

EARLY RETURNS FOR CISCO APPLICATION CENTRIC INFRASTRUCTURE



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IDC examines Cisco IT's use of Application Centric Infrastructure, and finds a lot of future promise.

These are early days for Cisco® Application Centric Infrastructure (Cisco ACI™), the highly-automated, policy-driven architecture that promises to deliver software flexibility with the scalability of hardware performance. But it's already in use by Cisco IT, and according to industry experts, the early returns are promising.

"ACI has arisen to tackle some real problems and opportunities," says Brad Casemore, director of research for data center networking at IDC. "It corrects a lot of traditional issues related to provisioning, alignment of applications and infrastructure resources, network management, and workload visibility."

IDC quantified the network-related benefits that it projects Cisco will achieve in the first data center where Cisco ACI is now employed. The results? An expected 25 percent initial CapEx savings as well as 44 percent average IT staff time savings in technology provisioning and network operations.¹

According to the IDC Business Value Brief, sponsored by Cisco, IDC believes that Cisco will be able to leverage ACI to make its IT operations more efficient, reduce its data center-related infrastructure costs, and minimize risk by lowering the incidence of revenue-impacting downtime, among other benefits. IDC also believes that Cisco will be able to use ACI to increase its non-IT staff productivity and potentially increase its revenue by speeding up application deployments and enhancing the flow of information across the organization.²

"Spinning up a new virtual machine takes minutes, but provisioning the network can take days or weeks," says Casemore. "ACI eliminates the gap between the speed of application development and the speed of network provisioning."

FASTER PROVISIONING AND POLICY MANAGEMENT

"I believe the most important thing IT teams must do is deliver new capabilities to the business more quickly," says John Manville, senior vice president of IT at Cisco. "It's so competitive out there, and application teams are on the frontlines. Infrastructure teams are often one level removed, but that's changing."

Infrastructure teams are tasked with delivering the entire stack—including application environment, middleware, and compute, network, and storage resources—to support the frontline applications. But it can no longer take days or weeks, Manville explains. It must happen quickly, simply, securely, and with less manual intervention.

"It makes me squirm to say it, but in the past, the network sometimes got in the way," Manville says. "Manual provisioning and policy management take time, and the only way to go faster is through automation. That's why ACI is a major step forward for us. It allows the infrastructure to be as flexible as the application teams need it to be."

It's also altering the way Cisco application and infrastructure teams work together, shifting from a hand-off-and-wait pattern to a more synchronized cadence. Cisco IT can now conduct continuous, more iterative application development, with the backing of a dynamic infrastructure that can flex up or down as needed.

“We don’t just view ACI as a new data center network,” says Manville. “We see it as a transformative operational model that makes our infrastructure teams more valuable and relevant for the application teams.”

“IT groups must work together to solve the needs of the business, not in silos focused on their specific gear,” Casemore adds. “ACI removes a lot of complexity and barriers. It makes it easier for the network to support applications, and for IT groups to work together to address business priorities.”

A PHASED ROLLOUT

Transitioning to Cisco ACI can be done in a phased manner, focusing on certain applications or workloads. And because it is built on open standards and features open APIs, it can integrate with a variety of environments, both physical and virtual.

“Cisco is working hard to consider previous infrastructure investments,” says Casemore. “Companies will need Cisco Nexus® 9000 Series Switches, but other preexisting systems can be leveraged. ACI can tie into open source projects like OpenStack. And it uses the same policy model as UCS [Cisco Unified Computing System™, built on Intel® Xeon® processors], bringing the network in line with the needs of servers and applications.”

Cisco IT has started with a single data center and plans to deploy Cisco ACI to the rest of the company’s data centers over the next two years.

“ACI is one of those things that must be considered,” Casemore insists. “Especially when it’s time for a network refresh, or if your company is virtualizing heavily, or migrating to the cloud. ACI makes the network more cloud- and virtualization-friendly.”

1 IDC Business Value Brief: Cisco ACI , sponsored by Cisco, May 2014

2 IDC Business Value Brief: Cisco ACI , sponsored by Cisco, May 2014

GET ADDITIONAL ANALYST INSIGHT

To get the [IDC Business Value Brief](#) on Cisco ACI, visit the [resource page at UnleashingIT.com](#).

I THE ROADMAP TO CISCO ACI

More than a set of new technologies, Cisco ACI represents a philosophical shift in how enterprise infrastructures are built and administered. In many cases, it requires a restructuring of longstanding IT operations and processes.

“A lot of people are asking how to get started with ACI,” says Jim Scaduto, service delivery executive for Cisco Services, “and the answer is Domain Ten.”

Cisco Domain Ten® is a holistic framework that transforms and simplifies IT. It focuses on ten crucial areas—or domains—that must be considered in order to streamline IT systems and operations in support of business priorities:

1. Infrastructure and environmentals
2. Abstraction and virtualization
3. Automation and orchestration
4. Customer interface
5. Service catalog
6. Financials
7. Platform
8. Applications
9. Security and compliance
10. Organization, governance, and process

“Domain Ten helps identify gaps to create a roadmap for consolidation, virtualization, and cloud in preparation for ACI,” Scaduto explains. “It focuses on people and processes in addition to systems, easing routine administrative tasks as well as the delivery of new services and capabilities.”

Cisco Services can assess a company’s IT maturity, develop a roadmap for transformation, and help with integration—for all domains collectively or each domain individually.

“ACI is a journey, and that journey starts with Domain Ten,” says Scaduto. “We’ve done this for Cisco IT and others, and can deliver advice and best practices. We can even bring Cisco IT engineers to the table so they can relay their experience with Domain Ten and ACI.”

To learn more about the Cisco Domain Ten Framework, visit the [Unified Data Center resource page](#) at [UnleashingIT.com](#).

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