

# Cisco's Application-Centric Cloud: Enable Your Company with Fast IT



## What You Will Learn

Business and IT organizations are facing major challenges. Market disruptions are increasingly frequent, pressuring businesses to reinvent themselves to remain competitive. In an increasingly digitized environment, such business agility requires IT agility: the ability to efficiently develop and deploy new or updated applications. Public and private cloud infrastructure provides some of that agility with lower-cost, easily provisioned computing, storage, and network services. But these aren't sufficient for business agility. The Cisco® application-centric cloud solution expands the focus up the cloud stack—to technologies designed to greatly simplify the development, deployment, and maintenance of applications—bringing improved IT agility, and therefore improved business agility. Our consultants can help you bring Fast IT and all its financial benefits to your organization.

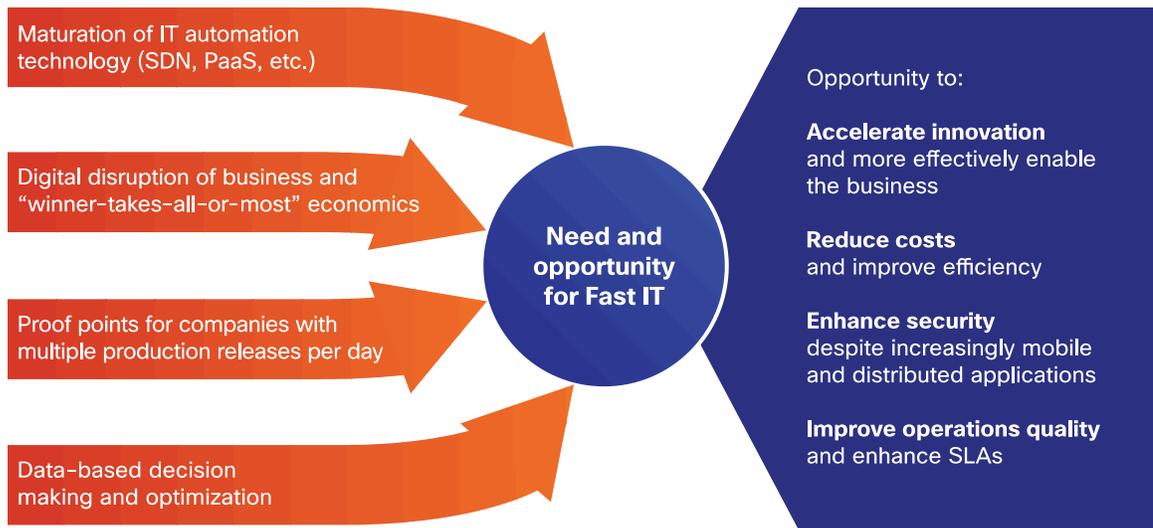
## Business Today Needs a New Kind of Cloud Infrastructure

The strategic priority of cloud-enabled IT organizations is to improve IT agility and customer satisfaction while reducing costs and risks. However, traditional enterprise cloud technologies concentrate on aspects of the data center infrastructure: virtualization and low-level management of computing, storage, and networking resources. They're not focused on processes for simplifying the development and automating the deployment of new or updated applications to solve the organization's pressing business problems. Fast IT addresses these challenges, delivering an integrated stack that combines infrastructure automation with an accelerated and higher-quality software development lifecycle (Figure 1).

According to Gartner, we are now in an era of "bimodal IT": a transition period in which traditional IT and Fast IT coexist. "Mode 1 IT (the 'safe' mode) is intended to support the delivery of safe, accurate and predictable systems. However, this is at odds with the expectations of many businesses, as well as their partners and customers, who

are in Mode 2 (the ‘fluid’ or ‘fast’ mode), which delivers faster results, more freedom of choice and more insightful interactions.”<sup>1</sup>

**Figure 1. The Context for Fast IT**



A technology-enabled market transition is underway to respond to these changes. New technologies, such as cloud application management platforms, software-defined networking, integration platforms, and automated development tools, have come together to enable application development efficiencies that have not previously been possible. Companies need a new kind of cloud infrastructure that incorporates these technologies holistically and delivers precisely what application and software development teams need: a powerful, automated application delivery infrastructure coupled with an integrated tool chain at the top, delivered “as a service” to the business-aligned application teams.

Our application-centric cloud solution is such a technological foundation. It is a key enabler of Fast IT in both the data center and the Intercloud,<sup>2</sup> offering specific capabilities that let you develop and deploy applications with greater agility and efficiency. Among other advantages, an application-centric cloud platform can reduce total IT cost by 20 to 25 percent,<sup>3</sup> dramatically accelerate application development,<sup>4</sup> and enable stronger business innovation and transformation.

### The Power of an Application-Centric Cloud with Cisco Consulting

How can your organization achieve the advantages of an application-centric cloud? Doing so goes beyond adopting a technology platform: you need to make sure that your technological change is tailored to your organization. You must develop a business case, determine how changes affect your organizational structure and processes, and promote adoption with appropriate applications to achieve the efficiency benefits you need—all while reducing risk and helping ensure compliance.

<sup>1</sup> Predicts 2015: Innovators Must Develop a “Split Personality” to Support Fast and Safe Digital Business, [www.gartner.com/doc/2944018](http://www.gartner.com/doc/2944018)

<sup>2</sup> [www.cisco.com/c/r/en/us/internet-of-everything-ioe/cloud/vision/index.html](http://www.cisco.com/c/r/en/us/internet-of-everything-ioe/cloud/vision/index.html)

<sup>3</sup> Cisco Consulting Services, 2015

<sup>4</sup> This is agile improvement in development speed: that is, an improvement in the number of user stories and features released per iteration (source: Cisco Continuous Delivery program)

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Our consultants are ready to help you transition to an application-centric cloud and, consequently, to Fast IT. With this transition, you'll be able to dramatically reduce the time needed to configure applications and deploy new capabilities, increase your IT and business agility, and improve your return on business-enabling IT spending.

We will help you manage the transition to Fast IT by baselining and monitoring four main metrics: cost, speed, risk, and quality. Although conventional wisdom says you can optimize only two of these metrics at the expense of the third, an application-centric cloud can actually help you optimize all of these on your way to Fast IT and greater business agility.

## A New Business Operating Model

At a time in which IT regularly changes the way that businesses run, every company must become a technology company. Digital payments and currency are disrupting the banking and financial systems, Uber and Lyft are disrupting transportation, streaming companies such as Netflix are disrupting traditional entertainment venues, and 3D printing is disrupting manufacturing. In all cases, technological innovations are enabling new companies to enter entrenched industries and markets. Businesses need technology at their core both to remain competitive and to implement change.

As a result, applications are becoming increasingly critical to support business needs. As lines of business (LOBs) rely on applications to maintain their differentiation, the number of applications is growing exponentially as applications migrate to mobile devices and, in some cases, to the network edge. Application development and deployment agility are now crucial. At the same time, business innovation must occur in an iterative and agile way ("fail fast"), promoting constant change in applications. Certain factors are obstacles to achieving the required agility. These include outdated and inflexible business processes, an inflexible IT infrastructure, long provisioning and deployment times for infrastructure and applications, and the inability to deploy applications at scale with a smooth user experience.

The development and operations (DevOps) approach to applications is another important consideration. According to Gartner, "By 2016, DevOps will evolve from a niche strategy employed by large cloud providers to a mainstream strategy employed by 25 percent of Global 2000 organizations."<sup>5</sup> Vanson Bourne Technology Market Research expands on this idea, stating, "Many organizations are achieving significant and measurable benefits from DevOps—anywhere from between 17 percent to 23 percent improvement in key business metrics such as revenue, time-to-market and new customer acquisition."<sup>6</sup> Companies are consequently turning to public cloud providers that offer advanced capabilities to boost developer efficiency. However, these solutions don't work for applications with close ties to other internal applications and data. Our application-centric cloud solution does.

In the past, much of the work to improve application development has involved programming language, tool-set, and versioning features. We now know these features are insufficient to address many of the issues that arise during the complete application lifecycle: from inception to software development to deployment and maintenance. Usually, the software development environment operates in a waterfall manner—a sequential process in which you should move to a phase only after the preceding phase has been reviewed and verified—with manual application lifecycle management. Application deployment, updating, and maintenance traditionally require long provisioning lead times and have many challenges related to scale.

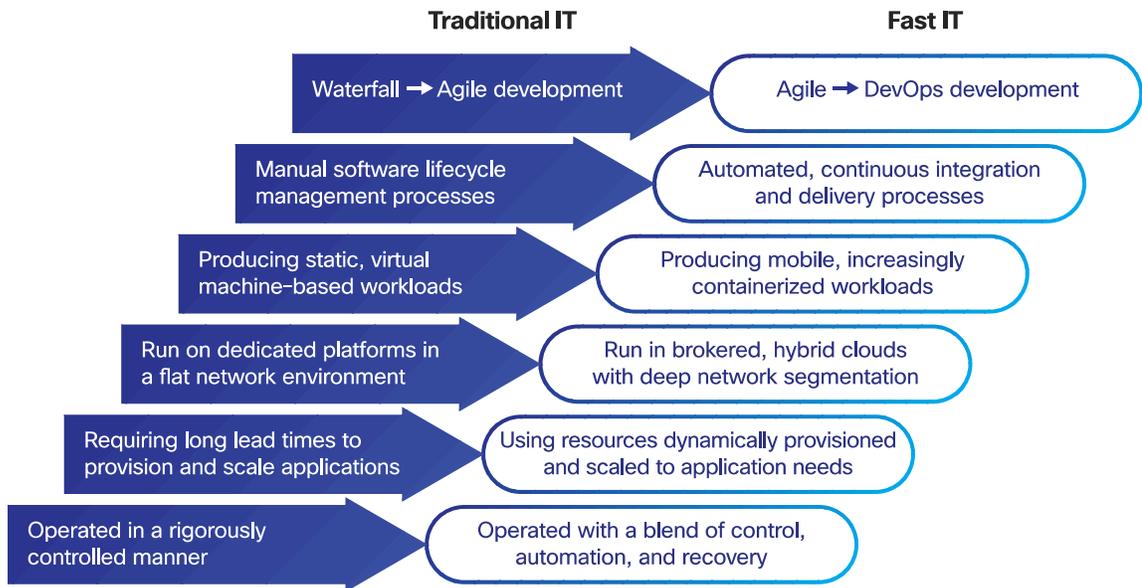
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<sup>5</sup> Gartner Says By 2016, DevOps Will Evolve from a Niche to a Mainstream Strategy Employed by 25 Percent of Global 2000 Organizations, [www.gartner.com/newsroom/id/2999017](http://www.gartner.com/newsroom/id/2999017)

<sup>6</sup> What Smart Businesses Know About DevOps, [www.ca.com/us/~media/Files/whitepapers/techinsights-report-what-smart-businesses-know-about-devops.pdf](http://www.ca.com/us/~media/Files/whitepapers/techinsights-report-what-smart-businesses-know-about-devops.pdf)

The desired IT environment must be set up for agile software development (for example, using the Scrum and Kanban frameworks). It must support the whole application lifecycle and provide automated, continuous delivery and continuous integration. Static workloads must be mobile and move around in a distributed cloud-of-clouds infrastructure. Infrastructure and other cloud resources must be dynamically provisioned and scale as needed. Figure 2 illustrates this evolution.

**Figure 2. The New IT Environment Model**



### Application-Centric Cloud and Fast IT

Fast IT has many benefits: faster provisioning of applications, better and faster decision making, capture of data in motion, increased visibility into security breaches, and an expanded tool set to transform business processes. In a digitized company, the speed at which applications are developed, tested, and deployed determines the speed at which business solutions can be put in place. In all cases, this “time to capability” is increasingly critical for business success.

Central to achieving this needed application agility are the underlying platform, the development tool chain, and a secure and reconfigurable infrastructure. An application-centric cloud provides a specific capability that brings together several technology solutions to enable more agile and efficient application development and deployment. It is a critical enabler for Fast IT—or even the single most important enabler. An application-centric cloud provides an integrated platform that implements continuous delivery, adaptive scaling, federated hybrid infrastructure as a service (IaaS), and policy-based secure networking. Application teams can consume an application-centric cloud platform as a single, integrated service.

The application-centric cloud platform includes three major layers of solution components:

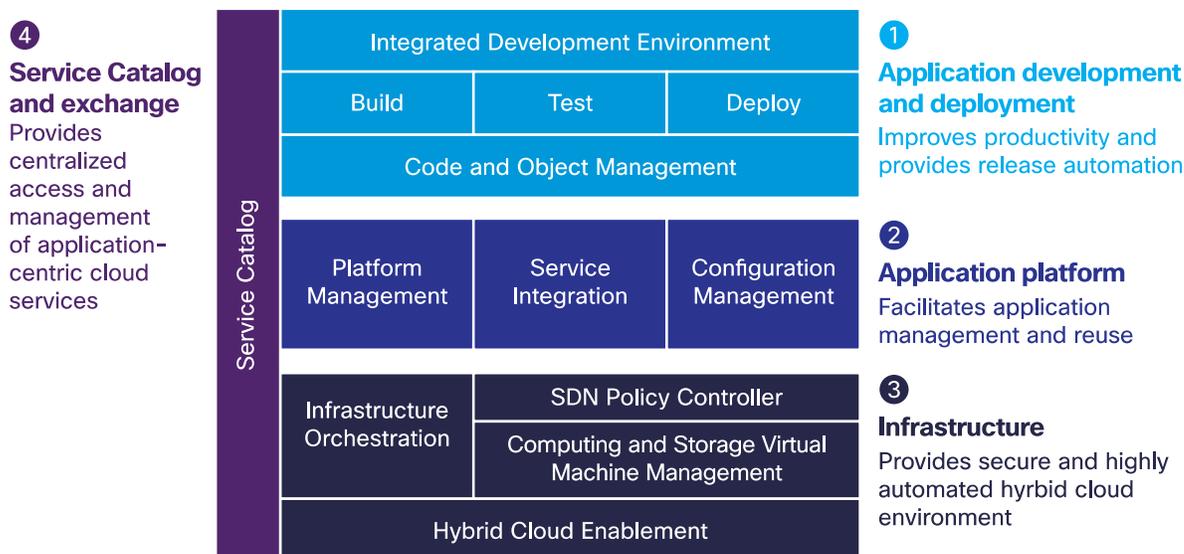
- The application development and delivery layer standardizes and integrates development, testing, and code management tools (integrated development environment; build, test, and deploy environment; and code and object management) to increase productivity and provide release automation.

- The application platform layer combines a platform-as-a-service (PaaS) component, a service integration component, and configuration management tools to facilitate application management and reuse.
- The infrastructure layer provides a highly automated and secure environment to support applications in a hybrid cloud environment. This layer includes infrastructure orchestration, software-defined networking (SDN) policy control, and computing and storage virtualization management components.

In addition, a service catalog and exchange component spans all three layers, providing centralized access and management of application-centric cloud services.

Figure 3 illustrates these layers and solution components.

**Figure 3. Application-Centric Cloud Solution Components and Representative Control Stack Technologies**



The main capabilities of an application-centric cloud include self-service provisioning of all application components; automated provisioning of network resources and services with deep segmentation; continuous integration and delivery automation; lightweight containers with adaptive scaling; application-level health monitoring and telemetry; and reusable business, data, and technology services.

### Application-Centric Cloud Enablement with Cisco Consulting

Five critical tasks are required to accelerate the transition to Fast IT:

- Measurement of metrics of value to be captured and tracked against targets and business cases
- Definition of IT service management (ITSM) and application lifecycle management (ALM) process models
- Use of automated technology platforms such as those provided by an application-centric cloud and its related technologies
- Creation of an IT operating model impact assessment and change plan
- Development of a structured use-case adoption plan and architectural roadmap

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Cisco is a recognized thought leader in the cloud space with an extensive global practice in consulting services. We can fully support your organization in any or all of these critical areas to achieve a smooth transition from your existing IT processes and models to Fast IT.

Our consultants have:

- Extensive experience developing, managing, and defining business cases and development plans
- A framework to quickly and effectively understand an enterprise and its needs
- A structured engagement methodology
- Assets including business models, process-impact models, and technology stacks
- Unique knowledge from working with Cisco IT and Cisco business units that are critical enablers of many application-centric cloud elements

## Conclusion

An application-centric cloud is a model for developing, deploying, maintaining, and managing applications in a fundamentally new way that brings new efficiencies to application lifecycle management. When coupled with strong adoption and business-change support, an application-centric cloud is a powerful foundation for Fast IT because it makes complete lifecycle management more time and resource efficient to implement. Bringing Fast IT to a cloud-based IT environment enables the IT organization to become both a valued partner to lines of business and a leader of innovation across the organization.

Cisco Consulting and Professional Services offerings have consistently been ranked highly in the market. IDC ranked Cisco as the number-one provider of cloud professional services in its 2013 professional services market study<sup>7</sup> and as a strong contender in its 2014 analysis of cloud professional services vendors.<sup>8</sup> Market analysts also recognize Cisco as a leader in private cloud solutions.<sup>9</sup>

Cisco consultants can help your organization implement an application-centric cloud solution by designing the application-centric cloud platform, managing its implementation, and providing change-management and migration processes. They can also help manage and improve your application-centric cloud through metrics-based optimization.

The Cisco Consulting approach to helping your organization move toward Fast IT with an application-centric cloud solution can be summed up in three words: smart, simple, and secure. It is smart, because it capitalizes on intelligence and automation to improve operational agility. It is simple, because it reduces complexity and costs by managing IT resources as a unified pool—whether the resources are physical or virtual, mobile or fixed, on premises or off premises—and enabling an open and programmable infrastructure. And it is secure, because it expands the security perimeter and uses analytics to improve your system's visibility and security response.

## For More Information

Please contact your Cisco Services sales representative to connect with the [Cisco Consulting Services team](#) and learn more about how we can help your IT organization move toward an application-centric cloud and achieve Fast IT.

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<sup>7</sup> [blogs.cisco.com/datacenter/cisco-professional-services-for-cloud-ranked-1-in-idc-survey-announced-at-ciscolive](https://blogs.cisco.com/datacenter/cisco-professional-services-for-cloud-ranked-1-in-idc-survey-announced-at-ciscolive)

<sup>8</sup> [www.cisco.com/c/dam/en/us/solutions/collateral/enterprise/enterprise-medianet/marketscape-cloud.pdf](http://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise/enterprise-medianet/marketscape-cloud.pdf)

<sup>9</sup> [www.cisco.com/c/dam/en/us/products/collateral/cloud-systems-management/intelligent-automation-cloud/the\\_forrester\\_wave\\_private\\_cloud\\_solutions\\_q4\\_2013.pdf](http://www.cisco.com/c/dam/en/us/products/collateral/cloud-systems-management/intelligent-automation-cloud/the_forrester_wave_private_cloud_solutions_q4_2013.pdf)

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