

Cisco Data Center Optimization Services



Evolve your data center solutions to support business growth, deliver next-generation services, and maintain competitive advantage with Cisco® Data Center Optimization Services.

Deliver Agility and Performance with a Unified Systems Approach

Business leaders are asking data centers to be more responsive, deliver operational excellence, and quickly and securely adopt virtualization and cloud technologies.

In an environment characterized by high energy costs, budget uncertainties, a shortage of qualified staff, and constant technology changes, the demand to improve data center performance is a continuing challenge. Data center managers must evolve their environments to support business growth, deliver next-generation services, and maintain a competitive advantage. To manage this transformation, IT departments often migrate to new IP services with converged data, voice, and video while also scaling and deploying diverse, complex technologies such as virtualization and cloud computing.

Without this evolution, the data center cannot provide the capabilities required to overcome technical challenges and take full advantage of business opportunities. In addition, data centers simply do not have the staffing resources and expertise to manage each challenge and technology component separately.

Data centers need a master architecture for all functional areas to continuously maintain a dynamic, flexible, and efficient data center environment and extract more value from technology investments. Data center managers must evaluate their current environment's design to determine how best to virtualize and consolidate applications, servers, storage, and switching functions to enable secure, on-demand, and highly automated IT operations for both virtual and physical infrastructure across computing, networking, storage, and application resources.

Cisco Domain Ten and Data Center Optimization Services

The Cisco Domain TenSM framework covers the 10 major areas that your organization must consider to successfully transform your data center into a more agile, cost-effective business resource. Cisco Domain Ten addresses all the important aspects of infrastructure, virtualization, and automation to help you map your data center transformation, whether you want to take advantage of virtualization or move to the cloud. In addition to technology services, the framework offers security, compliance, process, and governance services for a complete and holistic data center optimization solution.

Cisco Data Center Optimization Services are part of a lifecycle architecture-based approach that helps you plan, build, and manage your data center transformation and optimize performance, security, and governance for applications, servers, and storage over a unified fabric. You gain a holistic view of your data center functions that can help you incorporate Cisco's transformational technologies. The resulting consolidated and optimized solution offers dynamic efficiencies that accelerate savings and makes your data center easier to manage and scale.

Our consulting engineers use industry-leading tools and best practices to successfully support and guide your data center initiatives to mitigate implementation risks and accelerate return on investment (ROI). We assess and review your data center environment, recommend improvements to facilitate high availability and security, provide support to help you implement recommendations, and offer optional continuous learning capabilities for your staff.

Additionally, we:

- Periodically assess and review detailed design standards and evaluate your infrastructure's ability to support applications to meet future business requirements
- Regularly analyze the performance data and configurations of your data center network and technologies to give you a continuous, strategic view of your environment
- Provide assessment and support services to automate your environment for cloud computing, network operations, application workload scheduling, and data center automation to standardize, unify, and automate best practices for IT processes in complex, heterogeneous environments
- Assess and support management tools, processes, and governance to help you make full use of your data center investment

Cisco Data Center Optimization Services are available as a bundle or as standalone components, giving you the flexibility to customize your services by selecting the activities and deliverables that you need.

Strategy and Architecture Service

The strategy and architecture service helps you evaluate your current data center environment, concerns, and costs related to infrastructure migration and management. We help you develop a plan to consolidate or expand, virtualize, and automate management to increase ROI and operational excellence in the data center. The service:

- Prepares your data center for end-to-end virtualization by identifying gaps in your server, storage, and network infrastructure
- Helps you understand the cross-infrastructure management and operations activities necessary for an effective virtualization implementation
- Provides a dynamic platform capable of consolidation, growth, and automation that helps increase ROI

Cloud Optimization

With cloud optimization, you gain an understanding of the current state of your technology infrastructure and operations management architecture and tools. We also recommend changes needed to transition to a cloud operating model that will allow you to implement infrastructure as a service (IaaS). Cloud optimization:

- Helps you decide how and when to transition to a cloud IaaS architecture with Cisco cloud solution expertise
- Using the Cisco Cloud Management Automation Assessment tool, provides a basis for optimal management of a cloud service architecture
- Provides information and recommendations to facilitate and accelerate your overall cloud adoption and implementation of management plans while decreasing costs

Desktop Virtualization Optimization

Desktop virtualization optimization provides crucial performance and utilization metrics for your desktop and application environments. As part of the engagement, Cisco reviews best practices to evolve your desktop virtualization environment to support data center growth, improve productivity and IT operational processes, accelerate change, and develop a roadmap for future deployment, including architecture recommendations for deployment of desktop virtualization. We also:

- Help define your operational and technical objectives and align them with industry best practices to meet your current and future business operations requirements, mitigate risk, and reduce operating expenses
- Help identify areas for platform improvement through assessment of performance and capacity patterns, peak utilization trends, and underutilized assets to achieve operational excellence
- Improve the operational maturity, manageability, and delivery of desktop services through periodic reviews of the architecture and data center operations, making sure best practices are being implemented
- Provide ongoing expertise, support, and training to help you improve your desktop virtualization operating environment so it remains a competitive resource

Unified Networking Services Optimization

Data center networking optimization helps you develop an ongoing methodology, including an annual cycle of assessments, support, and learning, to deliver operational excellence. Our analysis and recommendations cover all planned data center initiatives and new features as they are released to help you get the most from your data center assets. Unified networking services optimization focuses on application distribution and delivery and application network performance.

- Application distribution and delivery
 - Helps ensure operational excellence so your users have fast, secure application access in a scalable Layer 4 through 7 environment
 - Supports application and infrastructure redundancy while providing high-performance throughput and scalability
 - Lets you add new services and apply changes without interrupting existing applications running on Cisco devices, such as the Cisco Application Control Engine (ACE), Cisco Global Site Selector (GSS), or appliances
- Application network performance
 - Provides ongoing, efficient, and focused support aimed at helping ensure a consistently high level of video application performance across your data center WAN
 - Helps you evolve your business by identifying design options and configurations that maintain or improve application responsiveness using Cisco Wide Area Application Services (WAAS) and the Cisco Enterprise Content Delivery System (ECDS)
 - Supports deployed solutions that consolidate your remote office infrastructure into a centrally managed data center and optimizes WAN performance
 - Conducts a periodic health check of your Cisco WAAS environment to identify sources of instability and make recommendations to change device configurations to improve performance and support network stability

Unified Computing Optimization

Unified computing optimization activities and deliverables help you evaluate how unified computing can improve the performance and efficiency of your data center's server capacity. We use application requirements, trends, procedures, capacity patterns, and security needs to recommend more secure, resilient architecture.

Unified computing optimization:

- Evolves your Cisco Unified Computing System™ (Cisco UCS™) to continually optimize operational efficiency and help applications perform better
- Periodically audits configuration, performance, and adoption of leading practices to help ensure that your Cisco UCS configuration meets your performance needs
- Strengthens in-house expertise through ongoing support, knowledge transfer, and mentoring

- Provides a periodic health check of your Cisco UCS infrastructure, including the Cisco Nexus® 1000V Series Switches, to identify sources of instability and recommend device configuration changes to improve performance and network stability in the Cisco UCS and Cisco Nexus 1000V Series environments

Unified Fabric Optimization

As part of the unified fabric optimization activities, Cisco experts work with your data center staff in a series of training sessions and meetings to develop a thorough understanding of a single Cisco Nexus advanced feature. We review the current Cisco Nexus design and provide recommendations with a focus on potential ways of using the selected, available Cisco Nexus advanced feature for virtualization, resiliency, availability, scalability, etc. We also work with you to develop a migration strategy to roll out the selected feature in your existing Cisco Nexus environment. The service:

- Provides a Cisco Nexus solution for virtualizing resources over a unified switching fabric that integrates applications, servers, and storage systems
- Encourages rapid deployment of Cisco Nexus advanced features, such as Cisco Fabric Path, in your design
- Helps you more quickly achieve the benefits offered by Cisco Nexus advanced features
- Uses business continuance reviews to reduce the risks associated with deployment of new features in an existing production design
- Allows you to quickly incorporate new features and functions that become available for Fibre Channel over Ethernet (FCoE), enabling you to get more value and performance from your solution
- Helps you analyze, improve, and optimize your Cisco Nexus solution while supporting your planned data center transformation initiatives
- Provides a periodic health check of the Cisco Nexus family switches to identify sources of instability and recommend changes to device configurations to improve performance and network stability

SAN Optimization Services

Storage area network (SAN) optimization activities and deliverables help you develop an ongoing methodology for operational excellence using an annual cycle of assessments, support, and education. Our analysis and recommendations consider your planned data center initiatives and the deployment of new features as they are released to help you make best use of your data center assets. SAN optimization:

- Delivers a consistently high level of SAN performance and availability and supports growing information management needs
- Optimizes your SAN infrastructure based on the Cisco MDS 9000 Family switches, which consolidate SAN islands into a secure, manageable solution that supports business continuance and disaster recovery for intelligent storage fabric applications
- Accelerates the identification and resolution of SAN problems after the initial deployment and helps ensure optimal performance in a dynamic environment

- Provides a periodic health check of the Cisco MDS 9000 Family switches to identify sources of instability and recommend changes to device configurations to improve performance and network stability

Other SAN optimization elements provide SAN test plan reviews, storage capacity and impact analysis, data migration project support, FCoE assessment and design support, IBM Fiber Connection (FICON) design support, optimization of SAN management and monitoring practices, SAN extension (using Fibre Channel over IP [FCIP], dense wave-division multiplexing [DWDM], and I/O acceleration [IOA]), and SAN assessment for Brocade SANs.

Please check the local availability of SAN optimization options for your data center.

Intelligent Automation Services

Intelligent automation optimization provides services for the portfolio of Cisco Intelligent Automation software products and services for data center automation, cloud computing, network operation automation, application workload automation, and IT systems management. We help you automate your data center environment for cloud computing and standardize, unify, and automate best practices for IT processes in complex, heterogeneous environments.

- The workshop is a vital tool for generating recommendations that enhance the value you get from the automation process and provides a technical blueprint when appropriate.
- Assessment provides a comprehensive review of your automation solution to mitigate risk, with the help of detailed recommendations based on industry-leading practices and in-depth expertise from Cisco Advanced Services.
- The upgrade assessment and support service recommends ways to upgrade production and nonproduction Cisco Intelligent Automation environments.
- The site and systems administration support service is designed for site administrators responsible for the configuration, administration, and maintenance of Cisco Intelligent Automation environments. It provides expert help to keep day-to-day data center orchestration infrastructure operations running smoothly and efficiently, with stable and scalable operations.
- The ongoing support service provides general advice and guidance about recommended Cisco Intelligent Automation environments. This service helps you implement fully featured private, public, or hybrid cloud solutions that include customer-specific cloud portals, service catalogs, and orchestration workflows to transform the automation capabilities in a wide range of existing IT infrastructures. It also addresses management automation requirements.
- Custom-design day-2 support is break-fix support for the custom solution implemented by Cisco Advanced Services based on your requirements.
- Remote Knowledge Transfer Sessions include our leading practices and industry knowledge to help you make the best use of the automation solution in your environment.

Operations Enhancement Services

To continue reaping the benefits of a virtualized data center as your business needs evolve, you need to keep operations optimized. Operations enhancement services help you consider process and governance, as well as the use of management tools, to operate the data center as efficiently as possible for IT service availability. These services:

- Audit your current operations processes to recommend improvements
- Conduct a holistic review of the management tool set to provide recommendations that improve visibility and control of a virtualized environment
- Help you determine how to best operate and manage, from both people and process perspectives, new Cisco technologies being introduced into your data center
- Increase operations visibility of Cisco devices in your infrastructure by reviewing their instrumentation-related configuration and the way that the instrumentation features are being used
- Provide a resiliency analysis across the whole data center architecture to identify risks that may affect IT service availability
- Support management tool software upgrades to help you properly plan implementation and reduce potential risks
- Help you develop and document one or more operational runbooks that address a specific operational or technical procedure for a given device, technology, or IT service

General Support Services

Performance and Validation Testing

With performance and validation testing, you gain access to our subject-matter experts in data center architecture design and testing. The service helps you build customized test systems that include almost any product in the Cisco portfolio, as well as products from other vendors, so you can validate your solution end to end.

Scheduled Change Support

Efficiently integrate scheduled changes into activities associated with resolution of technology issues.

Remote Knowledge Transfer Sessions

Improve the productivity of in-house resources by enhancing staff skills through customized knowledge exchange between your staff and Cisco experts with intimate knowledge of Cisco data center technologies.

Data Center Modular Knowledge Service

The data center modular knowledge service helps you get the most out of your Cisco technology by enabling staff to continually increase their competency with access to our knowledge base of data center products.

Data Center Optimization Health Checks

We provide periodic health checks of your data center technologies to identify sources of instability and recommend changes to improve performance, increase use of these technologies, and prepare for greater demands. The health check service is available for Cisco UCS, the Cisco Nexus 1000V Series component of the Cisco UCS infrastructure, the Cisco Nexus Family switches, the Cisco MDS 9000 Family switches, and the Cisco WAAS technology.

Benefits

Cisco Data Center Optimization Services help you transform your data center by helping you determine how to virtualize and consolidate applications, servers, storage, and switching functions. We help you:

- Improve the performance of business-critical applications
- Reduce operations overhead
- Quickly incorporate technology innovations with less risk
- Reduce costs through the efficient use of equipment and data center operations
- Improve productivity and enhance business processes
- Increase revenue through improved application performance

Complementary and Prerequisite Services

Cisco Data Center Optimization Services complement the Cisco Borderless Networks Optimization Service and can be ordered together or individually. For the best optimization results, we recommend that you first deploy the services listed in Table 1 that are relevant to your technology initiative.

Table 1. Prerequisite Services by Technology

Technology or Component	Prerequisite Services
Strategy and architecture	<ul style="list-style-type: none">• Data Center Architecture Workshop• Data Center Facilities Assessment• Data Center Virtualization Architecture Blueprint• Architecture Value Analysis• Data Center Consolidation Service• Virtualization Strategy and Roadmap Service• IPv6 Architecture and Design Review• IPv6 Device Assessment• Data Center Virtualization Network Device Security Assessment• Data Center Virtualization Security Strategy Planning• Data Center Virtualization Design Assessment
Cloud	<ul style="list-style-type: none">• Cloud Strategy• Cloud Planning and Design• Cloud Implementation
Desktop	<ul style="list-style-type: none">• Desktop Virtualization Strategy• Desktop Virtualization Planning and Design
Operations enhancement resiliency analysis	<ul style="list-style-type: none">• SAN Health Check• Cisco UCS Health Check

Technology or Component	Prerequisite Services
Unified networking	<ul style="list-style-type: none">• Application Dependency Mapping• Cisco ACE Planning and Design Service• Cisco WAAS Planning and Design Service• Cisco Nexus Planning and Design Service• Virtual Desktop Infrastructure Planning and Design Service
Storage	<ul style="list-style-type: none">• SAN Planning and Design Service• SAN Health Check Service
Unified computing	<ul style="list-style-type: none">• Cisco Unified Computing Architecture Assessment Service• Cisco Unified Computing Planning and Design Service• Cisco Unified Computing Virtualization Services• Cisco Unified Computing Preproduction Pilot• Data Center Virtualization Service
Unified fabric	<ul style="list-style-type: none">• Cisco Nexus Planning and Design Service
Intelligent automation	<ul style="list-style-type: none">• Cisco Intelligent Automation for Cloud
Process orchestration	<ul style="list-style-type: none">• Cisco Process Orchestrator Services for Network Operations
Application workload scheduling	<ul style="list-style-type: none">• Cisco Tidal Enterprise Scheduler Services

Cisco Expertise

We 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. Cisco Data Center Optimization Services are delivered by Cisco experts who hold a wide range 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 product and technology expertise is continually enhanced by hands-on experience with real-life networks and broad exposure to the latest technology and data center 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. 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.

Availability

Cisco Data Center Optimization Services are widely available. Contact your local Cisco account manager or Cisco partner about availability in your area.

For More Information

For more information about Cisco Data Center Optimization Services and the broad array of Cisco Services for the data center, contact your local Cisco account manager or Cisco Certified Partner or visit www.cisco.com/go/dcservices.



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