

Gain Superior Performance and Security with Cisco Unified Network Services

What You Will Learn

Delivering and securing applications is a constant challenge. Data center managers are constantly looking for ways to help ensure delivery and to monitor the data center network and help ensure the security of the infrastructure. Cisco® Unified Network Services is a framework that provides consistent and flexible service delivery across any Cisco Layer 4 through 7 service, any form factor, and any location. Cisco Unified Network Services improves application availability and security, enhances user productivity, and delivers performance monitoring from the network core or the computing edge, or both. Cisco Unified Network Services can be configured to fit the specific needs of your business and can bring the data center to the end user with a combination of access, acceleration, and security. The complete line of Cisco Unified Network Services products brings flexible, responsive, and consistent solutions to the data center, helping IT meet the growing needs of business.

Cisco Unified Network Services includes the following services:

- Load balancing
- WAN acceleration and application optimization
- Security
- Network analysis and monitoring

Cisco Unified Network Services Business Benefits

Cisco Unified Network Services offers a number of compelling business benefits along with innovations that help you gain business advantage (Figure 1).

Figure 1. Cisco Unified Network Services Innovations

Virtual Machine-Aware Policies	Workload Portability and Mobility
Virtual Services	Agility and On-Demand Delivery for Data Centers
Fabric Integration	Rapid Service Delivery with Improved Performance
Policy-Based Provisioning	Operational Simplicity and Reduced Overhead
Cloud Optimization	Secure Multi-Tenant Cloud Framework
Open APIs	Transparent Integration and Automation

Real Value

Increasing value to the business while safeguarding data is the number-one goal today in the data center. Great technology means little unless it adds value to the business. Virtualized data centers present an additional challenge in providing services such as Layer 4 through 7 acceleration, load balancing, and security. The

traditional model is not flexible enough to handle the highly mobile workloads found in virtualized data centers. Cisco Unified Network Services provides optimization, availability, performance, and security for both physical and virtual environments. Cisco Unified Network Services products are designed to work together and to provide services that increase the flexibility of your data center and transform it into a responsive and consistent business advantage.

Flexibility and Responsiveness

The goal today is to transform the data center into more than the sum of its parts. Application networking, policy, and security all come together to form a cohesive whole that gives customers the flexibility needed to manage changes in business needs and in technology. Cisco Unified Network Services offers true flexibility, providing security, acceleration, and numerous other functions that enhance the overall value of the data center to the business.

Centralization of data center resources to take advantage of economies of scale can lengthen response times for end users, both in remote offices and in the home office. Cisco Wide Area Application Services (WAAS) products can reduce this access time so that it approaches LAN local access time. Time lag at branch offices leads to loss of productivity and a simultaneous reduction in employee satisfaction, affecting the revenue of the company in ways that are not always easy to see. Cisco WAAS can monitor and track application response times, providing specific numbers. These products work with any TCP-enabled application, including those from Oracle, SAP, and Microsoft.

Implementing security is a particular challenge in a virtualized data center. Cisco Adaptive Security Appliances (ASA) and selected Cisco Application Control Engine (ACE) products provide security to support both existing traditional environments and virtualized environments. Flexible security means greater uptime and compliance with the myriad governmental regulations that apply to corporate data centers and networks today.

Virtualization and public and private cloud computing has increased the number of virtual servers while decreasing the size and amount of physical hardware required. A result is that server pools are larger and more diverse and east-west communications between them greatly increased. Load balancing is essential, as is encryption offloading. Cisco ACE products can provide both as well as XML parsing directly in the network, transforming the network from a data pipe into an agent of transformation as companies move to next-generation public and private cloud data center environments.

Virtualization and the move to private cloud computing has raised concerns that the complexity of the new environment will lead to inflexibility in the data center environment, at least from a networking perspective. Cisco has led the way in addressing these concerns with virtual versions of many of its products and a close partnership with industry virtualization software leader VMware as well as other virtual machine providers such as Microsoft. The key to flexibility, responsiveness, and consistency is virtualization-aware networking, which Cisco Unified Network Services products provide.

Flexibility in the data center offers clear benefits. A flexible data center can quickly respond to the changing needs of the business, and the faster the IT response, the faster the business commences making money. For IT, agility provides the capability to move workloads and their associated network profiles in response to current conditions in the data center: anything from equipment replacement, to expansion, to equipment failure and disaster recovery. Cisco Application Networking products are designed to work together to provide the flexibility to meet business and IT needs.

Consistency and Efficiency

IT departments are challenged by static or even shrinking budgets. They are mandated to do more with less. Efficiency is essential in the data center, but so are consistency of services and responsiveness. Virtualization and public and private cloud computing offer efficiency, but Cisco Unified Network Services can enhance that efficiency with a baseline of performance and performance monitoring.

Cisco Unified Network Services uses policy to meet the challenges of virtualized and public and private cloud environments. Cisco Unified Network Services provides policy that attaches to each virtual workload. When a workload is moved, the policy follows that workload. In addition, when a policy changes, it changes across all workloads assigned that policy. Cisco Unified Network Services policy-based provisioning significantly decreases the amount of time needed to deploy or move a workload, making IT much more responsive to the business.

Products such as Cisco WAAS can help reduce bandwidth costs for connection to remote data centers and branch offices. The Cisco ACE product line can make server farms more efficient with advanced load balancing and encryption offloading. Cisco has applied its engineering expertise and data center experience to increase efficiency in every aspect - from physical power, to heating, ventilation, and air conditioning (HVAC), to management and ongoing maintenance.

Data Center Business Advantage

Cisco Data Center Business Advantage is an architectural framework that delivers tangible business value for dynamic networked organizations. To meet the changing business needs of customers, the Cisco Data Center Business Advantage framework provides architectural flexibility and openness to deliver increased business value through technology innovation, systems excellence, and solution differentiation.

These four elements form a powerful architecture that only Cisco can deliver:

- Technology innovation: Cisco helps transform data centers through continuous standards-based innovation and a choice of platforms, so businesses can quickly deliver new capabilities and enter new markets
- Systems excellence: Cisco dramatically reduces complexity, creating an agile and efficient data center capable of responding to rapidly changing business demands
- Solution differentiation: Cisco, together with our partner ecosystem, provides complete, holistic offerings to address customers' IT and business needs
- Business value: Cisco brings customers increased choice and flexibility, a unified architecture, and improved investment protection

The data center is at the core of IT and business innovation, and Cisco Data Center Business Advantage directly addresses the top business and IT priorities such as faster service creation, improved profitability, and transformative new business models.

Cisco's data center vision has evolved in response to customers' needs, enabling customers to gain efficiency across the data center and IT infrastructure while providing the business agility needed to respond to changing demands. Cisco's vision ultimately enables an open, controlled, and transformative environment, moving the data center from a cost center to a competitive advantage.

Why Cisco?

Cisco Unified Network Services can bring the benefits of an efficient and agile data center to organizations of any size and in any specific market. Cisco Unified Network Services offers a solution that integrates with server, network, and virtualization resources to make them all work together as a cohesive whole.

Cisco Unified Network Services can:

- Reduce network complexity
- Reduce management overhead
- Decrease deployment times and expenses
- Help ensure availability in the data center and for the end user
- Help ensure optimal application performance

For More Information

Find out how Cisco Unified Network Services can transform your data center today by visiting <http://www.cisco.com/en/US/netsol/ns1097/index.html>.



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