

Top Five Reasons to Deploy Cisco UCS Integrated Infrastructure

Solution Brief
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Highlights

Use Comprehensive Integrated Infrastructure Management

- Cisco's unified management breaks down barriers so you can simplify, deploy, and maintain IT infrastructure.

Deploy an Innovative Foundation

- Cisco UCS integrated infrastructure consists of the Cisco Unified Computing System™ (Cisco UCS®), Cisco Nexus® switches, and Cisco UCS Director management software.

Unleash Fast IT

- Cisco UCS integrated infrastructure solutions are agile, highly secure platforms that support dynamic business priorities.

Reduce Total Cost of Ownership

- Cisco UCS integrated infrastructure solutions can help you optimize the use of your people, management, software, and facilities resources.

Reduce Risk with Proven Solutions

- Cisco Validated Designs are guidebooks for implementing solutions that help reduce risk and guesswork.

Gain Choice and Flexibility

- Cisco has established a large partner ecosystem, including top storage, converged infrastructure, software, and systems management vendors to deliver optimized solutions for popular use cases and applications.

If you need to deploy and scale applications faster to increase revenue, Cisco's integrated infrastructure solutions can help you achieve your goals—and reduce risk.

Technology transitions—such as cloud, mobility, big data, and the Internet of Things—bring together people, processes, data, and things to make resources and connections more valuable to your business. They also challenge the role of IT in the enterprise. For your IT department to stay relevant to your lines of business, it must deliver value faster and invest in innovation. Cisco Unified Computing System™ (Cisco UCS®) integrated infrastructure makes it possible to deliver Fast IT—a new IT model that transforms your data center infrastructure into an environment that is fast, agile, smart, and secure. You can break down the IT barriers that are holding your business back and create solutions that capture the value of new connections and information.

Your Data Center: Innovative or Frustrating?

Rapidly changing demand and workload diversity have forced IT departments to create large sets of hardware and software components—and spend time integrating them into a workable solution. Navigating the technology maze can be enlightening and frustrating, and making sure that all the components work well together is time consuming. Cisco UCS integrated infrastructure solutions take the guesswork out of deploying platforms that deliver Fast IT. You can transform your IT infrastructure from a collection of inflexible and poorly integrated systems to timely, flexible, automated, and secure application-centric infrastructure that lets you innovate at a fast pace to stay competitive.

Cisco UCS Integrated Infrastructure

Cisco helped establish integrated infrastructure, changing traditional data center deployments, processes, and dynamics with a higher level of technology integration. Today, Cisco offers a range of integrated systems, including:

- **Reference architectures:** Cisco solutions for FlexPod, EMC VSPEX, Hitachi Unified Compute Platform Select, Nimble Storage SmartStack, and IBM VersaStack
- **Converged infrastructure:** VCE Vblock™ Systems
- **Fully assembled appliances with preinstalled applications:** Cisco Solutions for SAP HANA

Each of these innovative solutions combines computing, storage, network, security, and infrastructure management into a platform designed to automate IT as a service (ITaaS) across physical and virtual environments.

Reason 1: Fast IT

Companies need to operate efficiently, capitalize on business opportunities, and remain secure. To meet these needs, IT must become both a source and a facilitator of disruptive innovation, pivoting with the company as it changes business models and responds to dynamic demands. Being successful requires a new model, which Cisco calls Fast IT.

Fast-to-Deploy Infrastructure

If you use component solutions or partially integrated infrastructure from other vendors, you could be experiencing delays in development and deployment schedules. That's because other solutions force your staff to spend time making everything work together and perform as expected. Cisco takes a different approach, integrating best-in-class components and management software so that your IT department can focus on strategic business priorities and get products and services to market in less time.

Cisco's solutions let you move from technology silos to a holistic approach that transforms your data center infrastructure into pools of resources that can be easily allocated and repurposed. Your applications can run more efficiently within, between, and beyond your data center boundaries—and your IT department can evolve to ITaaS to accelerate service delivery and increase revenue streams.

Application-Centric Infrastructure

Cisco UCS integrated solutions also change the way that you interact with your infrastructure. Deployment is approached from an application perspective, allowing you to define application-specific policies that are used to automatically provision underlying infrastructure: from virtual machines, servers, storage, and networks to security policies and workload placement. As a result, your applications automatically get the infrastructure resources they need—and your business gets the applications it needs at the time it needs them.

Accelerated Application Performance

Cisco is focused on delivering the best application performance so that you can take advantage of the cloud, mobility, big data, and other emerging trends. That's why Cisco UCS blade and rack servers use the latest Intel® Xeon® processors. Although almost every vendor can set a performance record now and then, consistently reporting world-record performance with every new generation of processor is truly exceptional. Cisco's industry leadership and ability to set and reset world records on application-centric benchmarks are testimony to the fact that Cisco is not just selling servers—it is reinventing the server market.

Cloud-Ready Infrastructure

The cloud is a crucial element of Fast IT, with hybrid cloud infrastructure poised to deliver the right resources for each business challenge. Shifting workloads throughout the fabric of connections in hybrid clouds means that your security perimeter is constantly expanding.

Cisco® Intercloud Fabric enables the establishment of secure connectivity and coherent sharing of security policies between private and public cloud environments. With this easy-to-manage, open, and flexible environment, you can consistently enforce your data center security, quality of service (QoS), and access control policies in both private and public clouds. As a result, you can safely extend your data center and cloud capacity—scaling your applications and adapting to changing priorities and moving strategies.

Reason 2: Lower Total Cost of Ownership

Your management teams recognize that operations—including people, management, software, and facilities—are the largest cost in the data center, far greater than the cost of underlying hardware. According to an IDG Research study for Delphix, 76 percent of chief information officers (CIOs) report difficulty staying on schedule and within budget due to the complexity of traditional IT infrastructure deployment.

When designed and deployed correctly, your infrastructure can work with you, not against you. Cisco UCS integrated infrastructure solutions can help you get more work done with the same (or fewer) resources. With these innovative solutions, your IT staff can consolidate more workloads onto fewer servers so there are fewer components to buy and manage. These solutions can also reduce cabling, power, and cooling requirements and automate routine tasks to increase productivity (Figure 1).

An Innovative Foundation

Cisco UCS integrated infrastructure offers a highly secure, automated platform that is anchored by the Cisco Unified Computing System, Cisco Nexus® switches, and Cisco UCS Director management software. Cisco UCS is the first data center platform that integrates industry-standard, x86-architecture Intel Xeon processor based servers with networking and storage access into a unified system.

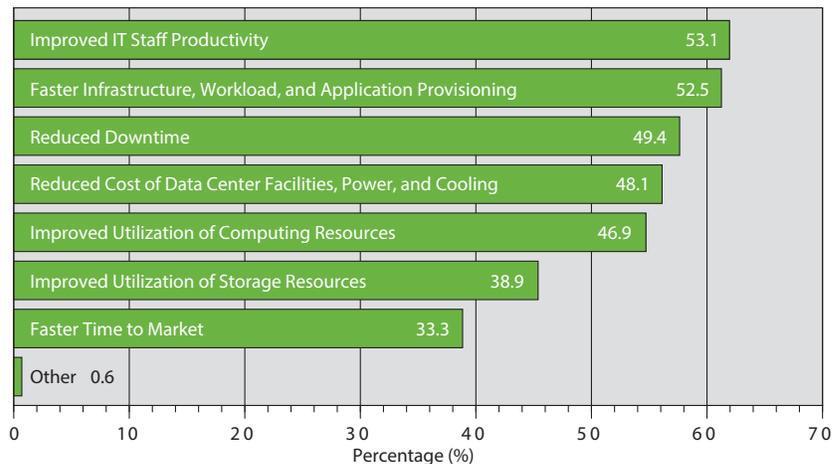
All components are connected through a unified fabric that delivers high-performance data and storage networking to simplify deployment, help ensure the quality of the user experience, and reduce operating costs. Integrated network services provide high-speed connectivity and high availability, accelerate application performance, and reduce the security risks associated with multitenant environments.

Reason 3: Integrated Infrastructure Management

Traditional management approaches make your IT environment difficult to use and scale. That's because an approach in which management is an afterthought results in incomplete solutions that fail to deliver unified

infrastructure management. Cisco breaks down these barriers so you can simplify, deploy, and maintain your physical, virtual, and cloud platforms with better visibility and control.

Cisco's unified management approach lets you tie your infrastructure to your applications across virtual and physical elements. Automation, orchestration, and lifecycle management capabilities simplify deployment and make it easy for your IT staff to operationally integrate your bare-metal and virtual infrastructure resources to address complex, time-consuming, manual, and compartmentalized processes. Because multivendor infrastructure is a deployment reality, a self-service web interface abstracts the complexity of devices, hypervisors, and virtual machines so that you can set up



Source: IDC Converged and Integrated Systems End-User Survey, July 2013

Figure 1. Benefits Achieved by Organizations with Integrated Computing Platforms

infrastructure in minutes and get the most from your IT deployments.

- **Cisco UCS Manager** provides unified, embedded management of software and hardware components in Cisco UCS. Using Cisco SingleConnect Technology it controls multiple chassis and manages resources for thousands of virtual machines.
- **Cisco UCS Central Software** lets you manage multiple, globally distributed Cisco UCS domains with thousands of servers from a single pane, allowing you to simplify your operations at scale.
- **Cisco UCS Director** unifies and automates end-to-end integrated infrastructure management processes by abstracting the complexity of individual devices, hypervisors, and virtual machines and automating integrated infrastructure management processes with a unified and easy-to-use set of tools and interfaces.

Reason 4: Reduced Risk with Proven Solutions

Deployment delays and service disruptions can affect your company's profitability. That's why it's important to deploy infrastructure right the first time.

Cisco Validated Designs reduce risk and guesswork by giving your architects and administrators a guidebook for implementing solutions.

Cisco tests, validates, and documents solutions so that you can get environments up and running quickly and with confidence. Validated designs are available for popular infrastructure use cases, applications, and technology transition points, such as virtualized infrastructure, private clouds, desktop virtualization, enterprise applications, big data, remote- and branch-office deployments, and industry-specific markets.

Reason 5: More Choice and Flexibility

When you deploy integrated infrastructure, you need to be able to get the types of resources you need—and assurance that the technologies are tested, certified, and supported. Cisco has established a large partner ecosystem, including top storage vendors (EMC, Hitachi, IBM, NetApp, and Nimble), converged infrastructure vendors (VCE), software vendors (such as Microsoft, Oracle, Red Hat, SAP, and SUSE) and many systems management vendors to deliver optimized solutions covering the entire operational lifecycle. Collaboration and validation

with partners gives you access to the newest technologies while helping your IT staff integrate innovation with your existing data center environments and IT processes at low risk.

Conclusion

Cisco UCS integrated infrastructure solutions let you focus on your business applications and deliver Fast IT. With these innovative solutions, you can transform your data center into a fast, agile, smart, and secure environment.

Learn More

- To learn more about Cisco UCS Integrated Infrastructure, visit <http://www.cisco.com/go/ucsintegratedinfrastructure>.
- To learn more about Cisco UCS, visit <http://www.cisco.com/go/ucs>.
- To learn more about Cisco UCS management, visit http://www.cisco.com/c/en/us/products/servers-unified-computing/cisco_ucs_management.html
- To learn more about Cisco Validated Designs, visit <http://www.cisco.com/go/designzone>.



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