

Cisco Virtualized Foundation Smart Solution



Scalable, Agile, Cost-Efficient Infrastructure for Midsize Companies

The Cisco® Virtualized Foundation Smart Solution provides midsize companies with a blend of innovative Cisco products, proven best practices, and fully-tested architectures to achieve the full potential of virtualization. The solution can help IT become a strategic business resource that enables the fast delivery of new services using scalable, agile, and cost-efficient infrastructure (Figure 1).

IT Infrastructure Challenges

Midsize companies face a broad range of challenges in managing their business. This often includes minimal IT staff and budget. They need IT infrastructure that is:

- Easy to deploy and manage, with low risk.
- More responsive to the changing demands of the business and ready to rapidly deploy any application the business might require.
- Able to keep up with both planned and unplanned growth.
- Capable of improving competitiveness within budget constraints.

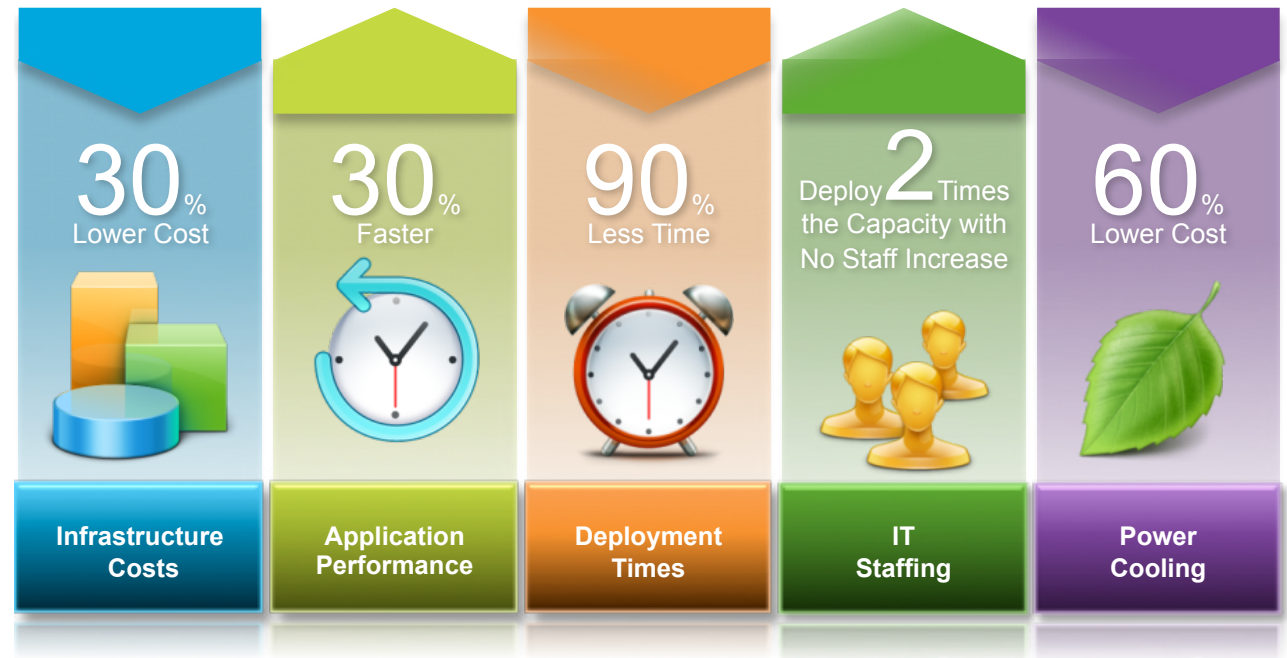
Cisco uses an innovative, fabric-based architecture to unify IT infrastructure components including computing, networking, virtualization, and management into a single platform. The resulting solution is more cost efficient, easier to manage, and faster to deploy, enabling IT to deliver greater value to the business.

Cisco's strategy is to rethink IT infrastructure to achieve cost efficiency and create agility to respond quickly to business opportunities, without the need for extensive integration and customization.

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The Cisco Virtualized Foundation Smart Solution enables on-demand provisioning from shared pools of physical and virtual resources and supports more efficient resource management. Combining the power of Cisco Unified Fabric with the innovations of Cisco Unified Computing System™

Figure 1. Changing the Economics of IT



(Cisco UCS®), Cisco's fully-integrated IT infrastructure was designed specifically for virtualization, not adapted afterward to accommodate it. This design advantage provides industry-leading performance, simplifies IT operations, and increases business agility, enabling IT to deploy and utilize infrastructure quickly, with low risk, and minimal staff and budget.

The Cisco Virtualized Foundation Smart Solution is based on Cisco products and integration with key ecosystem partners, as well as the experience of Cisco Certified Partners, who work to right-size Cisco technologies for the specific requirements of midsize organizations.

Unify the Network

A key element of Cisco Virtualized Foundation Smart Solution are Cisco Nexus® 5000 Series Switches (Figure 2), which provide a unified and converged fabric over 10 Gigabit Ethernet for network, storage, and management traffic. Cisco Unified Fabric enables network consolidation and greater utilization of previously separate infrastructure and cabling, reducing by up to 50 percent the number of

Figure 2. Cisco Nexus 5548UP



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adapters and cables required and eliminating redundant switches. The fabric design also enables centralized deployment and management of network resources to facilitate better support of virtualization with improved staff productivity and lower total cost of ownership (TCO). Cisco Unified Fabric delivers reliable, scalable, agile, and cost-effective network services to servers, storage, and applications.

Radically Simplify Computing and Management

Cisco Unified Computing System (Cisco UCS) employs a radical design simplification that combines the best elements of Cisco networking innovations and converged management. The result of this radical simplification is fewer switches, cables, adapters, and management points, helping reduce cost and complexity.

Cisco UCS Manager provides centralized management capabilities, creates a unified management domain, and serves as the central nervous system of Cisco UCS (Figure 3). One critical innovation that Cisco brings to the market is the service profile – a software definition of a server and its network connectivity. Service profiles allow server resources to be treated as raw computing capacity that can be allocated and reallocated among application workloads, enabling a much more dynamic and efficient use of servers. Server deployment using service profiles takes minutes instead of days or weeks.

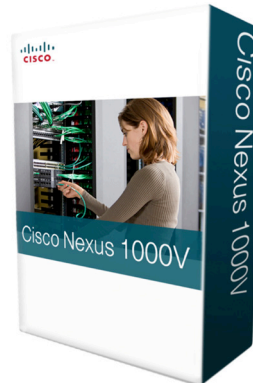
Figure 3. Cisco UCS



End-to-End Virtualization

The Cisco Virtualized Foundation Smart Solution also builds on Cisco's close relationship with leading hypervisors to deliver a fully-tested and comprehensive virtualization foundation that is fast to deploy, easy to manage, and scalable for future growth, eliminating much of the risk and cost overruns of ad-hoc approaches. Server virtualization allows you to run multiple workloads on one or more virtual machines on a single physical server, with each virtual machine consisting of an operating system and one or more applications. The Cisco Nexus 1000V Switch (Figure 4) is a virtual distributed soft switch embedded in the hypervisor; it delivers highly secure, multitenant services by adding virtualization intelligence to the network. Essentially, Cisco provides a virtual network interface for each virtual machine, with a single point of management.

Figure 4. Cisco Nexus 1000V



Services

Cisco and our ecosystem of global partners offer a broad range of professional and technical services to help you with assessment, design and implementation, private cloud development and optimization. Working to develop architectural strategies, roadmaps, design validation, and implementation of virtualized solutions, Cisco and our partners can help you to successfully plan, build, and manage your IT transformation.

Business Benefits

The Cisco Virtualized Foundation Smart Solution helps midsize companies take advantage of the benefits of virtualization and realize:

- **Increased IT flexibility and responsiveness** through a unified approach to virtualization that delivers uncompromised scale, security, visibility, and control
- **World-class competitiveness** through an enterprise-quality virtualization solution that aligns IT resources with business objectives
- **Business agility** through faster provisioning of IT infrastructure
- **Reduced operating costs** through an easy-to-install and easy-to-manage solution that shares resources and eliminates manual tasks
- **Improved productivity** by reducing or eliminating certain maintenance tasks and simplifying management processes
- **Reduced business risk** through a pretested and validated design

Why Cisco?

The Cisco Virtualized Foundation Smart Solution helps midsize companies quickly deploy virtualized infrastructure that is scalable, cost-efficient, and agile. Underlying the solution are Cisco technologies that simplify and unify infrastructure, while also centralizing infrastructure management. Cisco Unified Fabric simplifies infrastructure connectivity and reduces costs by consolidating traffic onto a single, high-performance, highly available network.

Cisco Unified Computing System has fewer components to purchase, configure, manage, and maintain, with more efficient scaling, resulting in lower cost of ownership. Cisco UCS Manager provides centralized management capabilities, creates a unified management domain, and enables a much more dynamic and efficient use of server capacity.

To build a virtualized environment that excels in your midsize organization today, and into the future, talk to an authorized reseller about the Cisco Virtualized Foundation Smart Solution or visit <http://cisco.com/go/vfss>.