



Next-Generation Guest Networking

How Cisco Upgraded to Next-Generation Guest Networking



A Cisco on Cisco Case Study: Inside Cisco IT

Overview

- Challenge

 - Scale to meet growing use

- Solution

 - Next-generation guest networking

- Results

 - Enhanced reliability, scalability, and user satisfaction; lower support costs

- Next Steps

 - Further improve resiliency, scalability, and manageability

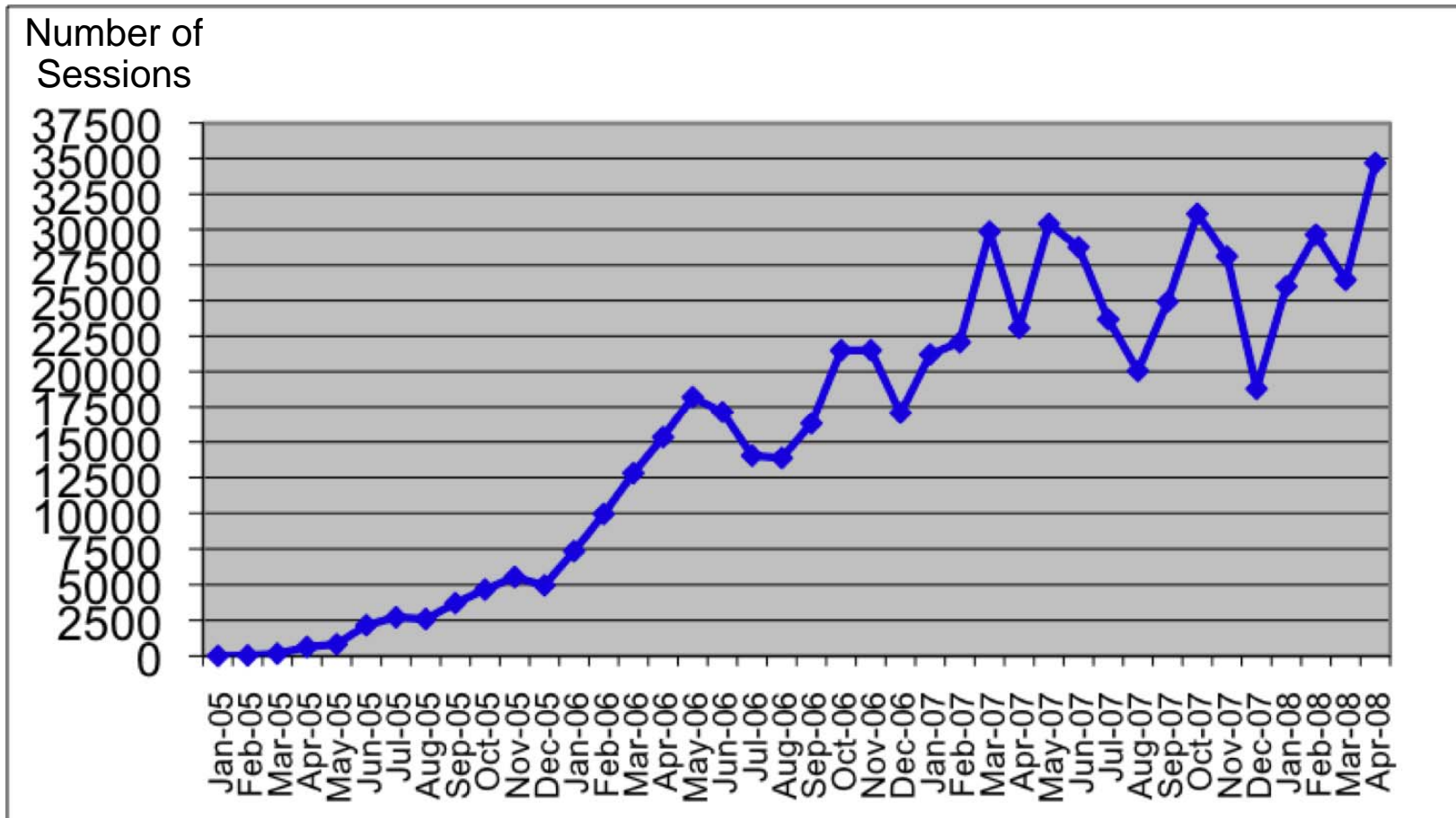
Challenge

Scale to Meet Growing Use

- Usage of the Cisco guest network quickly exceeded expectations
 - 150 percent year-over-year growth
- Guest access had become a highly visible service
 - Cisco trainers used the network for training classes
 - Customers expected access when they visited Cisco offices
- SLAs had become more stringent
 - Outages at Executive Briefing Centers were Priority 2 events with a four-hour response window
- IT cases opened for usage questions, IP address depletion, and outages of the access control platform

Growth in Guest Network Usage

Dips in usage correspond to Cisco holidays

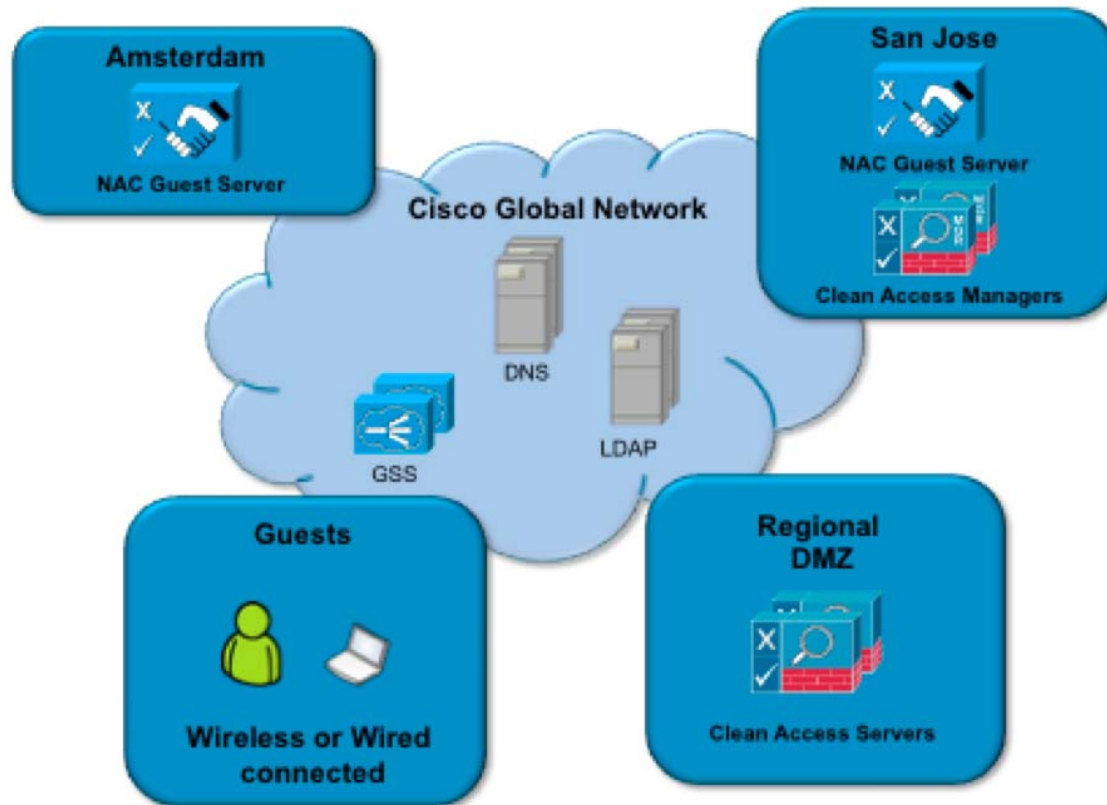


Solution

Cisco Next-Generation Guest Networking (NGGN)

Component	Function	Cisco Solution
Provisioning Portal	Enables enterprise users to sponsor visitors and create a unique access code for guests	Cisco Network Access Control (NAC) Guest Server
Traffic Segmentation	Ensures that guest traffic is securely segmented from the Cisco corporate wired and wireless networks	Generic routing encapsulation (GRE) tunnels and policy-based routing
Access Control and Policy Enforcement	Provides a welcome screen and validates guest identity, enforcing Cisco policy	Dual Cisco NAC Servers

Cisco NGGN Deployment

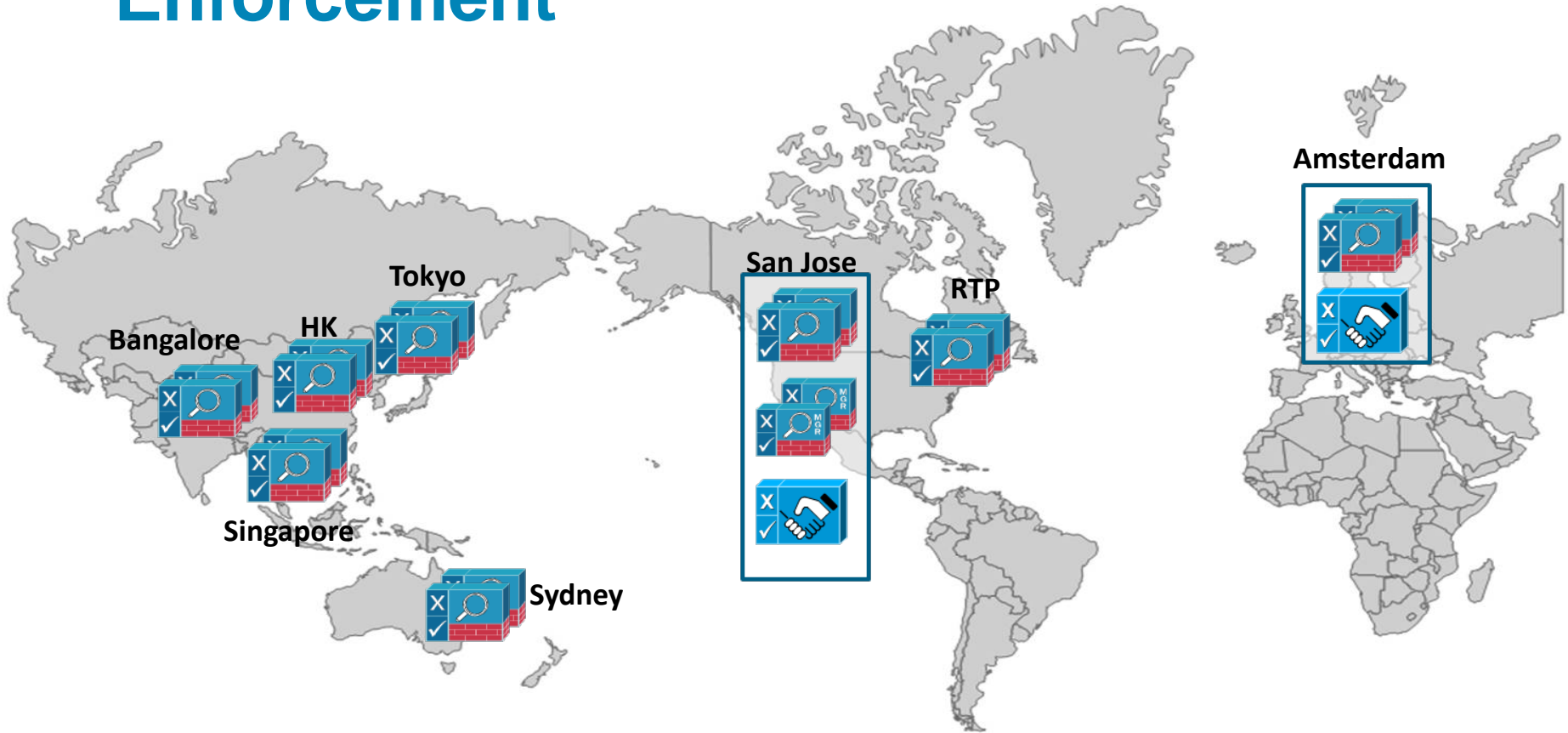


Guest_Guest_Networking_BM_15-Oct-08.pdf

© 2008 Cisco Systems, Inc. All rights reserved. Cisco Confidential

15

Redundant Servers for Policy Enforcement



Dual NAC Servers at 8 iPOPs



Dual NAC Managers at San Jose for global service management



Single NAC Guest Server at San Jose & Amsterdam, in redundant pair configuration

Results

Increased Reliability, Scalability, and User Satisfaction

- Improved reliability

Since deploying the new architecture, Cisco IT has opened no Priority 1 or 2 cases for guest access

- Increased scalability

The guest access solution is managing an average of more than 7000 authenticated connections weekly, with a cumulative connection time of 18,000 hours.

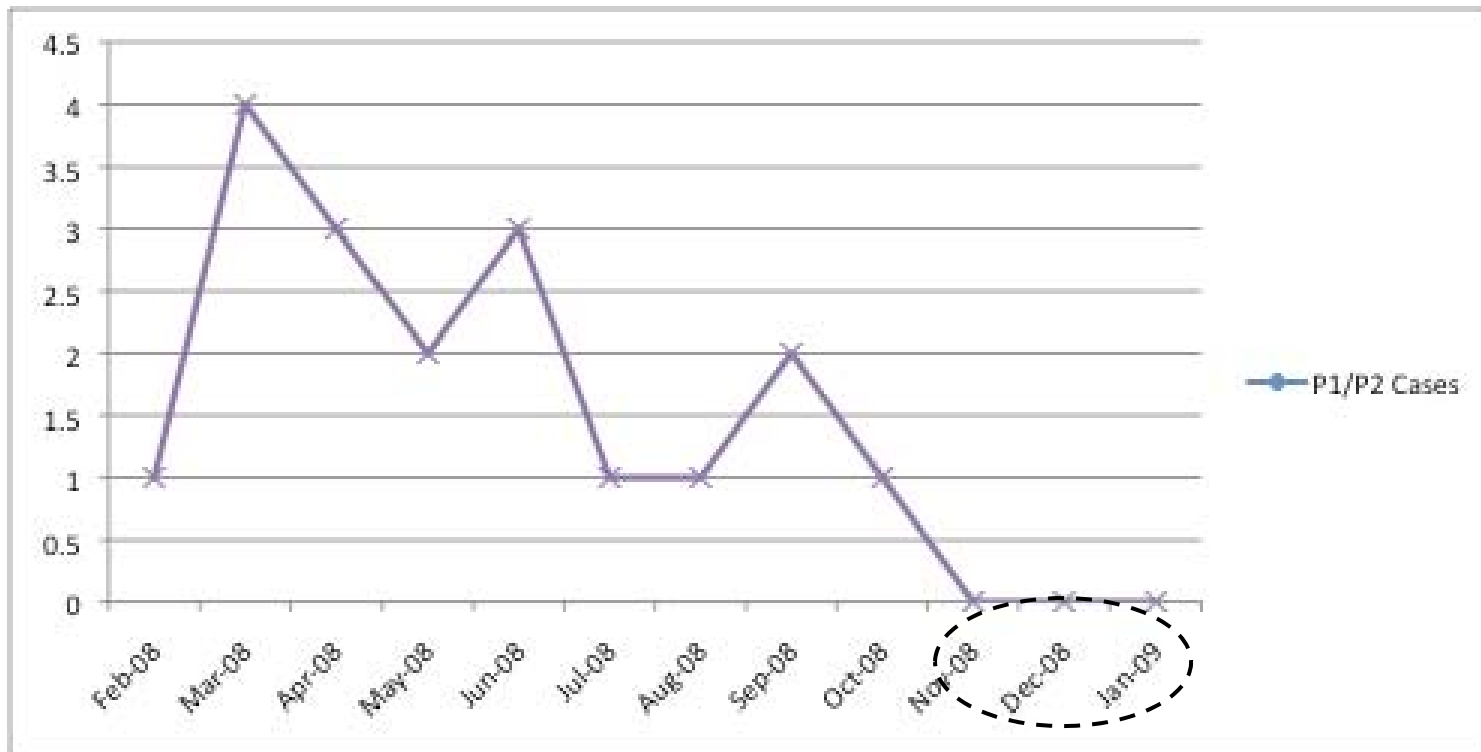
- Improved user satisfaction

Cisco employees like the intuitive provisioning interface in Cisco NAC Guest Server

Results

Decreased IT Support Costs

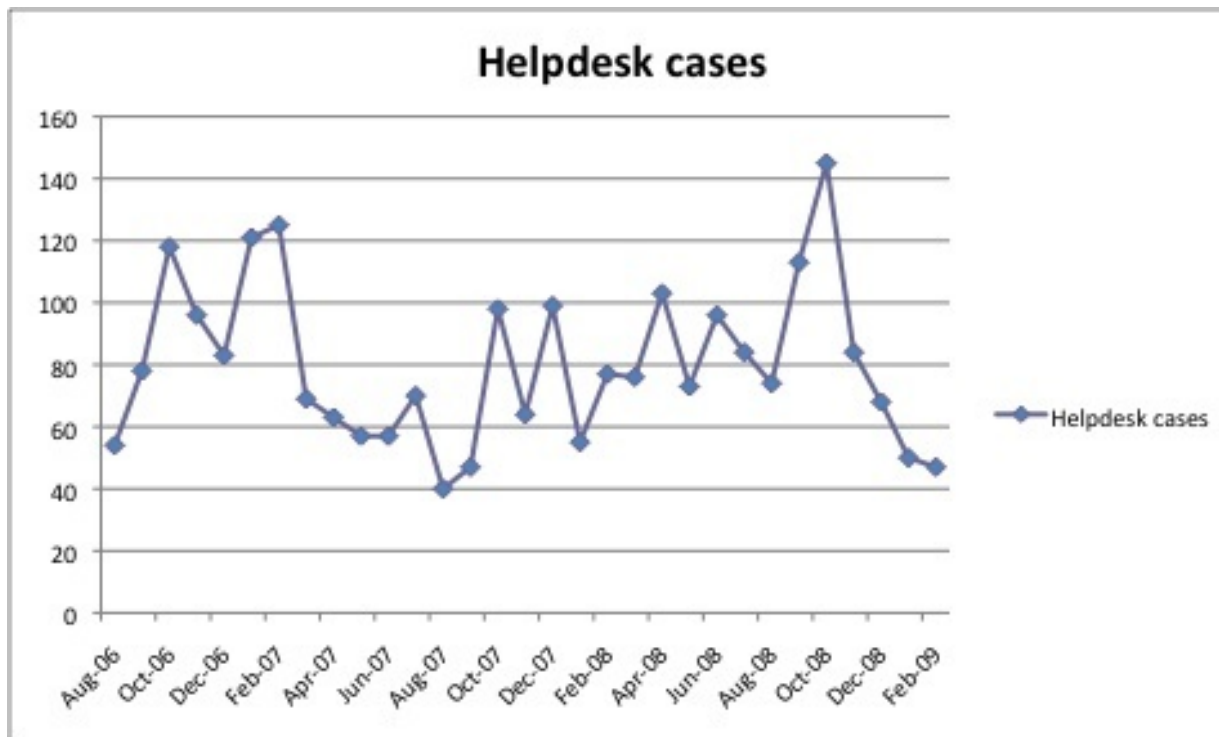
No Priority 1 or 2 cases since the NGGN deployment



Results

Decreased IT Support Costs

- In the 12 months before NGGN, the average number of helpdesk cases = 89
- In 2009, the average = 49, a 46 percent decrease



“If current trends for the new architecture continue, Cisco IT will see support costs decrease by approximately 15 to 20 percent.”

Oisín Mac Alasdair
Cisco Technical Staff

Next Steps

Further improve resiliency, scalability, and manageability

- Use Cisco Network Registrar for DHCP
- Use Cisco Wireless LAN Controllers for traffic segmentation
- Improve integration with Cisco's Enterprise Management (EMAN) platform
- Introduce new Cisco NAC Guest Server capabilities, including:
 - Support for portals in Arabic, Chinese, Japanese, and Korean
 - Delivering guest's credentials to their smartphones with SMS
 - Providing a guest portal optimized for smartphones and PDAs

For additional Cisco IT Case Studies on a variety of business solutions,
go to Cisco IT @ Work

www.cisco.com/go/ciscoitatwork



CISCO




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.

 CCDE, CCENT, Cisco Eos, Cisco HealthPresence, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company (0812R)
(C) 2008 Cisco Systems, Inc. All rights reserved.