



Cisco Support Community Expert Series Webcast:

Configure and Troubleshoot Wired and Wireless Networks Using Cisco Prime Infrastructure

Tejas Shah
Sr. Technical Consulting Engineer

April 2nd, 2013

Cisco Support Community – Expert Series Webcast

- Today's featured expert is Cisco Technical Marketing Engineer **Tejas Shah**
- Ask him questions now about *Cisco Prime Infrastructure*



Tejas Shah

Been in Network Management for over
10+ years at cisco

Topic: Configure and Troubleshoot Wired and Wireless Networks Using Cisco Prime Infrastructure

Event Date: April 2nd, 2013

Panel of Experts



Mark King
Product Mgr.



Chris McGuyer
Business Development Mgr.

Thank You for Joining Us Today

Today's presentation will include audience polling questions

We encourage you to participate!



Thank You for Joining Us Today

If you would like a copy of the presentation slides, click the PDF link in the chat box on the right or go to

<https://supportforums.cisco.com/community/netpro/network-infrastructure/network-management>

Or, <https://supportforums.cisco.com/docs/DOC-31564>



Thank You for Joining Us Today

Everyone who joins today's webcast will receive:

125 Cisco Preferred Access Points!



Polling Question 1

**How familiar are you with Prime Infrastructure?
(choose one)**

- a) I'm hearing about Prime Infrastructure for the first time**
- b) Somewhat Familiar**
- c) I have heard about it, but not evaluated it yet**
- d) I'm currently evaluating it in our test lab**
- e) I'm currently using it in our product infrastructure.**

Submit Your Questions Now!

Use the Q&A panel to submit your questions. Experts will start responding those





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Configure and Troubleshoot Wired and Wireless Networks Using Cisco Prime Infrastructure

Tejas Shah

Sr. Technical Marketing Engineer

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Agenda

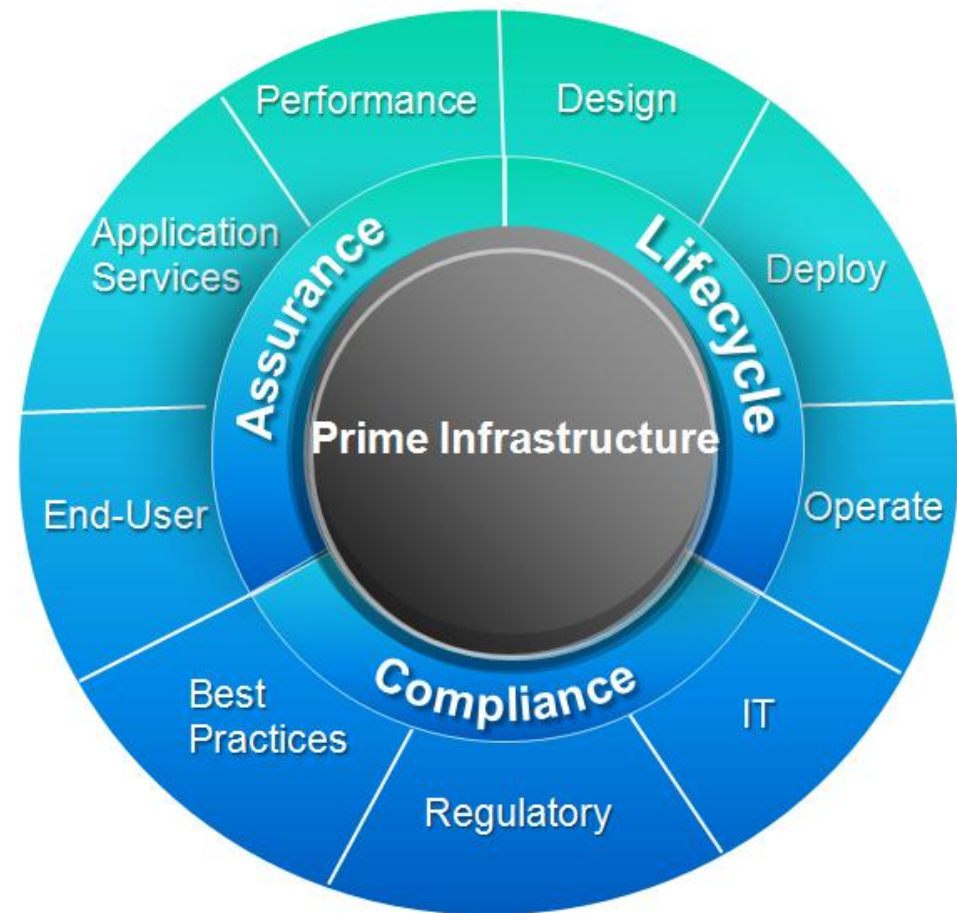
- **Overview of Prime Infrastructure**
- **Leveraging Prime Infrastructure for Designing and Deploying Configurations**
 - **Wired Devices**
 - **Wireless Devices**
- **Troubleshooting using Prime Infrastructure**
 - **Wired Infrastructure**
 - **Wireless Infrastructure**



Overview of Prime Infrastructure

Prime Infrastructure – Functional Overview

- ✓ A single integrated solution for comprehensive **lifecycle** management of wired/wireless access, campus, and branch networks
- ✓ Automates **compliance** with regulatory requirements, Cisco and IT best practices
- ✓ Utilizes rich performance data for end-to-end network visibility to **assure** application delivery and optimal end-user experience



Lifecycle Management for Wired/Wireless

- Lifecycle approach provides an easy and efficient way to manage a complex wired and/or wireless network by simplifying the day-to-day operational tasks associated with managing the network infrastructure for all Cisco devices including; routers, switches, wireless controllers, access points and more.
- Stages in this Life Cycle approach:
 - Design
 - Deploy
 - Operate
 - Report
 - Administration





Leveraging Prime Infrastructure for Designing and Deploying Configurations

Config Management - Overview

- Automated configuration archive
 - Backup all configurations out of the box
 - Backup vlan.dat which holds all the VLAN information on IOS devices
- Design configuration templates
 - For Wired as well as Wireless devices
 - Any type of templates from Simple configuration push to advanced dynamic decision making templates.
 - Uses standard Velocity Template Language (VTL)
- Design Day0/Day1 templates using intuitive wizards.
- Simple operational config changes using Device Work Center
- Deploy simple features or advance technology using out of the box templates within the product.

Configuration – Design & Deploy

```
snmp-server community public RO
snmp-server community private RW
snmp-server host 192.168.138.188
logging on
logging host 192.168.138.188
```

CLI Templates –
Simple, yet fully-customizable

	Name	Group
1	Configure De...	CLI Templates/Sys
2	Configure Log...	CLI Templates/Sys

Composite Templates –
Consolidate like CLI templates

Device Role

- Spoke
- Hub

Model based Templates –
Deploy Advanced Technology

- TrustSec Limited t
- TrustSec Capable l
- TrustSec Hardware
- TrustSec Software

Network Services –
Access Advance Feature readiness

Configuration – Day0 Provisioning

Workflows: Plug and Play Setup: Create Profile

Workflows ▾

- Plug and Play Setup
- Initial Device Setup



Configuration Details **Factory Defaults**

Properties

▼ Credentials Show Clear Text

*SNMP Fields

Read-Only Community String	<input type="text" value="public"/>	Confirm	<input type="text" value="public"/>
Read-Write Community String	<input type="text" value="private"/>	Confirm	<input type="text" value="private"/>

All fields are required. These SNMP v2 community settings will be configured on the device and used by Prime Infrastructure for discovery purposes.

*SSH Credentials

Enable SSH Enable Telnet

User Name	<input type="text" value="cisco"/>	Confirm	<input type="text" value="cisco"/>
Password	<input type="text" value="cisco"/>	Confirm	<input type="text" value="cisco"/>
Enable Password	<input type="text" value="cisco"/>	Confirm	<input type="text" value="cisco"/>

All fields are required. Telnet is enabled by default. If you prefer SSH ensure that you have the K9 image. The same credentials will be used for both Telnet and SSH.

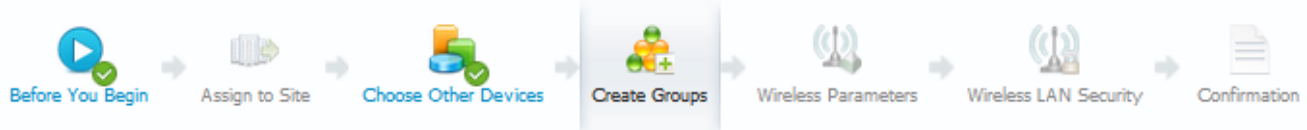
▼ Plug and Play Gateway Location

*PnP Gateway Host Name	<input type="text" value="pi-n29-1"/>
*PnP Gateway IP Address	<input type="text" value="192.168.139.188"/>

All fields are required. This is the location of the Plug and Play Gateway. You may use the default gateway, supplied as part of Prime Infrastructure, or you may specify an external gateway instead.

Configuration – Day1 Provisioning

Workflows: Initial Device Setup: Create Groups



- Workflows ▾
- Plug and Play Setup
- Initial Device Setup

This Mobility Domain belongs to the site **London Branch**

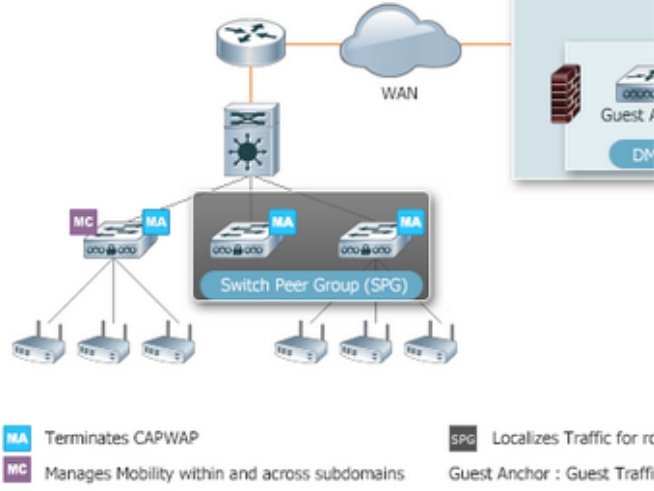
Mobility Domain Name **MD-London-Branch**

▼ Mobility Group

Mobility Group Name **MG-London-Branch**

The system automatically defines a Mobility Architecture. Modifications are allowed except to Mobility Agents and Mobility Controllers that were previously configured. Drag and drop a Mobility Agent to different Switch peer Group. Swap a Mobility Agent with the current Mobility Controller via the swap button.

Mobility Controller	Switch Peer Group	Mobility Agents
LON-3850-SBR	LON-SPG Available Slots: 16	



Configuration – Classic Wireless Templates

Config Group Detail : 'TME-Lab'

Configure > Controller Config Groups > Config Group Detail

General **Controllers** Country/DCA Templates Apply/Schedule Audit Reboot Report

All Controllers

IP Address	Name	Config Group	Mobility Group Name
192.168.13	SJ-WISM2-1	none	mobile-1
192.168.15	AMS-2504-WL	none	AMS

>>
(Add)

<<
(Remove)

Group Controllers

IP Address	Name	Config Group	Mobility Group Name
10.11.10.4	LON-3850-SBF	none	

Save Selection Cancel

Configuration – Operational Changes

Device Work Center

Discovery Configuration Archives Software Image Management Image Dashboard Plug and Play Status Network Audit

Device Group > ALL

ALL

Selected 1 | Total 68

Edit Delete Sync Groups & Sites Add Device Bulk Import Export Device Show All

Device Name	Reachability	IP Address/DNS	Device Type	Collection Status	Collection Time	Software Version	Credential Status
<input type="checkbox"/> 3560-DC-1	<input checked="" type="checkbox"/>	10.0.252.4	Cisco Catalys...	Managed with Warnin...	April 1, 2013 1:0...	12.2(52)SE	Failed
<input type="checkbox"/> 3750-PHY-1	<input checked="" type="checkbox"/>	10.0.252.3	Cisco 3750 St...	Managed with Warnin...	April 1, 2013 1:0...	12.2(35)SE5	Success
<input type="checkbox"/> 3945-East-1.cisco...	<input checked="" type="checkbox"/>	192.168.152.1	Cisco 3945E I...	Managed	April 1, 2013 1:0...	15.1(4)M1	Success
<input checked="" type="checkbox"/> 3945-West-1	<input checked="" type="checkbox"/>	10.0.103.1	Cisco 3945 In...	Managed with Warnin...	April 1, 2013 1:0...	15.1(4)M1	Success
<input type="checkbox"/> 7206-Core-1	<input checked="" type="checkbox"/>	10.0.255.42	Cisco 7206VX...	Managed	April 1, 2013 1:0...	12.2(15)T	Success
<input type="checkbox"/> 7206-Core-2	<input checked="" type="checkbox"/>	10.0.255.52	Cisco 7206VX...	Managed	April 1, 2013 1:0...	12.2(25)S1	Success
<input type="checkbox"/> AMS-2504-WLC	<input checked="" type="checkbox"/>	192.168.152.11	Cisco 2504 W...	Managed	March 31, 2013 9...	7.2.110.0	Success

Device Details Configuration Configuration Archive Image

Feature Configuration

Features

Interfaces

Selected 0 | Total 4

Edit Delete Enable Add Subinterface Add Logical Interface Show All

Interface	IP Address	Admin Status	Operational Status	Description
<input type="radio"/> Embedded-Service-Engine0/0		DOWN	DOWN	
<input type="radio"/> GigabitEthernet0/0	10.0.7.2	UP	UP	### Connection to 7206-Core-1 Gig0/2
<input type="radio"/> GigabitEthernet0/1	10.0.102.1	UP	UP	### Connection to LA Branch Gig 0/0 #
<input type="radio"/> GigabitEthernet0/2	10.0.103.1	UP	UP	### Connection to SF Branch Gig 0/0 #

Polling Question 2

How to do you currently make configuration changes in your network? (choose one)

- a) Manually. We login and make changes as needed
- b) We use our in-house scripts to make changes
- c) We use non-cisco solution to make config changes
- d) We use either LMS/Prime Infrastructure/NCS to make config changes for wired/wireless respectively



Troubleshooting using Prime Infrastructure

Session Content

- AP Troubleshooting
 - AP 360 View
 - Un-joined APs
 - AP KPI
 - AP Search
- Client Troubleshooting
 - Client 360
 - Client Connectivity issues
 - Client Debug Log Analysis
 - Client Identity/Profile related issues
- Coverage Issues

AP Troubleshooting



AP Troubleshooting – AP/Controller 360

- Concise wireless information about devices from anywhere within the product
- 360 views available for wireless Controller & APs
- On click shows the following
 - OS version and status
 - License used/Capacity
 - Number of Active Aps
 - Number of Active Clients
 - CPU and Memory utilization
- Provides snapshot of wireless interfaces, alarms and WLAN

Device 360° Views

● Cisco_fe:56:00
10.32.37.6 Cisco 5508 Wireless LAN Controller
up for 30 days 21 hrs 46 mins 34 secs

Software Version 7.2.106.3
Licence-used/capacity 214/500
Number of Active AP's 160
Number of Active Clients 34

CPU Utilization **1.00%** **Memory Utilization** **59.00%**


Low	High	Average	Low	High	Average
0.00%	3.00%	0.00%	59.00%	59.00%	59.00%

Alarms **Wireless Interfaces** WLAN

Interface Name	WLAN	VLAN ID	IP Address
alpha_voice	Not Available	101	10.32.43.4
data	Not Available	70	10.35.68.6
data_vlan_72_...	Not Available	72	10.32.29.196
management	Not Available	66	10.32.37.6
service-port	Not Available	0	10.32.164.36
tmobile-uma	Not Available	99	10.32.44.196

AP Troubleshooting – Unjoined APs

- Real-time Troubleshooting



Monitor | Configure | Services | Reports | Administration

- Devices
 - Controllers
 - Third Party Controllers
 - Switches
 - Access Points
 - Third Party Access Points
 - Unjoined APs
 - RFID Tags
 - Chokepoints
 - Interferers
 - Spectrum Experts
 - WiFi TDOA Receivers
 - Media Streams
- Radio Resource Management
- Maps
 - Site Maps
 - Automatic Hierarchy Creation
 - Google Earth Maps
- Alarms & Events
 - Alarms
 - Events
- Clients and Users

AP Troubleshooting [Go back](#)

Properties

General

AP Name **NMTG-AP3500-1**
AP IP Address **192.168.152.39**
AP Ethernet MAC
MAC Address **ec:c8:82:fb:32:a0**
Neighbor Switch Name
Wireless LAN Controllers **AMS-2504-WLC**

Switch

Troubleshoot

? Switch Port Discovered ? IP Address Assigned ? Discovery Message Received ? AP Joined

AMS-2504-WLC

Problem

Unable to successfully communicate with device

Recommendation

Check if device is up and can be accessed remotely

AP Troubleshooting – Log Consolidation

AP Troubleshooting [← Go back](#)

▼ Properties

General

AP Name **NMTG-AP3500-1**
AP IP Address **192.168.152.39**
AP Ethernet MAC
MAC Address **ec:c8:82:fb:32:a0**
Neighbor Switch Name
Wireless LAN Controllers **AMS-2504-WLC**

See logs from all controllers for a particular AP in ONE place !

RTTS

Stop Clear Choose different Controllers

Total 50

Sl no ▲	Debug Time	Controller Name	Controller IP	Message
1	Sep 18 20:29:08.757	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Echo Request from 192.168.152.14:18133
2	Sep 18 20:29:08.757	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Echo Response sent to 192.168.152.14:18133
3	Sep 18 20:29:12.053	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Configuration update request for PHY payload sent to...
4	Sep 18 20:29:12.119	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Configuration Update Response from 192.168.152.14...
5	Sep 18 20:29:12.127	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Change State Event Request from 192.168.152.14:1...
6	Sep 18 20:29:12.127	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 apfSpamProcessStateChangeInSpamContext: Down L...
7	Sep 18 20:29:12.127	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Radio state change for slot: 0 state: 1 cause: 0 detail ...
8	Sep 18 20:29:12.128	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Change State Event Response sent to 192.168.152.1...
9	Sep 18 20:29:12.128	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 CAPWAP State: Run
10	Sep 18 20:29:12.128	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Sending the remaining config to AP 192.168.152.14:...
11	apfReceiveTask: Sep	AMS-2504-WL	192.168.152.11	18 20:29:12.128: 04:c5:a4:f2:3f:60 Received LWAPP Down event for A...
12	Sep 18 20:29:12.129	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Configuration update request for Delete ALL MNs mes...
13	Sep 18 20:29:12.130	AMS-2504-WLC	192.168.152.11	04:c5:a4:f2:3f:60 Change State Event Request from 192.168.152.14:1...

Note: RTTS table will be refreshed automatically for every 2 seconds.

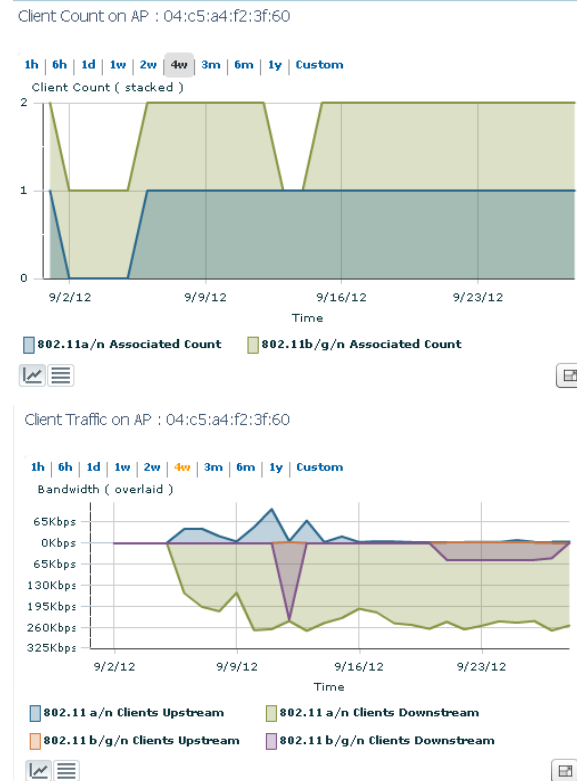
AP Troubleshooting – AP KPIs

- % of errors in Radio by AP
- % of data passed through AP
- % of successful associations of users under each AP
- % of unsuccessful associations of users under each AP

Load

Monitor > Access Points > Load

AP Name	Radio	Attached Client Count		Channel Utilization		Receive Utilization	Transmit Utilization
		Actual	Threshold	Actual	Threshold		
NMTG-AP3500-2	802.11b/g/n	1	12	39%	80%	0%	2%
NMTG-AP3500-2	802.11a/n	1	12	16%	80%	1%	11%
NMTG-AP3500-1	802.11b/g/n	0	12	20%	80%	0%	4%
NMTG-AP3500-1	802.11a/n	2	12	9%	80%	0%	0%



AP Search

Search for unassigned APs

Add Access Points

Monitor > Site Maps > System Campus > building > f1 > Add Access Points

- APs can be selected/added over multiple pages. Use Next/Previous to navigate and select APs to be added to Floor Area. APs can be searched by [Name/MacAddress (Ethernet/Radio)/IP]. IP search [primary by AP, fallback by Controller]. Searches are case insensitive

Search AP [Name/MacAddress (Ethernet/Radio)/IP]: Search

Add checked access points to Floor area 'f1'

Existing APs # 5 Selected AP # 0 Total AP # 5

<input type="checkbox"/>	AP Name	MAC Address	AP Model	Controller
<input type="checkbox"/>	MAP_1240	00:3a:98:89:3c:90	AIR-LAP1242AG-A-K9	10.104.173.178
<input type="checkbox"/>	MAP_2b	9c:af:ca:48:9d:00	AIR-LAP1524SB-N-K9	10.104.173.178
<input type="checkbox"/>	Ranga_AP_RAP	68:bd:ab:e6:f7:c0	AIR-LAP1262N-A-K9	10.104.173.178

OK Cancel

Partial string match

Add Access Points

Monitor > Site Maps > System Campus > building > f1 > Add Access Points

- APs can be selected/added over multiple pages. Use Next/Previous to navigate and select APs to be added to Floor Area. APs can be searched by [Name/MacAddress (Ethernet/Radio)/IP]. IP search [primary by AP, fallback by Controller]. Searches are case insensitive

Search AP [Name/MacAddress (Ethernet/Radio)/IP]: Search

Add checked access points to Floor area 'f1'

Existing APs # 5 Selected AP # 0 Total AP # 5

<input type="checkbox"/>	AP Name	MAC Address	AP Model	Controller
<input type="checkbox"/>	MAP_1240	00:3a:98:89:3c:90	AIR-LAP1242AG-A-K9	10.104.173.178
<input type="checkbox"/>	MAP_2b	9c:af:ca:48:9d:00	AIR-LAP1524SB-N-K9	10.104.173.178

OK Cancel

Floor Search

Search box

Data may be delayed up to 15 minutes or more depending on background polling interval . Filtered by 'AP' [Clear].

AP



Results highlighted visually

Comprehensive search

Search by MAC, IP or Name for any map element

Coverage Issues



Coverage – Heat Maps

Site Profiles & Maps

Maps Tree View >

Floor Settings ▾

- Access Points >
- AP Heatmaps >
- AP Mesh Info >
- Clients >
- 802.11 Tags >
- Rogue APs >
- Adhoc Rogues >
- Rogue Clients >
- Coverage Areas >
- Location Regions >
- Obstacles >
- Rails >
- Markers >
- Chokepoints >
- Wifi TDOA Receivers >
- GPS Markers >
- Services >
- Interferers >

Show MSE data

Currently Detected

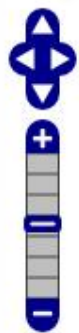
Save Settings

Floor View

M... WNBU

Information icon: Data may be delayed up to 15 minutes or more depending on background polling interval

Signal strength legend: -30 dBm to -90 dBm. Auto Refresh 5 min



Zoom & Pan controls

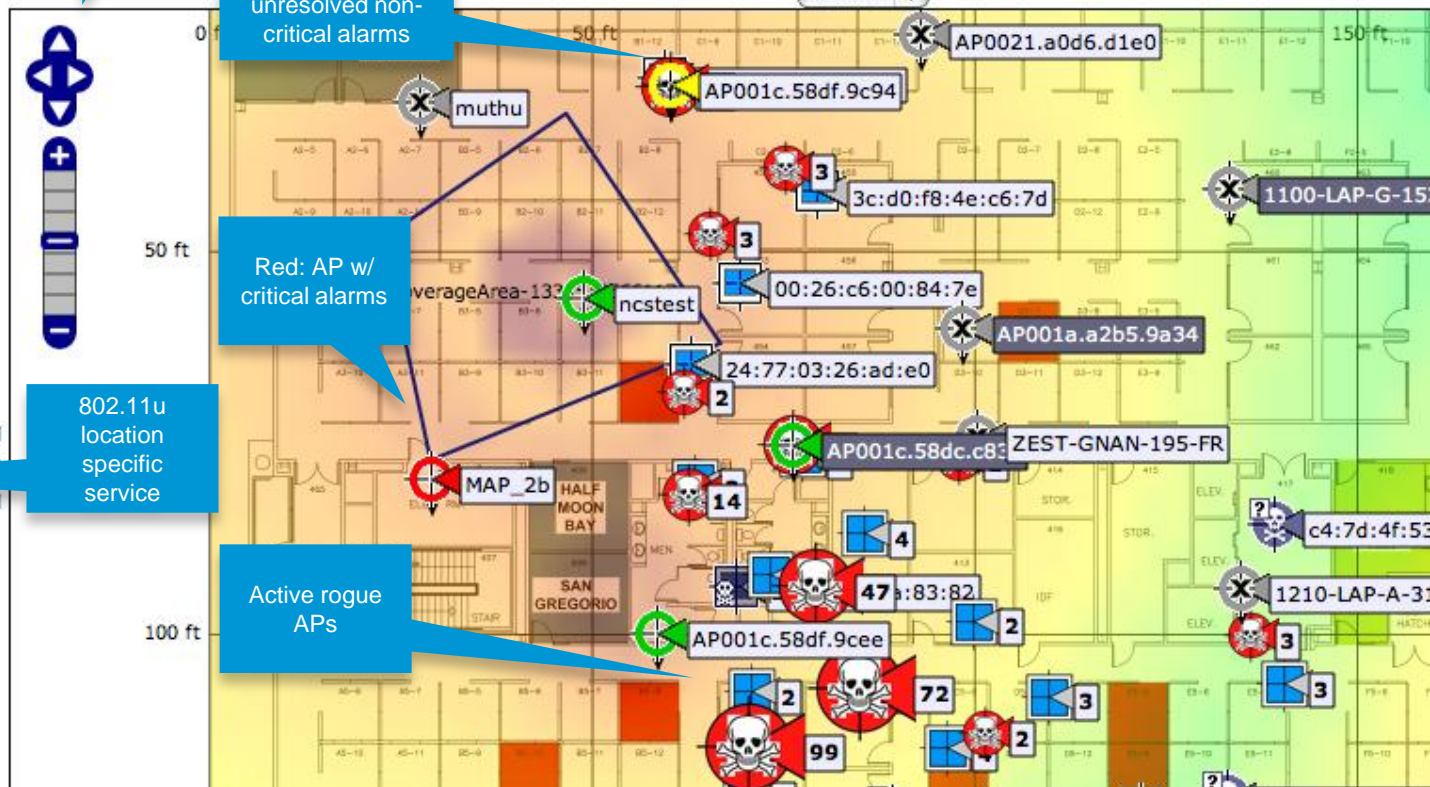
Yellow: AP w/ unresolved non-critical alarms

Red: AP w/ critical alarms

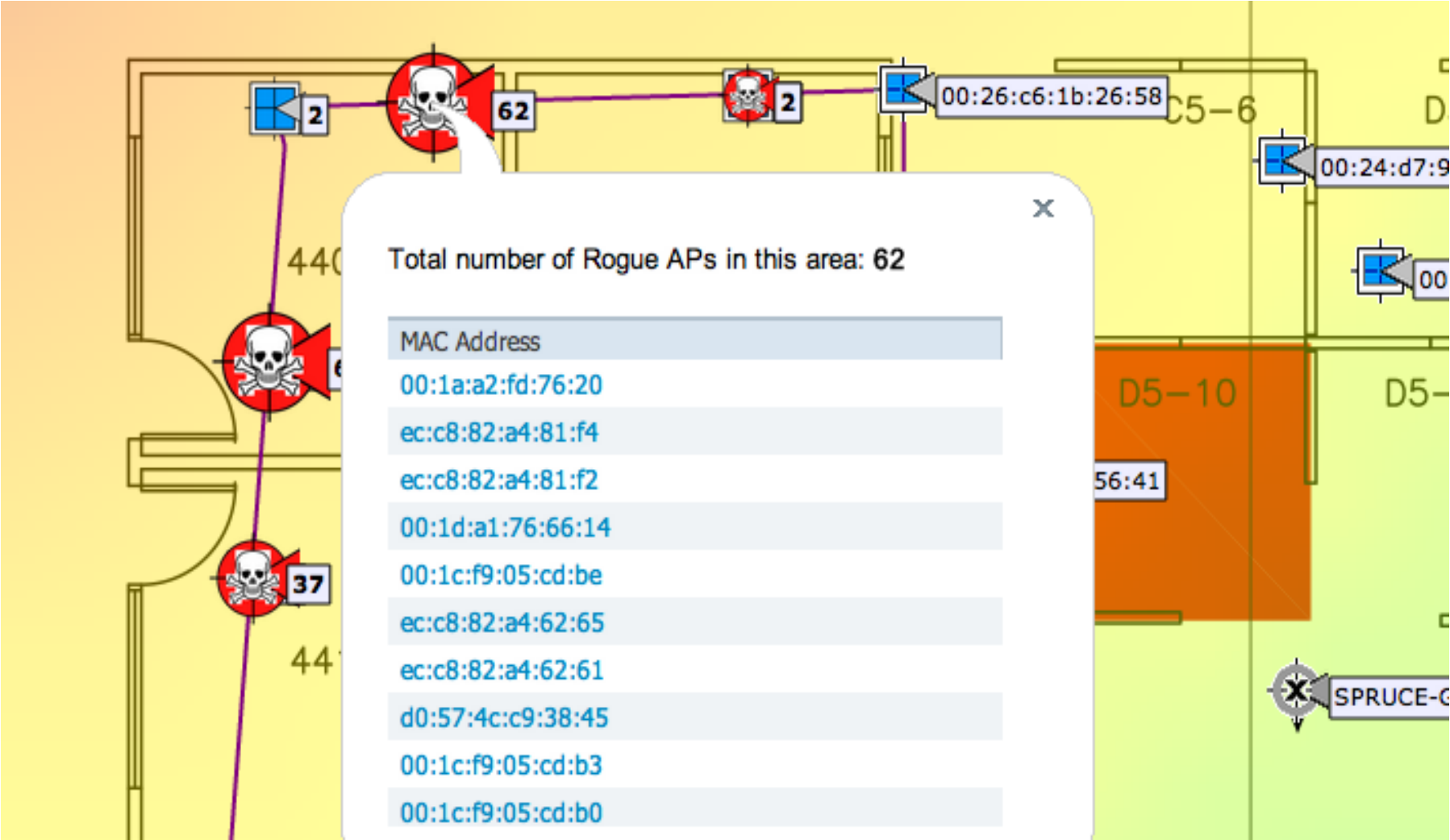
802.11u location specific service

Active rogue APs

Grey: Disconnected AP



Coverage – Visualize Rogue APs in Cluster





Client Troubleshooting



BYOD – Planning/Support/Improvement/Pilot

- Design Profiling for different OS's.
 - When iOS based mobile device logs in , ISE can detect it is an Apple device and installs the certificate.
 - When an Android based mobile device logs in ISE detects it as an Android device and redirects the webpage to install the certificate.
 - Similar things for Windows and Mac Devices.
- End User equipment profiles can be created on ISE
- **Certification installation is one time process** , Once these certificates are installed , user can directly access the intranet next time onwards.
- Blocking the device if user reports a lost device.

Identity Service Engine Integration

Client Type and Policy Visibility

Single pane of glass view and lifecycle management for Wired and Wireless

IP Address	User Name ▲	Type	Vendor	Device Name	Endpoint Type	Protocol	Interface
10.20.1.101	Jack		Intel	5508	Microsoft-Workstation	802.11n(5GHz)	data
10.20.1.103	Jack		Dell	CoreSwitch.wlan.local	Microsoft-Workstation	802.3	GigabitEthernet1/0/40
10.50.1.100	Jane		Intel	5508	Microsoft-Workstation	802.11n(5GHz)	data-contractor

General

User Name **Jack** ⊕
 IP Address **10.20.1.101**
 MAC Address **00:21:6a:5a:85:3a**
 Vendor **Intel**
 Endpoint Type **Microsoft-Workstation**
 Client Type **Regular**
 Media Type **Lightweight**
 Mobility Role **Local**
 Hostname **Data Not Available**
 CCX **V4**
 E2E **V1**
 Power Save **OFF**

Device Identity
or Profile from
ISE Integration

AAA Override
Parameters
Applied to
Client

Policy Information
Including Posture

Security

Security Policy Type **WPA2**
 EAP Type **PEAP**
 On Network **Yes**
 802.11 Authentication **Open System**
 Encryption Cipher **CCMP (AES)**
 SNMP NAC State **Access**
 Radius NAC State **RUN**
 AAA Override ACL Name **none**
 AAA Override ACL Applied Status **N/A**
 Redirect URL **none**
 ACL Name **none**
 ACL Applied Status **N/A**
 H-REAP Local Authentication **No**
 Policy Manager State **RUN**
 Authenticating ISE **ISE**
 Authorization Profile Name **AuthEmp**
 Posture Status **Not Applicable**
 TrustSec Security Group **Data Not Available**
 Windows AD Domain **wlan.local**

Client Troubleshooting

1-Click Connectivity Checks

- 1-Click Troubleshooting checks for
 - 802.11 Association
 - 802.1x Authentication
 - IP Address Assignment
 - Successful Association

Troubleshoot

✔ 802.11 Association ✔ 802.1X Authentication ✔ IP Address Assignment ✔ Successful Association

Problem

No issues found with client connectivity

Recommendation

No recommended actions

- [Search Cisco Support Community](#)
- [Open or Update](#) a service request

Client Troubleshooting

Debug Log Analysis

- Debug Log Analysis filter for
 - 802.11 Initialization
 - 802.1x Authentication
 - PEM Messages
 - DHCP Messages
 - AAA Messages

Debug and Analysis

Click **Start** to begin capturing log messages from the controller. (It may be necessary to ask the client to restart the connection process by rebooting their laptop to ensure that relevant log events are generated.) When a sufficient number of messages have been collected, click **Stop**.

Run Stop Clear Export

Status Message

Select LogMessages:

802.11 Initialization (0)
802.1x Authentication (0)
PEM Messages(0)
DHCP Messages (0)
AAA Messages(0)
All (0)

Time	Severity	Controller	Message
------	----------	------------	---------

Client Troubleshooting

Context Aware History

Context Aware History

Client Location History (From : 2012-Sep-07, 12:53:41 PDT To : 2012-Sep-25, 20:15:42 PDT [Generate Report](#))

MSE Name: Show:

Change selection every Entries 1 - 50 of 102

Time Stamp	Floor	Username	Associated AP	IP Address	Status
1 2012-Sep-25, 20:15:42 PDT	Cisco San Jose - Site 5>BLD 14>4th floor	gzebib	SJC14-42B-AP7	171.70.240.12	Associated
2 2012-Sep-24, 17:44:43 PDT	Cisco San Jose - Site 5>BLD 14>4th floor				Probing
3 2012-Sep-24, 17:43:43 PDT	Cisco San Jose - Site 5>BLD 14>4th floor				Probing
4 2012-Sep-24, 16:18:41 PDT	Cisco San Jose - Site 5>BLD 14>4th floor				Probing
5 2012-Sep-24, 16:17:41 PDT	Cisco San Jose - Site 5>BLD 14>4th floor				Probing
6 2012-Sep-21, 14:15:22 PDT	Cisco San Jose - Site 5>BLD 14>4th floor	gzebib	SJC14-42B-AP6	171.70.240.166	Associated
7 2012-Sep-21, 11:41:10 PDT	Cisco San Jose - Site 5>BLD 14>4th floor	gzebib	SJC14-42B-AP6		Associated
8 2012-Sep-21, 11:41:00 PDT	Cisco San Jose - Site 5>BLD 14>4th floor	gzebib	SJC14-42B-AP6		Associated
9 2012-Sep-21, 11:40:51 PDT	Cisco San Jose - Site 5>BLD 14>4th floor	gzebib	SJC14-42B-AP6		Associated

Client Location

Location Calculated at 2012-Sep-25, 20:15:42 PDT

Floor Cisco San Jose - Site 5>BLD 14>4th floor



[Enlarge](#)

Prime Demo



References

- Cisco Support Community – Network Management
<https://supportforums.cisco.com/community/netpro/network-infrastructure/network-management>
- Cisco Prime: <http://www.cisco.com/en/US/prod/netmgtsw/prime.html>
- Cisco Prime Infrastructure
<http://www.cisco.com/en/US/products/ps12239/index.html>
- Transitioning from Cisco Prime LMS to Cisco Prime Infrastructure
http://www.cisco.com/en/US/prod/collateral/netmgtsw/ps6504/ps6528/ps12239/app_note_c27-716266.html
- Cisco Prime Infrastructure Evaluation: www.cisco.com/go/nmsevals
- Cisco Prime Infrastructure WhitePapers:
<http://www.cisco.com/go/infrastructure> > Whitepapers
- Cisco Prime Infrastructure VoDs:
<http://www.youtube.com/playlist?list=PL7406F0EF2BC7DED8>

Polling Question 3

What tools do you use for infrastructure troubleshooting? (check all that apply)

- a) We use Ping/Traceroute all the time
- b) We just log into the device and troubleshoot most of the time
- c) We do packet capture if all else fails
- d) We use special appliance/application to help us with network troubleshooting
- e) We use either LMS/Prime Infrastructure/NCS for troubleshooting wired/wireless resp.

Submit Your Questions Now!

Use the Q&A panel to submit your questions. Experts will start responding those



Trivia Question (select the correct answer)

What does one of the world's oldest airlines and Cisco Prime Infrastructure have in common?

- A. Cisco Prime Infrastructure is used to monitor the majority of the air traffic control tower networks on the major air routes that Air France uses across the world
- B. Cisco Prime Infrastructure helps monitor all the networks for United and Lufthansa
- C. Cisco Prime Infrastructure helps monitor the IT network for KLM airlines

Q & A

Expert responding some of your questions verbally. Use the Q&A panel to continue asking your questions



We Appreciate Your Feedback!

Those who fill out the Evaluation Survey will enter a raffle to win:

\$50 Amazon Gift Card

To complete the evaluation, please click on link provided in the chat or in the pop-up once the event is closed.

Ask The Experts Event (with Tejas Shah)



If you have additional questions, you can ask them to Tejas. She will be answering from April 2nd to April 12, 2013

<https://supportforums.cisco.com/thread/2208725>

You can watch the video or read the Q&A 5 business days after the event at

<https://supportforums.cisco.com/community/netpro/ask-the-expert/webcasts>



Next Expert Series Webcast in English

Topic: Automating Cisco IOS Software Vulnerability Assessment

Tuesday, April 23, at

7 a.m. PDT (San Francisco)
10 a.m. EDT New York
4 p.m. CET Paris



Join Cisco Expert

Omar Santos

During this live event, Cisco expert Omar Santos will discuss how customers can use OVAL to quickly assess the effects of security vulnerabilities in Cisco IOS Software devices. Santos will provide step-by-step instructions on how to use OVAL content with available open source tools. Join us to learn more about security automation and machine-readable content and ask questions to Cisco experts.

Register for this live Webcast @

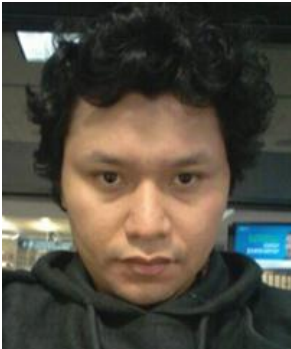
http://tools.cisco.com/gems/cust/customerQA.do?METHOD=E&LANGUAGE_ID=E&SEMINAR_CODE=S18096&PRIORITY_CODE=cisco

Next Webcast in **Spanish**

Cisco UCS: A Day in the Life of an IP Packet.

Tuesday April 9th

9:00 a.m. Mexico City
7:00 a.m. San Francisco
10:00 a.m. New York
4:00 p.m. Madrid



Join Cisco expert:

Daniel Castillo

During this live event, Cisco expert Daniel Castillo will talk about “a day in the life of an IP packet” in the Cisco UCS solution with an Ethernet perspective. Castillo will explain the different Cisco UCS solution components that are in charge of the data flow and will also explain how it takes the send decision.

Register for this live Webcast @

http://tools.cisco.com/gems/cust/customerQA.do?METHOD=E&LANGUAGE_ID=S&SEMINAR_CODE=S18091&PRIORITY_CODE=cisco

Next Expert Series Webcast in Portuguese

Topic: Multicast VPN Fundamentals, Configuration, and Troubleshooting



Tuesday, April 16th, at

11 a.m. Brasilia City
1 p.m. WEST Lisbon

Join Cisco Expert

José Luiz Marques

During this live event you'll learn basic concepts and fundamentals of multicast VPN and how to troubleshoot common issues. Marques will cover important topics such as terminology, packet encapsulation, packet forwarding, troubleshooting tips, and other interesting topics related to the multicast VPN configuration in Cisco IOS and IOS-XR Software.

Register for this live Webcast @

http://tools.cisco.com/gems/cust/customerQA.do?METHOD=E&LANGUAG E_ID=P&SEMINAR_CODE=S17956&PRIORITY_CODE=cisco

Ask the Expert Events – English

Current



Topic: AnyConnect Secure Mobility

Join Cisco Expert: **Ameet Kulkarni**

Learn about the various aspects of AnyConnect Secure Mobility such as HostScan, Client and Clientless based remote access, policies, and more..

This event Ends April 5, 2013



Topic: Server I/O: Unleashing the potential of the UCS Cisco Virtual Interface Card (VIC)

Join Cisco Expert: **Robert Burns**

Learn and ask questions related to Cisco's line of Virtual Interface Cards adapters for the UCS B and C Series compute platform..

This event Ends April 5, 2013

Join the discussion for these Ask The Expert Events at:

<https://supportforums.cisco.com/community/netpro/expert-corner#view=ask-the-experts>

Ask the Expert Events – Upcoming English



Topic: Configuring, Troubleshooting and Monitoring Wireless Networks using Security Policies

Join Cisco Experts: **Saravanan Lakshmanan**

Learn and ask questions about how to monitor and troubleshoot and configure Wireless Networks using Security Protection Policies.

Starts April 8



Topic: Automating Cisco IOS Software Vulnerability Assessment

Join Cisco Expert: **Omar Santos**

Learn how customers can use OVAL to quickly assess the effects of security vulnerabilities in Cisco IOS Software devices.

Starts on Tuesday April 23rd, 2013

Join the discussion for these Ask The Expert Events at:

<https://supportforums.cisco.com/community/netpro/expert-corner#view=ask-the-experts>

Ask the Expert Events

Ongoing

Topic: Cisco ASR 1000 Series Aggregation Services Routers (**Portuguese Ongoing**)



Join Cisco Expert: **Pedro Duarte**
Learn and ask questions about how to use and troubleshoot the Cisco ASR 1000 router.

<https://supportforums.cisco.com/thread/2208283>

Configuración de servicios de GGSN (Gateway GPRS Support Node) en el ASR5000 (**Spanish upcoming**)



Join Cisco Expert: **Nestor González**

Learn about the GGSN services in the Cisco ASR5000.

Starts: April Monday 8th

Join the discussion:

<https://supportforums.cisco.com/thread/2208742>

Upcoming WebEx Sessions on Cisco Live 365

April 17 – 10am PT / 1pm ET / 18:00 GMT

Activate with Cisco Unified Access: One Network Deep Dive

Kedar Karmarkar – Technical Leader, Unified Data Center and Campus Switching

Jon Dreyfus – Director, Product Management

April 24 – 10am PT / 1pm ET / 18:00 GMT

Physical to Virtual: Accelerate Migration and Simplify Operations

Michael La Fauci – Principal Product Manager, VCE

Full Agenda & Details: <https://www.ciscolive365.com/connect/agenda.ww>

We invite you to actively collaborate in the Cisco Support Community and social media

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<http://itunes.apple.com/us/app/cisco-technical-support/id398104252?mt=8>



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<http://www.linkedin.com/groups/CSC-Cisco-Support-Community-3210019>



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We have communities in other languages

If you speak **Spanish, Portuguese, Japanese, Polish or Russian**, we invite you to ask your questions and collaborate in your language:

- Spanish → <https://supportforums.cisco.com/community/spanish>
- Portuguese → <https://supportforums.cisco.com/community/portuguese>
- Japanese → <https://supportforums.cisco.com/community/csc-japan>
- Polish → <https://supportforums.cisco.com/community/etc/netpro-polska>
- Russian → <https://supportforums.cisco.com/community/russian>

Trivia Answer

What does one of the world's oldest airlines and Cisco Prime Infrastructure have in common?

- A. Cisco Prime Infrastructure is used to monitor the majority of the air traffic control tower networks on the major air routes that Air France uses across the world
- B. Cisco Prime Infrastructure helps monitor all the networks for United and Lufthansa
- C. Cisco Prime Infrastructure helps monitor the IT network for KLM airlines**

(Correct answer C)

KLM Royal Dutch Airlines is one of the oldest airlines in the world. Any disturbance in network availability has the potential to affect users by inhibiting their access to key applications and services, ultimately resulting in poor customer experiences. "We know that network availability is critical for our employees and for our passengers. That is why we adhere to an internal service-level agreement (SLA) of 99.99% network availability," says Veldhuizen.

In the 1990s, KLM decided to standardize its network infrastructure on Cisco after a disappointing experience with a multivendor network that proved unreliable and difficult to manage. KLM's IT team uses Prime LMS, now a part of Cisco Prime Infrastructure, to monitor the health of the network. Prime LMS has been instrumental in helping us proactively respond to incidents, permitting our team to act quickly and, as a result, prevent impact on our operations."

Thank You for
Your Time

Please Take a Moment to Complete the Evaluation



Thank you.

