Bring Your Own Device (BYOD)
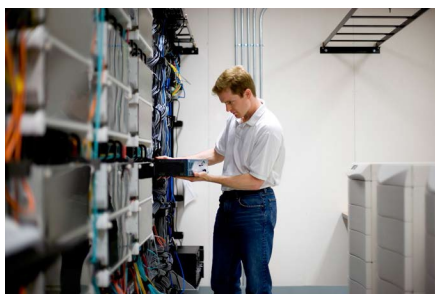## Cisco IT Insights

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Business Impact

Gave employees the flexibility to work from anywhere, with their choice of device

Reduced the desktop total cost of owner-ship (TCO) by replacing company-owned laptops with less-expensive thin clients or employee's personal devices

Increased protection of intellectual property by storing files in secure data center instead of employee devices

Challenge

Reflecting a social trend, Cisco employees want to use personal devices, such as smartphones and tablets, for work. In the absence of a formal Bring Your Own Device (BYOD) program, employees were finding their own ways to access their email and work files from personal devices. Thousands were using public cloud storage services, most of which lack enterprise-calibert availability and security.

Giving employees the flexibility to use any device would do more than increase employee satisfaction; it would also save money and strengthen security. For example, replacing even a small percentage of company-owned devices with employee-owned devices would significantly lower capital costs and IT management costs. And storing intellectual property in Cisco IT's data center would provide better protection than storing it on employee laptops.

Solution

Cisco IT launched an "Any Device" initiative to give employees the flexibility they expect while also meeting Cisco IT's cost and security requirements. The goal is empowering employees to securely connect to Cisco IT voice, video, and data services from anywhere, using any device.

The Any Device Initiative includes several IT programs, including an always-on VPN client that employees provision themselves, desktop virtualization, and a private storage cloud.

Connect Using Any Registered Personal Device
Employees appreciate Cisco AnyConnect® because it is always on, saving the trouble of repeatedly entering passwords throughout the day and waiting for a connection. They also appreciate the excellent user experience, because the client automatically selects the best protocol depending on whether the session includes voice, video or data.

Desktop Virtualization: Work With Virutal Desktops on Any Device
Virtual desktop infrastructure (VDI) refers to hosting virtual desktops on a central server. Using the Cisco Virtualization Experience Infrastructure (VXI), selected Cisco employees can enjoy a full desktop experience (including voice and video) from a choice of client devices, including thin or zero clients, company-owned laptops or ultrabooks, and personal devices.

Cisco IT started with two use cases to lower desktop total cost of ownership (TCO). One use case is allowing 7000 employees who had two company-owned laptops to replace one with any personal device. The other use case is replacing laptops given to Cisco extranet partners with a lower-cost Cisco Virtualization Experience (VXC) endpoint.

Private Storage Cloud: Access Files from Any Device
Cisco IT does not want employees to user consumer-oriented public cloud services to back up their work because of the risk of lost intellectual property and insufficient availability and disaster recovery measures.

Cisco IT is currently conducting a proof-of-concept for the internal storage cloud (S-Cloud) as a part of the Any Device initiative. Built on the Cisco Unified Computing System™ (UCS®) and enterprise storage, S-Cloud uses a commercial middleware to support access from Windows, Mac, Linux, Apple iOS, and Android operating systems. S-Cloud can scale to back up 100,000 desktops for Cisco employees and contractors.

Business Impact

- Minimum time for new employess to receive desktops shrank from 5-10 days to just minutes
- 61 percent of employees using Cisco VXI reported productivity savings averaging 69 minutes weekly.
- Unlike most thin clients, Cisco VXC endpoints provide excellent voice quality because traffic travels point to point, just as it does with standard IP phones.
- Cisco IT expects to provide virtual desktops to 10,000 internal users by March 2013, giving most employees a Cisco VXC endpoint or Cisco VXC 4000 software appliance.

Results

Borderless Experience, for High Productivity and Employee Satisfaction

In a survey of Cisco VXI users conducted by Cisco IT, 61 percent of respondents reported an increase in productivity, an average of 69 minutes weekly. They said that the main benefit of VXI was being able to connect to a persistent desktop from multiple devices.

In addition, the Cisco VXI accelerates onboarding of new employees, both from acquisitions and at Cisco intranet partners. These employees can be productive right away, working with a virtual desktop on their own devices, instead of waiting a week or more for a new laptop. Cisco IT can fulfill urgent requests for a desktop within minutes, compared to 5-10 days before the Cisco VXI Smart Solution.

Employees who use the Cisco AnyConnect Mobility Client are also more productive because they can work from anywhere, and no longer need to re-enter a one-time password every time they lose a connection.

Lower Desktop Total Cost of Ownership

Cisco VXC endpoints contain no moving parts, increasing desktop client lifespan from three years to five-eight years, reducing inventory requirements. What's more, operating system and application upgrades are centralized, saving considerable time for Cisco IT. At a partner extranet site in India, Cisco IT no longer needs to refresh the laptop fleet every three years, but instead spends just one quarter testing new applications in the VXI environment.

Increased Security for Intellectual Property

For employees who use the Cisco VXI Smart Solution, including extranet partners, Cisco information never leaves the Cisco data center. This is a more cost-effective form of security than implementing leased lines between partner sites and Cisco data centers.

Securing access to the Cisco enterprise network also takes less effort for Cisco IT, because the Cisco AnyConnect Secure Mobility Client fully automates authentication and authorization. And when an employee informs Cisco IT of a lost device, Cisco IT can immediately terminate any active VPN sessions.

For More Information

View all Cisco on Cisco - Inside Cisco IT success stories at:
http://www.cisco.com/go/ciscoit

Employee Mobility Services Overview
http://www.cisco.com/web/about/ciscoitatwork/network_systems/anyconnect_deployment.html

AnyConnect Mobility Client Provides Secure Connection from Any Device
http://www.cisco.com/web/about/ciscoitatwork/network_systems/anyconnect_deployment.html

BYOD Smart Solution
http://www.cisco.com/web/solutions/trends/byod_smart_solution/index.html

Secure Any Device Access with Cisco Virtualization Experience Infrastructure (VXI)
http://www.cisco.com/en/US/solutions/collateral/ns340/ns1176/collaboration/Cisco_IT_Case_Study_VXI.html