



Separate Network for Alpha Testing

How Cisco IT Designed a Separate Network to Test Cisco Alpha Equipment



A Cisco on Cisco Case Study: Inside Cisco IT

Overview

- Challenge

 - Using production environments to validate new products

- Solution

 - Creation of IT Alpha, then the emergence of INSET

- Results

 - When successful, INSET's results are invisible to customers

- Next Steps

 - Continue expanding INSET's base of clients

Challenge: Using Production Environments to Validate New Products

- The need to understand product behavior in a production-level network
 - Engineers needed more information about development issues
 - Required a safe network that would remove the risk that testing causes, from standard Cisco business and engineering operations
- Trials need to be run to learn:
 - How compatible a product is with other equipment
 - How to automate as much of the deployment and monitoring management as possible
 - How to prepare the deployment and support staff for the new product prior to full-scale deployment
- To ensure excellence and availability of products

Solution: Creation of IT Alpha

- Engineering Computing Services and IT merged to become IT Alpha, to run all the Cisco production networks as well as the engineering test networks
- IT Alpha would manage, administer, and control a second network to safely test new products

To test products at production-level

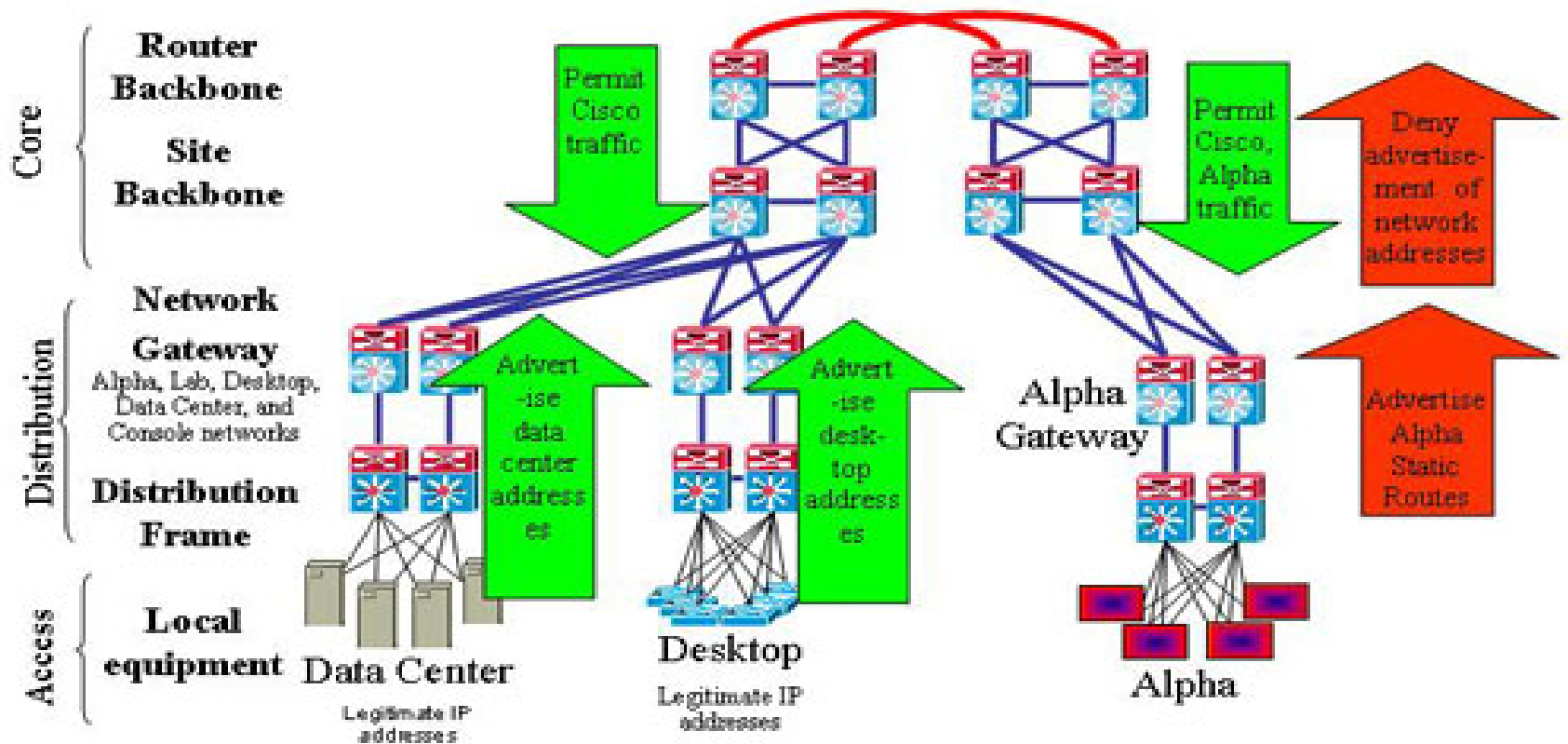
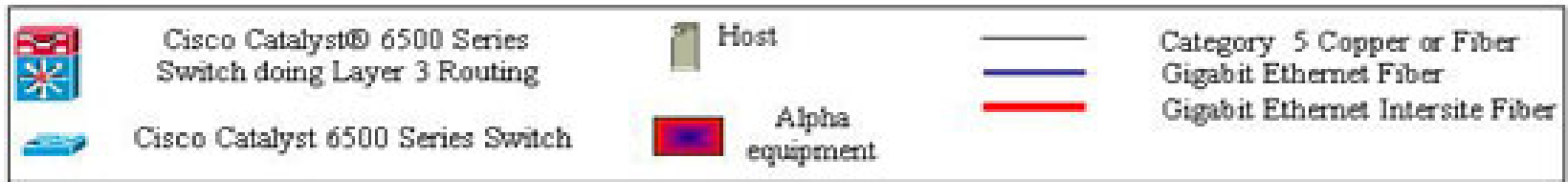
To take over the validation function of the engineering network, with greater control and significantly reduced risk for Cisco

Solution: Creation of IT Alpha (Contd.)

- IT created a barrier to protect the Cisco production network from the IT Alpha network

In the production network, constantly changing configurations of new products could cause problems by bringing down the network, preventing employees from working for hours at a time

Alpha Network Routing Advertisements and Static Routes



Solution: Creation of IT Alpha

- IT Alpha has evolved into the Intelligent Network Systems Emerging Technologies (INSET) group
 - Consists of six full time engineers and one project manager
 - Qualified to validate any solution in a production-level network
 - Maintains relationships with 14 different Cisco business units, as well as network and support teams within IT
 - Manages approximately 50 separate product alpha network environments
 - Successfully helps Cisco business units to find feature gaps and bugs, becoming the GO-TO organization to augment Cisco “product-readiness”

Products with Versions in Alpha Testing



Cisco Wireless IP Phone 7920



Cisco Catalyst 6500 Series switches



Cisco IP Phone 7970



Cisco uBR900 cable access router



Cisco 7800 Series media convergence servers



Cisco Catalyst 6500 Series firewall services modules



Cisco 12000 Series routers



Cisco 831 Ethernet Broadband Router



Cisco IP Conference Station 7935



Cisco Secure Access Control Server Software



Cisco 2600 Series multiservice platforms

Results: When Successful, INSET's Results are Invisible to Customers

- Better validation means better product performance and fewer customer problems

Translates to fewer technical assistance calls, and fuller, richer features

- Reduction of customer-found defects (CFD's) is a top priority

INSET's most important function is to find bugs before the product ships

INSET notifies engineers, to get problems fixed before the customers can find them

Next Steps: Continue Expanding INSET's Base of Clients

- Give the opportunity to more Cisco product teams to have their prerelease products tested in a real-world environment
 - To have the opportunity to catch and fix problems before the customers do
- To expand the alpha service provider network

Next Steps: Continue Expanding INSET's Base of Clients (Contd.)

- To add more client value to the test environment and the Network Access Module blade, which captures network traffic and application flow statistics

Multi-Router Traffic Grapher (MRTG), a software tool, is being used to capture traffic data, and make it available to engineering teams

Making application flow data available to determine causes of product anomalies, and improving products before they are shipped

To read the entire case study, or for additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT

www.cisco.com/go/ciscoit



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