

Cisco Cloud Enablement Services



Comprehensive cloud enablement services help service providers realize a secure, agile, and highly automated infrastructure-as-service (IaaS) environment, enabling rapid time to services and revenue as well as new customer offerings.

Accelerate Your Service Provider Cloud Initiative

Today service providers and enterprises face several continuing challenges around the evolution of their businesses and how best to meet customers' needs.

Service providers are struggling with the constant need to increase market share, pressures around average revenue per user (ARPU) and service pricing, low and declining margins on hosted and colocation services, increasing capital and operating expenses, infrastructure complexity, speed of provisioning, and the demand for constant service innovation. In turn, enterprises, faced with increasing service demands from users and growing data center capital and operating costs as they try to securely and rapidly meet that demand, are looking to outsource a range of IT services to be delivered as on-demand, online services.

In fact, both service providers and enterprises are positioned to benefit from cloud computing: IT resources and services that are abstracted from the underlying infrastructure and provided on demand and at scale in a multitenant and elastic environment.

Many service providers, which are already expert at provisioning, managing, and scaling infrastructure-based services for multiple customers, are starting with offerings based on infrastructure as a service (IaaS) – a cloud utility architecture – where the enterprise uses a pay-as-you-go infrastructure from a service provider. Such offerings, where enterprise customers run workloads on the provider's infrastructure, have been called “virtual infrastructure hosting” services.

Given these market and IT challenges, service providers are asking some difficult, though highly relevant, questions about the value of cloud computing and IaaS.

- What new cloud capabilities will increase market share and ARPU?
- How do we grow the business and speed time to service revenue with cloud infrastructures?
- Is there a way to determine and justify the return on investment for cloud?
- How do we manage a multitenant infrastructure and its security concerns?

- How do we align, optimize, and transition internal processes for cloud readiness and deployment?
- How can we define and deliver SLAs in multitenant cloud environments?
- How do we enable usage-based, per customer costing in multitenant cloud environments?
- Is there a way to stage the introduction of the cloud infrastructure to smooth our investment and reduce risk?
- How do we make sure that our virtualized data center and the operations platform that supports it remain optimized as the use of data center services evolves?"

Like any major business transition, these important questions must be answered before service providers can initiate any change, including cloud computing, with confidence. To help you answer these questions, Cisco Cloud Enablement Services for service providers provide a family of professional services that can help to quickly realize a transition to a cloud approach and accelerate the time to services deployment and time to revenue.

Transitioning to Cloud Computing

Migrating to a new cloud model is much more complex than implementing a single technology. It requires a shift to a new operational business model. New data center technologies such as virtualization, orchestration, and automated provisioning and solutions such as Cisco® Unified Service Delivery (USD), which unifies network, computing, storage access, and virtualization resources in a cohesive system, have combined to make IaaS technically and operationally feasible.

There are several clouds deployment models available to enable infrastructure as a service.

- Private clouds: enterprise IT infrastructure services, managed by the business, with cloud computing qualities such as self-service, pay-as-you-go chargeback, on-demand provisioning, and the appearance of infinite scalability
- Virtual private clouds: Cloud services that simulate the private cloud experience in public cloud infrastructure
- Public or external clouds: Cloud infrastructure made available to the general public through web browsers or through APIs but offering limited customer control
- Community clouds: Cloud infrastructures shared by several organizations and supporting a specific community; for example, several financial service banks join to form a financial community in a cloud
- And, in the future, hybrid clouds: cloud infrastructures composed of two or more clouds able to interoperate or federate through networking technologies, across data center and organizational boundaries

By provisioning IT services as an IaaS cloud computing utility, service providers can offer revenue-generating services with potentially improved margins in the cloud to customers on an as-needed and pay-as-you-go basis.

In turn, by offering customers the flexibility of capacity on demand, at scale with cloud multitenancy capabilities, service providers can amortize their infrastructures across multiple customers, thus reducing costs. In addition, service providers can benefit from:

- Increased productivity in IT operations
- Reaching or expanding into new markets
- Improved competitiveness with security and application performance capabilities

By using the Cisco USD framework, service providers can quickly deploy the technology foundation for creating and delivering IaaS cloud services, such as computing as a service, business continuity (disaster recovery), virtual desktop infrastructure, cloudburst, and development and testing/quality assurance. The Cisco Unified Service Delivery framework is a single common infrastructure enabling an integrated approach to service delivery, which helps you cut costs, optimize resource use, and deliver a secure virtual experience across your entire service portfolio. Together with a fit-for-purpose cloud operations platform, service providers are able to leverage a cloud based solution to deliver differentiated, competitive services to their customers.

Cisco Cloud Enablement Services Approach

Cisco Cloud Enablement Services for service providers can help you build your cloud business case; virtualize, dynamically provision, and optimize network, computing, and storage resources; enable new IaaS services with security built into every layer of the infrastructure and identify, plan, build and execute an operations platform to support the new environment. This delivers for a secure, compliant cloud environment that provides and maintains an effective catalog of well defined and maintained services for customers.

In addition, the Cisco Services approach, as well as Cisco solutions, not only help bring today's cloud computing services to market quickly but also provide a foundation for other services that emerge as the cloud computing market evolves.

Cisco Cloud Enablement Services enable service providers to address several challenges:

- Strategize, justify, and map a transition to an IaaS cloud architecture and operational model
- Plan and design the appropriate IaaS solution and operational architecture for cloud services that will enable you to cost-effectively realize the benefits of cloud, with the most appropriate technology, security, orchestration, and billing and chargeback mechanisms
- Build, test, and validate your IaaS architecture in a nonproduction environment without affecting other existing deployments and operations?
- Implement, deploy, and operationalize an IaaS architectural approach, including how to deal with the people and process issues that might affect cloud adoption
- Accelerate the adoption of Cisco's Unified Service Delivery architecture
- Optimize your virtualized data center and the operations platform that supports your cloud infrastructure as the use of data center services evolves

Cisco Cloud Enablement Services provide customized strategy, planning and design, implementation, and optimization based on the customer's targeted IaaS offering. Drawing on extensive experience delivering secure end-to-end virtualized data centers, Cisco provides a comprehensive, architectural approach for enabling IaaS that considers the people, processes, and technologies involved across your network, computing, and storage resources. This approach encompasses the selection and customization of infrastructure management tools to orchestrate new services and service-oriented billing and chargeback mechanisms, as well as alignment of people and processes to manage IT services.

As part of its Cloud Enablement Services, Cisco also provides two overlying functions: a program management office (PMO) and architecture management office. The PMO is a common service element providing project governance, communications planning, risk mitigation, and ongoing management status updates for on-time, coordinated delivery of the IaaS architecture.

The architecture management office aligns your business, technologies, and operational architecture to your strategy and utilizes standardization and automation to lower costs for IT services, IT service management (ITSM) complexity, and risk. The office includes a solutions architect providing onsite and remote analysis and reviews of your end-to-end architecture to help ensure adherence to the cloud IaaS architectural design across all service phases.

Cisco Cloud Enablement Services offer:

- Choice: Cisco provides design, implementation, and integration services, allowing you to choose the vendors, partners, and solutions that meet your business needs and create a best-in-class solution.
- A comprehensive, architectural approach: Cisco's approach to cloud enablement is designed to enable the cloud as a new operational model. Cisco utilizes a comprehensive, architectural approach to provide customized cloud infrastructure solutions and uses validated tools and methodologies to accelerate cloud implementation, while mitigating risk. Cisco delivers its enablement services across the enterprise business architecture, technology architecture, data center systems management, network management systems architecture, IT operations platform a, billing and service-level agreement (SLA) architecture, and facilities architecture.
- Extensive virtualized data center and unified service delivery expertise: Many virtualization efforts focus on server, rather than network, virtualization, thus limiting the potential of the cloud approach. By utilizing Cisco's network experience to address the entire cloud architecture and business challenge, you benefit from a holistic, rather than siloed, perspective. Cisco and its ecosystem of partners offer extensive real-world, technology and business expertise across network, storage, and computing resources.
- Best-in-class solutions and partners: A cloud architecture can encompass diverse technologies and business partners, both within and outside the enterprise. Cisco's collaborative partner approach applies the combined expertise of Cisco and our global partner ecosystem to reduce the risk and accelerate the benefits associated with a cloud transition. Cisco Cloud Enablement Services help integrate your technologies, tools, and partnerships into a cloud solution of your choice.

Cisco Cloud Enablement Services

The Cisco Cloud Enablement Services include:

- Cloud Strategy Service
- Cloud Planning and Design Service
- Cloud Onsite Proof of Concept (POC)
- Cloud Preproduction Pilot (PPP)
- Cloud Implementation Service
- Cloud Optimization

Cisco Cloud Strategy Service

The most important question service providers should ask when contemplating a cloud initiative is: How can the IaaS cloud solution help control costs and accelerate time to service revenue?

The Cloud Strategy Service employs ROI tools and in-depth analysis of your current architecture and technology choices – with a primary focus on security – to help you determine the most appropriate cloud strategy and architectural options. It also helps assess your architectural options for various cloud uses, such as disaster recovery and computing as a service. Additionally, this service helps you evaluate data center applications and dependencies, as well as management tools and operations management approaches involved in a cloud transition.

Unlike a device- or application-level only approach to security, Cisco takes a comprehensive architectural approach. Security is integrated into every layer of the Cisco-enabled IaaS architecture, and all service delivery elements have security. This core capability then is tailored to your environment and business mandates.

As part of the strategy service, Cisco provides several security assessments which you can select according to your business needs. These security assessments focus on your needs around, for example, how to build enterprise-class security capabilities into the cloud for customer adoption; enable customers to meet their security compliance requirements in the public cloud; and isolate and secure customers from one another in the multitenant cloud. These assessments include the following:

- Assess the current data center security architecture and identify gaps between current state and future cloud security architecture state
- Assess your existing cloud security architecture, identify areas to strengthen protection, and provide improvement recommendations
- Assess whether an application, content, or network service is suitable for migration to a public cloud

In multitenant cloud environments, users will have both unique and overlapping regulatory, legal, and audit requirements for their business operations. Our services help address these requirements as a cohesive business process for protecting systems and information by helping you to:

- Understand your existing security processes and how they are governed
- Evaluate the effectiveness of these security processes

- Improve security processes to better address requirements
- Analyze operational and technical controls
- Develop a common control framework based on the controls analysis

The end result is that the cloud is now aligned with governance, risk, and compliance (GRC) priorities, in a consolidated and consistent program. As the business' GRC priorities adapt and expand, they can be incorporated smoothly into a cloud GRC program.

Cisco Cloud Strategy Service helps ensure that subsequent cloud architectural development, tools, and process integration and implementation are aligned with achieving business returns.

Cisco Cloud Planning and Design Service

Once a service provider has identified a secure cloud strategy through the Cloud Strategy Service, the next step is creating a detailed architecture design and plan to implement the IaaS cloud solution. This service addresses a crucial question: How can you maximize virtualization, orchestration, service provisioning, and chargeback design with the target IaaS architecture?

The Cisco Cloud Planning and Design Service provides a comprehensive, detailed design service encompassing network, computing, storage, network services, network security, management tools, and processes to realize the target IaaS architecture.

The IaaS design service covers the technology and management tools architectures; security from a holistic end-to-end security framework view (including identity and trust, security event monitoring and correlation, policy enforcement, isolation, and resiliency); cloud operations readiness; service-level agreement and chargeback development; migration planning; and facilities, mechanical, and electrical design.

Cisco offers substantial expertise in the underlying technologies of network, storage, and computing to deliver advanced, virtualized data centers, while detailing operational processes and recommending best practices. As part of Cloud Enablement Services, the Cisco team also will transfer to you your unique intellectual property that benefits your business.

The Cloud Planning and Design Service is crucial to linking strategic objectives with a secure overarching design, which prepares the foundations for the subsequent implementation and integration activities.

Cisco Cloud Onsite Proof of Concept (POC)

Once you have an overarching design for your cloud model, Cisco Cloud Onsite Proof of Concept can help reduce project risk and mitigate implementation barriers so that you can safely and effectively prepare for a fully scaled production deployment of your cloud project. This service addresses how you can build and validate a cloud IaaS infrastructure and use cases without affecting existing data center production deployments and operations.

The Cisco Cloud Onsite Proof of Concept (POC) engagement rapidly delivers the services that support an onsite infrastructure of prepackaged hardware and software

for virtualizing and dynamically provisioning network, computing, and storage resources in a nonproduction environment. As a result of this 30-day engagement, enterprises have a fully working but standalone cloud environment in house, so primary use cases can be validated in a convenient hands-on environment. Service providers can test the primary infrastructure and automation use cases to understand and validate how a cloud infrastructure is built and operated, as well as accelerate decision making on cloud computing projects.

Through this approach, valuable insights can be obtained to drive, support, and accelerate future project decisions and trade-offs before commitment to a preproduction or production environment. The Cloud Onsite Proof of Concept deployment does not affect existing operations as it remains a standalone environment, physically disconnected from the production network.

A Cloud Onsite Proof of Concept infrastructure reduces project risk, accelerates time to revenue and ROI, and helps decrease application and service migration costs, thus avoiding exposure around moving directly and rapidly to a fully scaled production deployment. Cloud Onsite Proof of Concept provides investment protection, and its findings can be repurposed as the project moves toward full production.

Cisco's complementary Cloud Preproduction Pilot adds aspects of connectivity and integration with operations support system (OSS) and business support system (BSS) components and processes.

Cisco Cloud Preproduction Pilot

After validating your cloud infrastructure and use cases with Cloud Onsite Proof of Concept, the Cisco Cloud Preproduction Pilot enables a nonproduction pilot in your environment to test and validate your cloud project. This service addresses how you can safely and effectively build an IaaS infrastructure and test that it can deliver your desired business objectives and benefits without affecting existing production deployments and operations.

This 4-month, interactive and hands-on engagement can help you build your cloud infrastructure with prepackaged hardware and software to virtualize and dynamically provision network, computing, and storage resources in a nonproduction environment and enable new IaaS services with security built into the infrastructure for a secure, compliant cloud environment.

The preproduction pilot service rapidly delivers a functioning Cisco cloud computing environment suitable for deploying applications in a limited scale, preproduction environment. The validation of a fully functional virtual multitenancy data center (VMDC) architecture lays the foundation for broad scale production deployment of cloud computing services.

The service helps shorten your timeframe to a fully scaled cloud production deployment with:

- In-depth analysis of infrastructure and orchestration use cases
- Mapping of use cases to the cloud-based VMDC architecture

- Implementation of a VMDC architecture with limited integration of cloud and customer tools
- Validation of the cloud pilot deployment against expected business and technical objectives by delivering and implementing a proof of concept and system test plan
- Specific, proven knowledge and best practices that provide you with the lowest risk during implementation
- Valuable interactive, hands-on expertise and knowledge transfer for assessing, designing, implementing, and operating cloud architectures

At the end of the engagement, you will have the methodology behind a successful Cloud IaaS deployment and operation and be better positioned to evaluate critical success factors, risks, and the next steps toward a successful, fully scaled, cloud production deployment.

Cisco Cloud Implementation Service

Given the complexity of the transition from current-generation IT approaches to a cloud operational model, implementing a cloud solution is a significant long-term investment, with potential risks. The service addresses: “How do you realize your IaaS cloud architecture – on time, on budget, and securely in your specific environment?”

The Cisco Cloud Implementation Service helps enable the migration from your environment to an IaaS cloud architecture. Cisco manages the implementation and integration of the entire architecture by staging and delivering application migration, provisioning, and service orchestration of your desired cloud environment.

Cisco and its best-in-class partners bring extensive data center and virtualization expertise to the integration and staging of an IaaS cloud and provide you with a fully operational IaaS architecture, an automation tools architecture, and progressive implementation of new cloud-enabled IT services. The service reduces risk around cloud migration and helps ensure that the IaaS architecture aligns with the ROI metrics defined during the Cisco Cloud Strategy Service activities.

The Cisco Cloud Implementation Service uses Cisco services experts, internal Cisco intellectual property, proven methodologies, and Cisco partners to accelerate the implementation of cloud architectures, tools, and processes. Cisco helps to ensure that the architecture blueprint is accurately realized, in an on-time manner. Cisco also provides specialized expertise around the operation of Cisco networking technologies and the unified technology architecture so that you benefit from a leading practices implementation.

The Cloud Implementation Service covers the activities, including technology, security, tools, and facilities implementation; orchestration integration; workload migration; and staging and validation.

Cisco Cloud Optimization

After the implementation of your IaaS, the demand for application services, secure and reliable cloud services, business continuity, and increased agility and scale coupled with lower costs increases the need for optimized asset utilization and a unified approach toward resource and service management. This service addresses how to optimize your resources and assets to support an IaaS cloud deployment.

Cisco provides a uniquely holistic view of all your data center functional areas and their effects on the operational management using virtualization, segmentation, and cloud technologies. As a service package within Cisco Data Center Optimization Services, which takes advantage of this unified perspective to provide a set of activities for building custom solutions, Cisco Cloud Optimization optimizes your data center architecture for desktop virtualization and cloud services by unifying your application, storage, and server traffic into a comprehensive framework. The service assesses and provides guidance on your management automation tools – specifically, orchestration and provisioning tools and assurance tools – with recommendations on the management tools infrastructure necessary for supporting a cloud computing architecture that is capable of offering cloud IaaS. Cloud Optimization can help to:

- Accelerate your decision as to whether, how, and when you should transition to a cloud IaaS architecture
- Develop a basis for your decisions on how to best manage a cloud IaaS architecture with our Cloud Management Automation Assessment
- Provide valuable information and recommendations from Cisco's cloud solutions architects, whose expertise and experience can help facilitate and speed up your overall cloud adoption and management plans while decreasing costs
- Optimize your virtualized data center and the operations platform that supports your cloud infrastructure as the use of data center services evolves

Cisco consulting engineers deliver this service package using industry-leading tools and best-practice methodologies to mitigate implementation risks and accelerate your return on investment. Our experts periodically assess and review detailed design standards for your IaaS and evaluate the ability of your applications to meet your future requirements.

Cisco and its largest customers use best-known methods as blueprints for success. With these methodologies, Cisco supports and guides you as we work through your cloud project. We help you meet tight timelines and facilitate high availability and security as we mitigate risk through proactive recommendations, escalation support, and continuous learning.

Cloud Optimization involves recurring analyses of the performance data and configurations from your network and your devices to give you a continuous, strategic view of your cloud environment. Ongoing communication with Cisco experts keeps you informed about new products and software features.

Benefits of Cisco Cloud Enablement Services

What is crucial to successfully exploiting cloud computing is to recognize this revolutionary operational model is a new operational business model. Security, systems management tools, chargeback mechanisms, operational procedures, and SLAs are all important, in addition to the network, computing, and storage technologies.

The Cisco Services approach draws on expansive data center and virtualization expertise, proven best practice methodologies, and Cisco's unique intellectual property to support cloud-enabling technologies. Cisco Cloud Enablement Services help service providers:

- Accelerate the development of a financially justified cloud strategy with a measurable ROI
- Help ensure that IaaS infrastructure, management, people, and processes maximize the success of the cloud transition and help ensure that its benefits are achieved
- Accelerate the development and implementation of an IaaS architecture, integrated tool design, and chargeback and security mechanisms validated by Cisco
- Create a phased migration plan to help ensure the successful adoption of the new cloud operational model
- Accelerate time to value of an IaaS architecture for cloud services delivery and service revenue creation

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 combination of network and application-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 cloud architecture for your business.

The Cisco Cloud Enablement Services are delivered by 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.

We offer the following expertise:

- Data center solutions architect
- Layer 2 and Layer 3 infrastructure architect
- SAN architect
- Layer 4 to Layer 7 architect
- Virtualization architect
- Virtualization architect with service orchestration expertise
- Cloud automation solutions architect
- Information security architect
- Network management architect with service orchestration expertise
- Customer system architect and administrator
- Project management

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.

Availability

Cisco Cloud Enablement Services are widely available. Contact your Cisco account manager about availability in your area.

For More Information

For more information about Cisco Cloud Computing, visit: www.cisco.com/go/cloudenablement.



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