Cisco IT Brief

New Data Center in 2 Months, with HyperFlex.

In early 2017, one of our IT services teams approached our Early Technology (ETE) infrastructure team in San Jose with an urgent request. The team needed a new data center to deliver a set of applications to 500 Cisco employees in a particular region. In just two months.

Most Cisco regions have two small ETE data centers built on Cisco Unified Computing System (UCS) blade servers and network-attached storage. The Asia Pacific (APAC) region had one ETE data center, in Singapore. “Usually, a data center located in the same general region as the users delivers good performance,” says Travis Norling, Cisco IT manager with the ETE team. “But in this case, the data center had to be in the same country as the primary users: India.”

The IT services team had another unusual requirement. Ordinarily our infrastructure teams deliver virtual machine as a service (VMaaS), while IT services teams manage the application. But not this team. They wanted a combination of VMaaS and infrastructure as a service (IaaS). This arrangement would spare them from having to manage the hypervisor and network but still give them control over resource allocation. “We agreed that this operational model would work,” Norling says. “The reason is that we in the ETE infrastructure team work as partners with IT service owners. We know their business, processes, and roadmap.”

We decided to stand up a new ETE data center in India. That would meet the service owner’s location requirements. It would also provide a secondary ETE data center in the APAC region, which had been on our to-do list. But we had to move fast. “Standing up a brand-new new remote data center pod ordinarily takes six months,” says Norling. “We had two months.”

Simple solution: data center “in a box”

We met the deadline using Cisco HyperFlex hyperconverged infrastructure, which combines networking, storage, and virtualization in one box. HyperFlex is well suited for our regional ETE data centers because it’s:

- Quick to deploy. We ordered HyperFlex with a single SKU. We didn’t have to integrate servers and storage because HyperFlex uses software-defined storage.
- Compact. The entire 4-node system fits in 10 rack units. That gave us a wider choice of locations for the data center. (We selected Bangalore.)
- Simple to manage. “If we had used traditional infrastructure, configuration and management would require three engineers—for networking, virtualization, and storage,” says Norling. “With HyperFlex, one person, a virtualization engineer, configures and manages everything.”
- Easy to scale. When we add more services and users, we can independently add compute or capacity. Adding more compute, for instance, doesn’t also require us to buy more capacity.

Fast Implementation

We drop-shipped a 4-node system with 40 TB of hybrid storage: SSD for logging and caching, and SAS for everything else. The deployment team in Bangalore had experience with Cisco UCS blade servers, but not with Cisco HyperFlex, so we put together a simple build guide. Just 15 steps covered everything, including rack placement and patching. That’s about half the length of a build guide for traditional infrastructure.

After handoff, our San Jose infrastructure team configured the cluster and virtualization. For practice, the virtualization team deployed HyperFlex twice. Setup and validation for networking, storage, and virtualization took four weeks the first time and two

weeks the second time. Configuring HyperFlex using the installation wizard took just three hours. At the end we had setup code that we can reuse for rebuilds, validation, and replication.

So far the system hosts Cisco Unified Communications Manager, Cisco Spark, and FTP services. The IT services team can allocate cluster resources for their applications without any assistance from the infrastructure team. They use VMware vCenter, the same management interface they use for traditional Cisco UCS infrastructure.

Norling concludes, “The biggest benefits of HyperFlex for our small, regional data center is speed of deployment. That’s a direct result of the simplicity of combining networking, storage, and virtualization in one box.”

Now we’re thinking of other ways to take advantage of HyperFlex to make IT faster—as fast as our business.

For More Information

To read additional Cisco IT case studies about a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT.

To view Cisco IT webinars and events about related topics, visit Cisco on Cisco Webinars & Events.

Note

This publication describes how Cisco has benefited from the deployment of its own products. Many factors may have contributed to the results and benefits described. Cisco does not guarantee comparable results elsewhere.

CISCO PROVIDES THIS PUBLICATION AS IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some jurisdictions do not allow disclaimer of express or implied warranties; therefore, this disclaimer may not apply to you.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**