help you 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 expand virtualization knowledge in your organization.
- **Virtualization design and implementation:** Cisco experts create a low-level design for your virtualization solution, including securing the virtualized environment. Depending on your needs, we can also help you 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
- **Virtualization project management:** Cisco can help you keep your virtualization project running smoothly by creating a detailed work breakdown structure, managing change control, providing weekly status reports, and facilitating communications.

## 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. The Cisco Unified Computing Virtualization Services provide a clear view of server consolidation opportunities within your data center's physical IT infrastructure and expert assistance in the planning, design, and deployment of your virtual server environment on the Cisco Unified Computing System platform. Drawing on Cisco Services best practices and proven methodologies, these services help you plan and implement your virtualization strategy more effectively and accelerate the return on your Cisco UCS investment.

The [Cisco Unified Computing Virtualization Services](#) include:

- **Unified Computing Virtualization Assessment Service:** Provides a clear, comprehensive analysis of the server consolidation opportunities within your physical IT infrastructure and delivers expert assistance for creating a roadmap for your solution.

- **Unified Computing Virtualization Accelerator Service:** Beginning after you have installed the Cisco Unified Computing System and the environment is online, this service helps you design and deploy an optimized compute infrastructure. It includes the development and implementation of an exhaustive test plan to address the resiliency and flexibility of your planned unified architecture on the Cisco Unified Computing System.
- **Unified Computing Server Virtualization Mobility and Management Service:** Provides in-depth planning and design for an end-to-end data center virtualization strategy and for enhanced provisioning and management of virtual machines. It applies management and movement best practices to help you eliminate common problems associated with virtual machine deployments.

### Desktop Virtualization

Cisco's DV solutions deliver an optimal virtual desktop user experience from anywhere, using any device, over any media. 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. We help you 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. Then Cisco and our partners help you plan and deploy your solution, using proven methodologies that help mitigate risks and accelerate your transition to a cost-effective DV solution.

These 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. This holistic analysis encompasses your complete technology strategy, including your server and storage infrastructure, operating systems, and 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. Skilled Cisco professionals work with you to make sure that your deployment reduces operating costs, improves desktop management, and extends disaster recovery to your branch-office IT environment. In the process, you will realize a better return on branch-office and desktop virtualization investments with the Cisco Unified Computing System (Cisco UCS), Cisco Wide Area Application Services (WAAS), the Cisco Application Control Engine (ACE), Cisco UC and Collaboration applications, and third-party platforms and tools.

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. This 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, while providing a full range of

underlying operations capabilities for the Cisco DV go-to-market solution as well as consulting and engineering services for your desktop virtualization solution.

- **Desktop virtualization optimization:** provides key performance and utilization metrics for your desktop and application environments. As part of the engagement, Cisco reviews best practices for evolving your desktop virtualization environment in order to support data center growth, improve business productivity and processes, accelerate change, and develop a future deployment roadmap, including architecture recommendations for desktop virtualization deployments.

## Benefits

As data centers support larger server footprints that demand higher capital expenditures and incur greater operating costs, virtualization and automated resource provisioning will become central to a sustainable productivity and growth strategy. Virtualization can create economies of scale, enable power and cooling efficiencies, and take advantage of new technologies such as 10 Gigabit Ethernet and unified I/O to facilitate better resource utilization.

Successful virtualization implementations require expertise in networking and virtualization that addresses server, desktop, network, and storage resources. With Cisco Virtualization Services, subject matter experts engage in a blended onsite and remote delivery model to help simplify delivery and increase the value of our services to you. You benefit from the expertise of enterprise architects, solution architects, certified virtualization experts, storage and IP networking experts, and project managers who are responsible for making your solution successful with end-to-end delivery and task coordination.

Cisco Virtualization Services can help you:

- Obtain a clear understanding of the gaps in your environment by providing virtualization assessments
- Develop and deploy a DV strategy that can help you reduce costs, provide secure access to sensitive information anywhere, and lay the foundation for a rich user experience
- Manage risk by working closely with subject matter experts
- Deliver a multilayer defense against security threats and improve security for virtualized infrastructure
- Maintain application uptime and performance by developing an end-to-end virtualization architecture
- Utilize automation tools for faster resource provisioning to unleash the potential of a virtualized data center
- Enhance application availability, scalability, and manageability using any-to-any connectivity
- Develop a vision to adopt advanced functionality to take advantage of better cost models
- Make 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.

## 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 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
- 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.

## Follow-On Services

Cisco Virtualization Services can be followed by Cisco Data Center Optimization Services, which provide recurring analyses of the performance data and configurations of your network and data center devices for a continuous, strategic view of your data center environment.

## Availability

Cisco Virtualization Services are widely available. Contact your local Cisco account manager about availability in your area.

## To Find Out More

For more information about Cisco Virtualization Services, 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](http://www.cisco.com/go/dcservices).



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