Organizational Transformation in the Data Center

Increasingly IT staffs are being challenged to address major market, globalization, and technology trends. Responding to these challenges successfully requires organizationally-supported, significant shifts in the data center architecture and IT staff mindset.

In the past six years alone, Cisco’s data center architecture has undergone two major transformations. In 2004, the data center was a highly fragmented organization aligned by lines of business. In a segmented infrastructure, each line of business managed its own lifecycle (plan-build-run). The Network and Operations groups were managed separately outside the data center organization.

In 2006, Cisco IT overhauled its data center into a technology-based organization similar to that of many large enterprises (Figure 1). Moving from a line-of-business to a technology orientation, the infrastructure and IT staff skillsets aligned with point technology silos.

Figure 1  Cisco IT Data Center Organization: 2006-2007

The technology-based organization brought several improvements. Resource pooling with similar skillsets enforced domain optimization, data center services were shared across multiple lines of business, and technology-based standards could be developed.

Chiefly, the benefits of storage consolidation (which had started in prior years) and virtualization continued to drive value for IT, in productivity and other business gains. But processes, resources, and skillsets still were fragmented. And the potential return from virtualization initiatives could not be fully realized.

In 2008, Cisco IT transformed the data center once again. This latest iteration is based on a shared infrastructure (Figure 2). Virtualized pools of data, storage, compute, and application resources can be allocated and provisioned dynamically to meet changing business, application, and service-level requirements, as well as Cisco’s diverse business users.

Because the new model focuses on the functional nature of providing services in the data center, Cisco IT combined all of the architects responsible for networking, storage, and compute services into a single group. Designers for these functional areas are unified under one director who ensures design consistency throughout the data center.
The current organizational model strongly emphasizes service lifecycle management. This approach aligns business and technical requirements through all six phases of the network lifecycle: prepare, plan, design, implement, operate, and optimize (PPDIOO).

This service-oriented data center more heavily relies on the network than ever before. In many ways the network now becomes the underlying foundation upon which the virtualized data center infrastructure runs. And IT becomes a service (infrastructure) provider to the business as a whole.

**Figure 2  Cisco IT Data Center Organization: 2008-Today**

In this new organizational structure, Cisco IT has the ability to provision all services in the data center as a true system. Instead of relying on separate teams to drive infrastructure deployments, e.g., the applications team requesting servers and the server team requesting storage, provisioning can now be programmatically and automatically deployed. Of course such an approach not only requires technology changes but also people and process changes. For example, it is important for storage teams to understand how to interact with a network fabric that is run by another team.

**Transformation Brings Stronger Business Alignment**

The degree to which an IT department can strengthen and improve its relationship with the business depends on how far it has gone in transforming itself. In a January 2008 survey conducted by the Economist Intelligence Unit on behalf of Cisco, more than 950 IT professionals from 21 industry groups worldwide were polled about their experiences regarding IT transformation. Companies that have recently completed one or more transformation projects or are currently undergoing a transformation were significantly more likely to say that their IT divisions were working more closely with the business. About 60 percent of companies that are undergoing or have recently completed a transformation agree or strongly agree that their IT departments seek opportunities with non-IT departments to improve business practices, compared with 46 percent of respondents whose firms are still considering or not considering a change.

Among the other key survey findings:

- Fifty-seven percent of respondents said that improving IT’s responsiveness to new business requirements was their company’s top IT objective for 2008, more than any other response.

- To make transformation effective, frontline workers need up-to-date information about company and division objectives. For example, about 49 percent of CIOs said that contributing to business process optimization was one of three top objectives in 2008.
Companies that have completed IT transformation initiatives report cost savings and smoother operations as a result. Forty-six percent of all respondents expected IT transformation efforts to result in cost savings, and among companies that have recently completed such an initiative, 43 percent of respondents cited this as a top benefit, along with smoother, more flexible operations (40 percent), improved communication with customers and partners (32 percent), and increased profits (31 percent).

No doubt, the data center will continue to evolve in response to market, technology, and other trends. IT skillsets and organizational alignment must continuously be assessed and ready to transform, as needed, to keep the business competitive and growing.

For more on strategies and operations in the data center, see the full Cisco IT Data Center Experience at www.cisco.com/go/virtualdatacenter.