



Cisco Support Community  
Expert Series Webcast:

Simplified Operations & Ultra Availability with

# Catalyst 6800 VSS

## Quad-Sup SSO & Instant Access

Vivek Baveja

Technical Marketing Engineer

02/04/2014

# Cisco Support Community – Expert Series Webcast

- Today's featured expert is Technical Marketing Engineer – **Vivek Baveja**
- Ask him questions about **Catalyst 6800, VSS** and **Instant Access**



**Vivek Baveja**

Technical Marketing Engineer

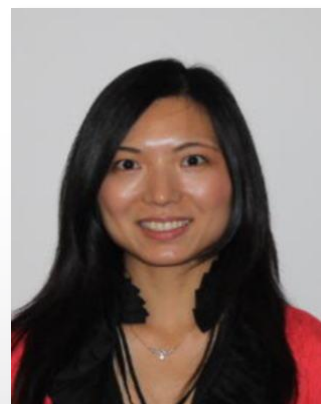
# Topic: Catalyst 6800 VSS Quad-Sup SSO & Instant Access

Event Date: February 4, 2014

## Panel of Experts



Mahesh Nagireddy  
Catalyst 6800 TME



Rose Zhu  
Catalyst 6800 PM

# 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/switching](https://supportforums.cisco.com/community/netpro/network-infrastructure/switching)

Or, <https://supportforums.cisco.com/docs/DOC-39819>



# Polling Question 1

**What is your level of experience with Catalyst 6500 or 6800?**

- a) I know Catalyst Switching technologies, but I am not familiar with Catalyst 6500 or 6800.**
- b) I have some experience with Catalyst 6500 or 6800, but I'm not familiar with the architecture.**
- c) I'm running Catalyst 6500 in production, but I have never used a Catalyst 6800.**
- d) I'm running both Catalyst 6500 and 6800 in production.**

# Submit Your Questions Now!

Use the Q & A panel to submit your questions and panel of experts will respond.





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# Agenda

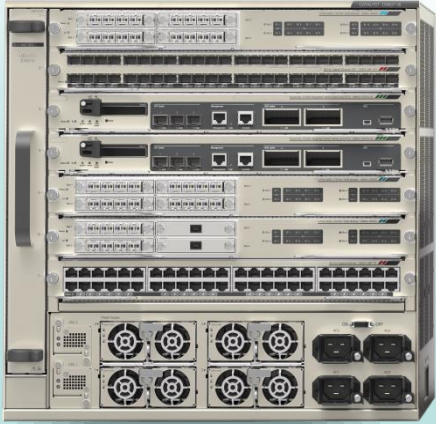
- **Introduction to Catalyst 6800 Series**
  - Catalyst 6807-XL Overview
  - Catalyst 6880-X Overview
  - Catalyst 6800IA Overview
- **Overview of Virtual Switching (VSS)**
- **Overview of Instant Access (IA)**
- **Live Demo of Catalyst 6800 Series with VSS & Instant Access**





# Introduction to Catalyst 6800 Series

# Cisco Catalyst 6800 Family



## 6807-XL

Future-proof Backbone platform to scale your Campus services with NO compromise



## 6880-X

Mini but mighty backbone platform with high density 10G and rich services



## 6800IA

With **Catalyst Instant Access** solution that dramatically simplifies your campus operations

# Reinventing Your Backbone Experience

# Investment Protection

6807-XL supports  
Sup2T with its  
linecards and  
service modules

**PAST**

6800  
optimizes  
10G/40G  
performance  
and is ready  
for 100G

**PRESENT**

6800 is built to  
persevere and has  
the capacity to be  
unlocked by  
future modules

**FUTURE**



# Introducing the New 6807-XL

Taking Catalyst 6K Up to 880G/Slot

Now Shipping

7 Slots 10 RU

Side-to-side air flow  
(redirectable via airflow baffles)

Next-Generation Ready

Low-Power and Noise  
High-Efficiency Fans

Up to 4 (N+1) power supply  
redundancy

3000W AC



Up to 880G/Slot capable

Catalyst 6500 DNA

Investment protection!  
Compatible with Sup2T, 6700, 6800, 6900  
and latest Service Modules

Backwards compatible backplane connectors



# The New Catalyst 6880-X

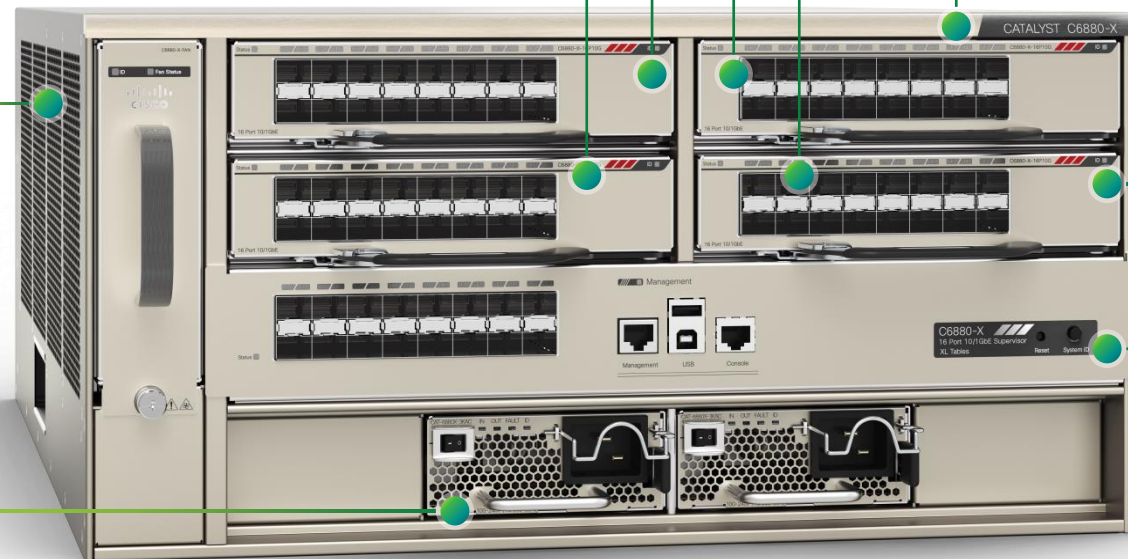
C6K-Based “Extensible” Fixed Platform

Now Shipping

Up to Eighty 1G/10G ports  
or Twenty 40G ports\*

Low Power &  
Low Noise Fans

Platinum EFF  
Redundant AC and DC PS



VSS, Instant Access, MPLS, MACsec,  
VPLS, LISP, SGT, 1588\* capable on  
every port

Sixteen 10/100/1000M & 10G SFP  
ports or up to Four 40G ports\*

Fixed module with Sixteen  
10/100/1000 & 10G SFP ports  
X86 2 GHz CPU 4 GB DRAM

**Four 100G-Ready Port Slots, Front  
Serviceable Power Supplies, and Fan Tray,  
NEBS Level 3-Compliant Platform**



# Catalyst Instant Access Client



Now Shipping



System and Status LEDs

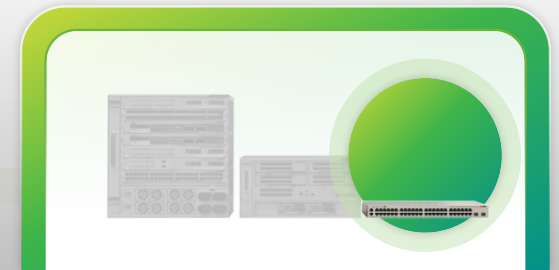
Stackable up to Three members at FCS

48 x 1G RJ45 Ports

Data and PoE/PoE+ Options

2 x 10G SFP+ Uplink Ports

Catalyst 6800 features at Access Layer



# The Modular Cat6K Portfolio



### 40/10 GE Fiber

CVR-4SFP    CFP-LR4    CFP-SR4

### 10 GE Fiber & Copper

80G/Slot 6908		6904
40G/Slot 6816		6816

### 1 GE Fiber & Copper

Fiber		6824
		6848
Copper		6848

### 10 GE Fiber & Copper 40G/Slot

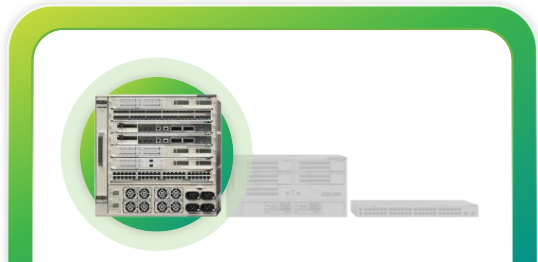
6716		6716
6704		6708

### 1 GE Fiber & Copper 40G/Slot

Fiber		6724
		6748
Copper		6748

### Service Modules

- NAM-3
- WiSM2
- ASA-SM





# Smooth Migration from 6500-E to 6807-XL

## 6500-E

Optimized for 1G/40G/10G



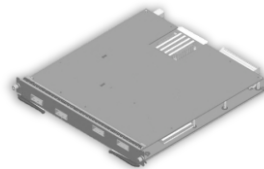
CARD	SPEED
6900	80G/slot
New 10/40G	80G/slot
New 100G	80G/slot



Sup2T, 6900,  
6800, 6700



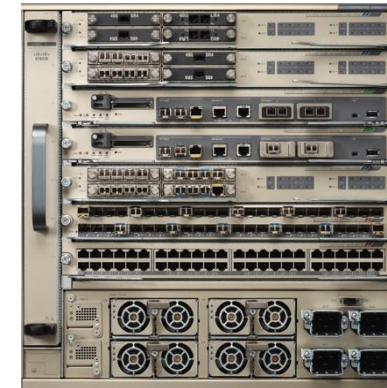
Service Modules



Next Generation  
Cards

## 6807-XL

Optimized for 10G/40G/100G



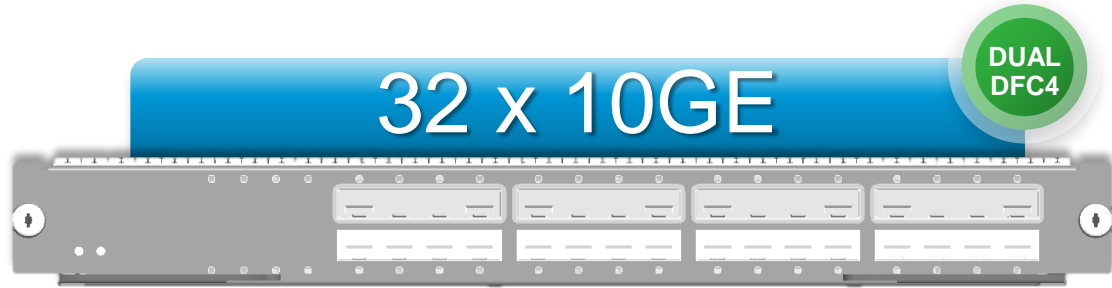
CARD	SPEED
6900	80G/slot
New 10/40G	160G/slot
New 100G	200G/slot



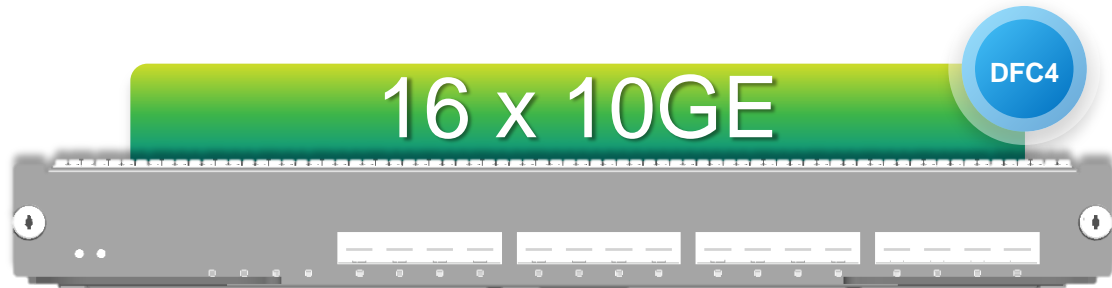
# Continued Investments

Introducing New 10G/40G Linecards

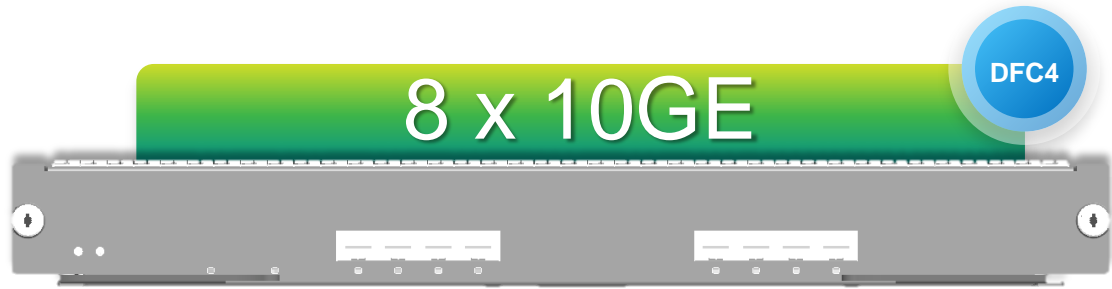
**Target  
Q4CY14**



6500-E	6807-XL
80G/Slot	160G/slot



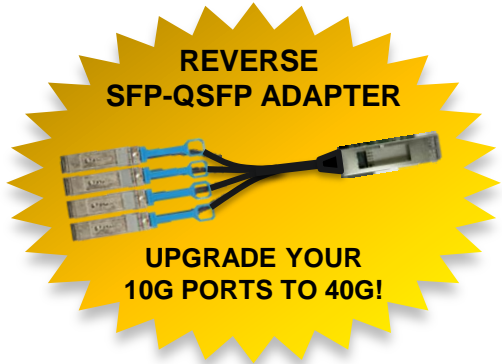
6500-E	6807-XL
80G/Slot	80G/slot



6500-E	6807-XL
80G/Slot	80G/slot

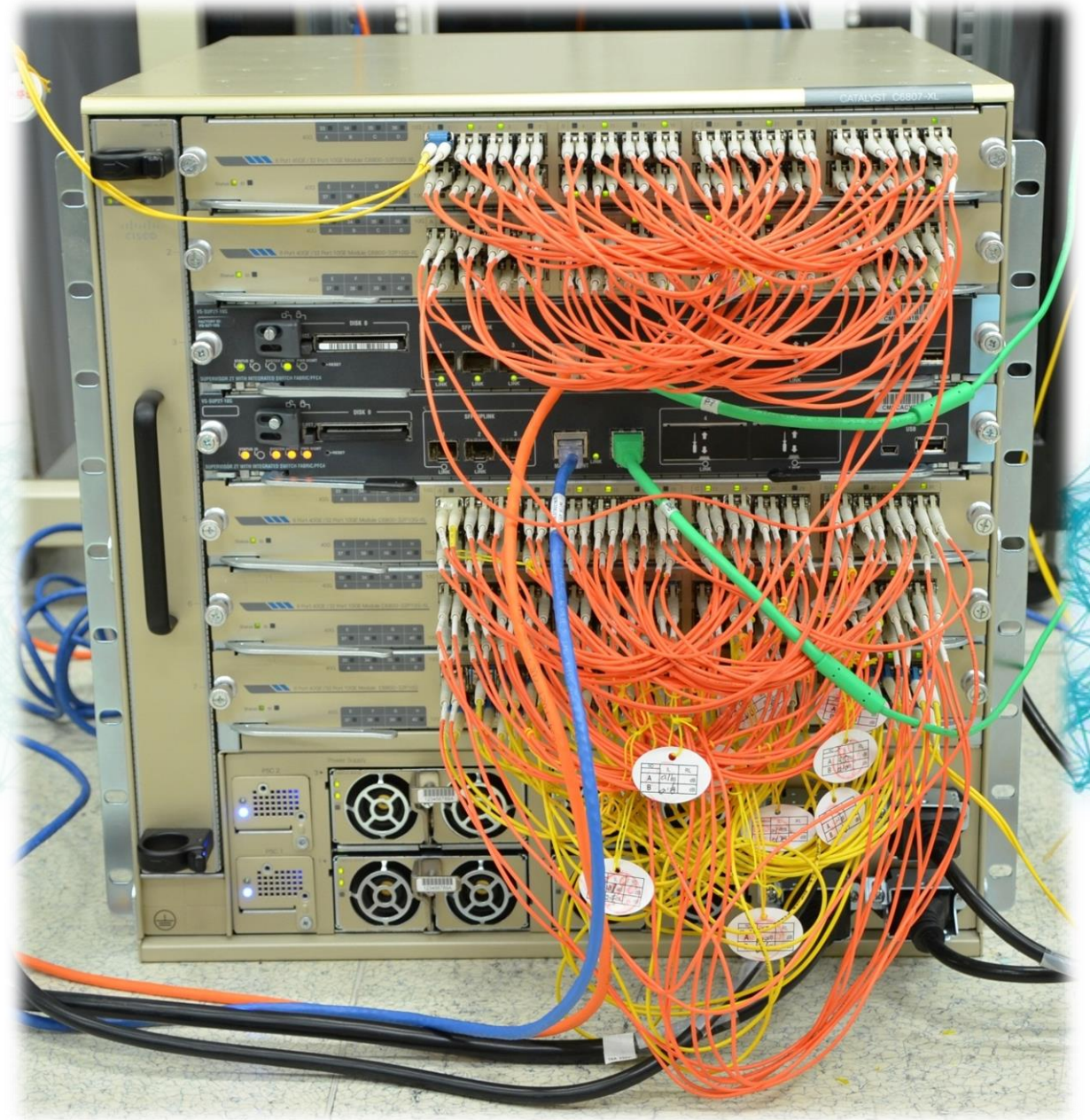
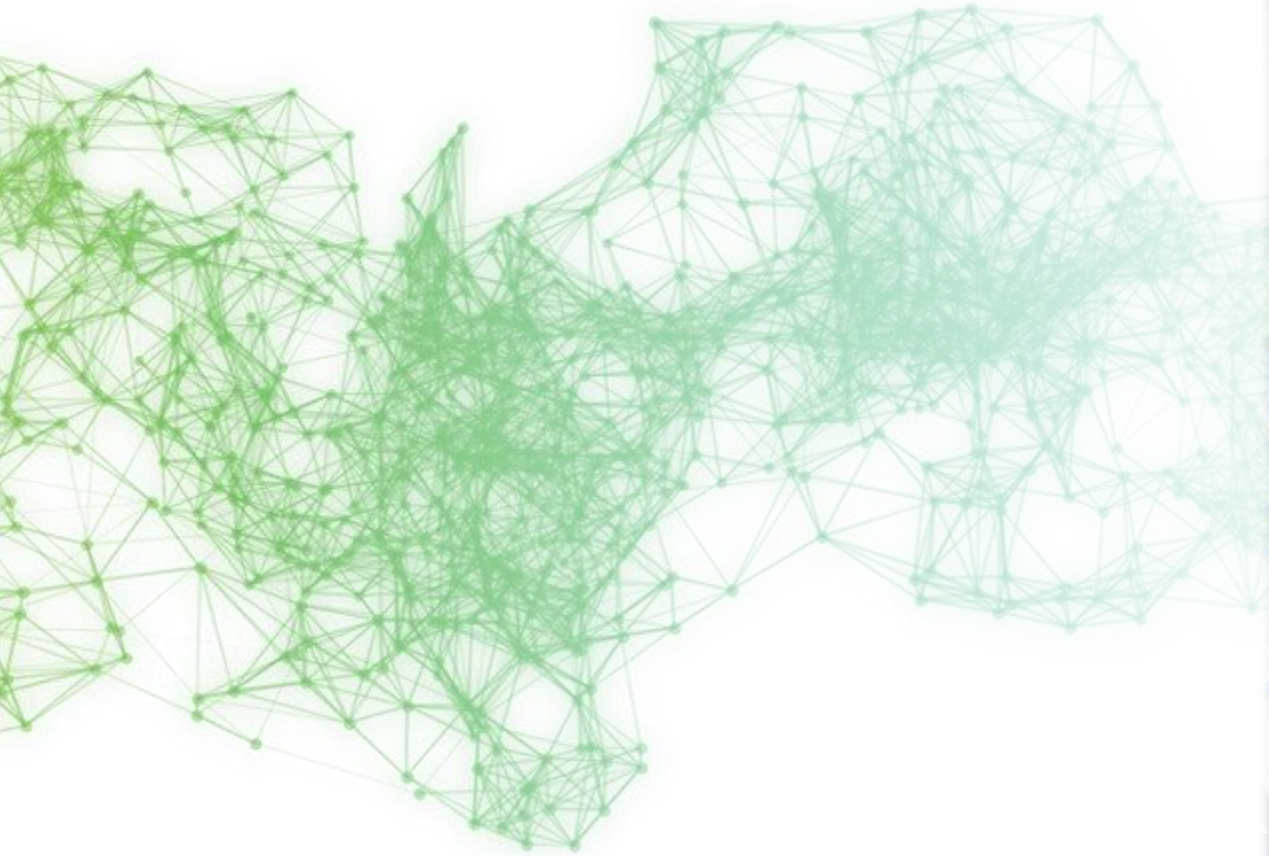
Built in Hardware:  
**MACsec, SGT,  
LISP, PTP, VSS &  
FEX**

Supported by Sup2T  
& interoperable with  
6700, 6800 & 6900 Cards



# It's Real! 😊

Fully loaded C6807-XL with the new 32x10G module



# Catalyst 6880-X

Base Board and System Controller

Now Shipping

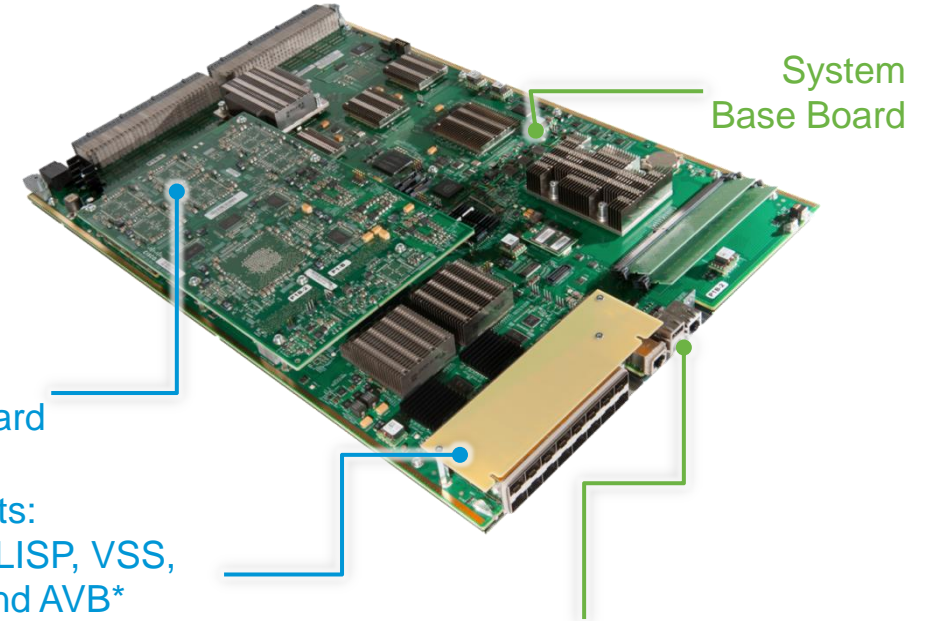


## Two HW Options

6880-X-LE

6880-X

	6880-X-LE	6880-X
IPv4/v6 Routing Capability	256K/128K	2M/1M
Multicast Routes (IPv6)	64K	256K
Number of Adjacencies	256K	1M
MAC Addresses	128K	128K
Security and QoS ACL	64K	256K
Flexible NetFlow	512K	1M
Microflow Policers	512	512
Aggregate Policers	8K	8K



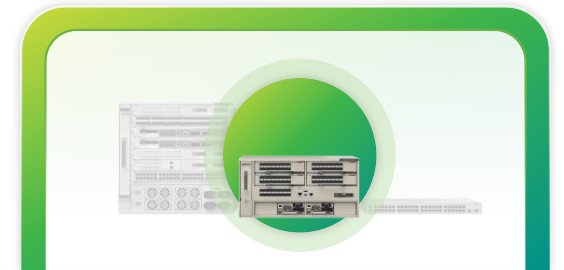
Forwarding Daughter Board

16 SFP+ Ports:  
MacSec, IA, LISP, VSS,  
SGT, 1588 and AVB\*  
Available on Every Port

\* Under Investigation

USB Host (Type A)  
USB Console (Type B)  
RJ-45 Console and Management Ports

## Enhanced Control-Plane Scale with New X86 2.0GHz Dual Core CPU



# 16-Port SFP+ Multi-Rate Port Card

Supports Between 1Gbps–40Gbps

FCS Q1  
CY14

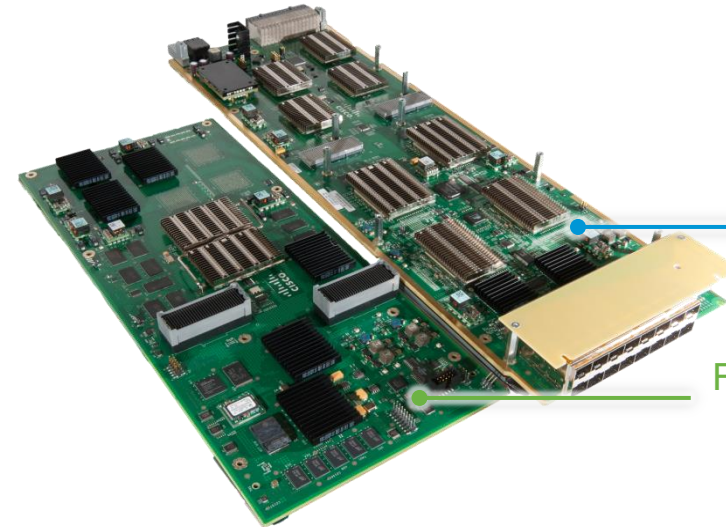


## Two HW Options

## Standard (LE)

## Large Tables

Two HW Options	Standard (LE)	Large Tables
IPv4/v6 Routing Capability	256K/128K	2M/1M
Multicast Routes (IPv6)	64K	256K
Number of Adjacencies	256K	1M
MAC Addresses	128K	128K
L3 Interfaces	128K	128K
Security and QoS ACL	64K	256K
Flexible NetFlow	512K	1M
Microflow Policers	512	512
Aggregate Policers	8K	8K
Port Buffering	24MB / Port	24MB / Port



Port Card  
Base Board

Forwarding Engine  
Daughter Board

## Port Speed and Type

## Number of Ports

1000 Mb/s Copper	16 (GLC-T SFP)
1 Gb/s Fiber	16 (SFP)
10 Gb/s Fiber	16 (SFP+)
40 Gb/s Fiber	4 (SFP-QSFP)

**MacSec, Instant Access, LISP, VSS, SGT, 1588  
Capable on Every Port**



# Catalyst 6800 Series

## Over 3000+ Catalyst 6500 Features

**MATURE,  
PROVEN &  
DEPLOYED  
@ SCALE**

### MPLS, VPLS & EVN

10 + Year MPLS Maturity	✓
L2 VPN	✓
L3 VPN	✓
L2/L3 VPN over mGRE	✓
MPLS TE	✓
VPLS/A-VPLS/H-VPLS	✓
Label Switch Multicast	✓
MACsec over EoMPLS	✓
MPLS at Access with I-Sat	✓
VRF-Lite	✓
EVN	✓
VRF-Aware Multicast	✓
VRF-Aware NetFlow	✓

### Next-Gen Solutions

FEX Controller	✓
L2 Campus LISP	✓
L3 Campus LISP	✓
SDN / ONEpk	✓
Smart Install Director	✓

### VSS & HA

5+ Year VSS Maturity	✓
MACsec on VSL	✓
1G/10G/40G VSL	✓
NSF & NSR	✓
BGP PIC	✓
BFD on SVI & MEC	✓



### QoS & Security

MACsec & SGT	✓	DHCP Snooping	✓
SGACL & L3 SGT	✓	Dynamic ARP Inspection	✓
Ingress/Egress ACL	✓	Span with ACL	✓
Time-Based ACL	✓	Identity 2.0	✓
ACL Statistics	✓	ACL-Based QoS Classification	✓
Port Security	✓	Marking (DSCP/COS)	✓
IPv6 FH Security	✓	Microflow Policing	✓
ACL Atomic Commit/Dry Run	✓	Advanced CoPP	✓
IPv6 uRPF	✓	IPv6 VACL	✓

### IPv4 Unicast

OSPFv2/v3	✓
OSPFv3 VRF-Lite	✓
VRF-Aware Unicast	✓
IP Tunnel HA	✓
BFD SVI-GRE	✓
BGP PIC	✓

### IPv4 Multicast

IGMPv3 and MLDv2 Snooping in HW	✓
PIM-SM "Dual-RPF" in HW	✓
PIM-DM, PIM-Bidir	✓
PIM-Bidir, PIM Snooping	✓
PIM Register in HW	✓
mVPN, MSR, mcast BFD	✓

### Large Tables & Scalability

<b>IPv4 Routing Capability</b>	<b>64K-2M</b>
Multicast Routes (IPv4)	64K-256K
Number of Adjacencies	256K-1M
MAC Addresses	128K
ECMP (v4 and v6)	16
Security & QoS ACL	64K-256K
Flexible Netflow	128K-5M
MPLS Label Push/Pop in 1pass	5/3
Aggregate Policers	8K
Number of VPNs	16K

### Rich Media

Flexible NetFlow	✓
Egress NetFlow	✓
Sampled NetFlow	✓
NDE (Full & Sampled)	✓
Video Monitoring	✓
Mediatrace	✓
Metadata QoS	✓
Multicast Service Reflection (MSR)	✓

### Management & Services

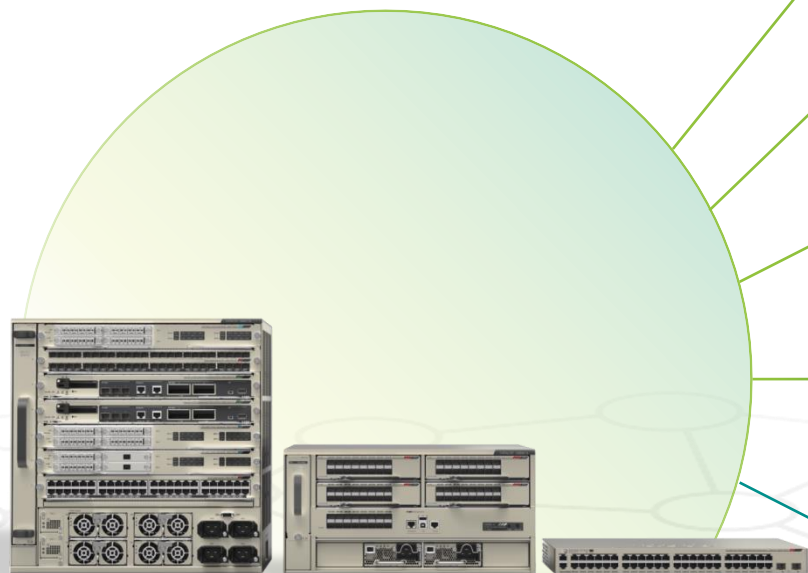
WCCPv3	✓
PBR IPv4/IPv6	✓
NAT/PAT	✓
GRE	✓
ERSPAN	✓
GOLD	✓
ISE	✓
Cisco Prime	✓
Mini Protocol Analyzer	✓

### IPv6 Features

IPv6-IPv4 HW Parity	✓	IPv6 in IPv4 Tunnels, VRF-Aware IPv6 Tunnels	✓
OSPFv3 VRF PE-CE	✓	BGPv6, IS-ISv6	✓
MLD, MLD Snooping	✓	6VPE and 6PE	✓
IPv6 Mcast HA	✓	PIM Sparse Mode (PIM-SM)	✓
IPv6 SLA, TCL, LLDP	✓	IPv6 QoS, PAACL, RAACL	✓

Now Shipping

# 15.1(2)SY Release



## Campus FEX Solution

- Catalyst Instant Access Switch ( C6800IA-48FPD )
- Catalyst Instant Access POE+ Switch ( C6800IA-48TD )

Medianet Support for Supervisor 720

Cisco Service Discovery Gateway ( mDNS Bonjour Support )

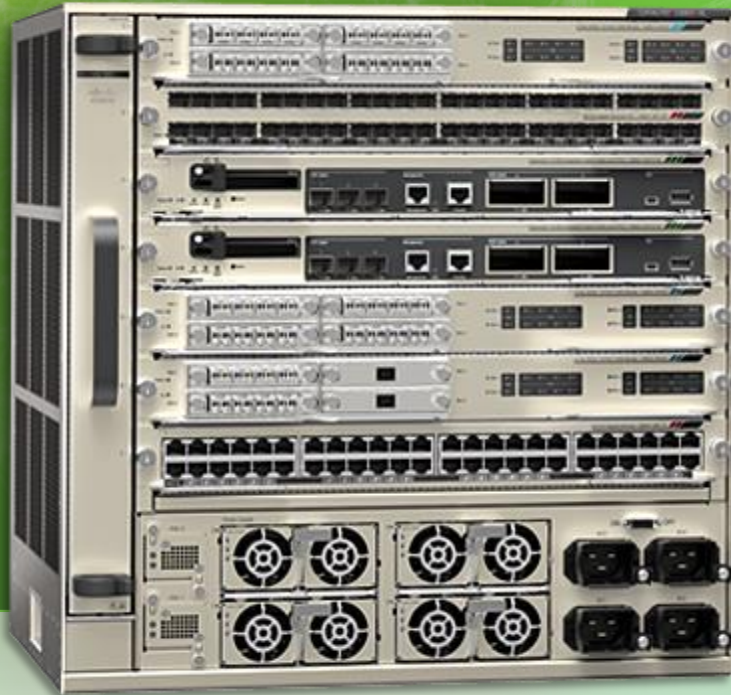
DWDM-SFP10G Support for WS-X6904-40G-2T Module

Multicast Enhancements – MoFRR, MVRFv6 Lite, MVPNv6

Routing Enhancements – OSPFv3 NSR, EIGRP IPv6 GR

System Manageability Enhancements

# Reinventing the Backbone Experience



## Catalyst 6800 Series

The Next Generation campus backbone is here!



## Priced to Compete

Aggressive services and bundle pricing!



## Nonstop Innovation

Strong hardware and software roadmap with more to come!



# Virtual Switching System (VSS) Overview

# Polling Question 2

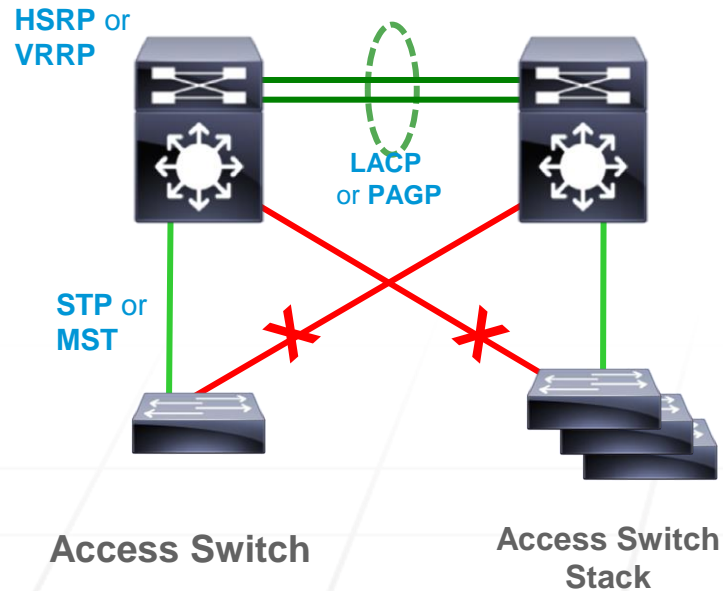
## What is your level of experience with Catalyst Virtual Switching System (VSS)?

- a) I am not familiar with Catalyst (single-chassis) SSO or VSS.
- b) I am familiar with Catalyst (single-chassis) SSO, but I'm not familiar with VSS.
- c) I'm playing with Catalyst VSS in the lab.
- d) I'm running Catalyst VSS in production.

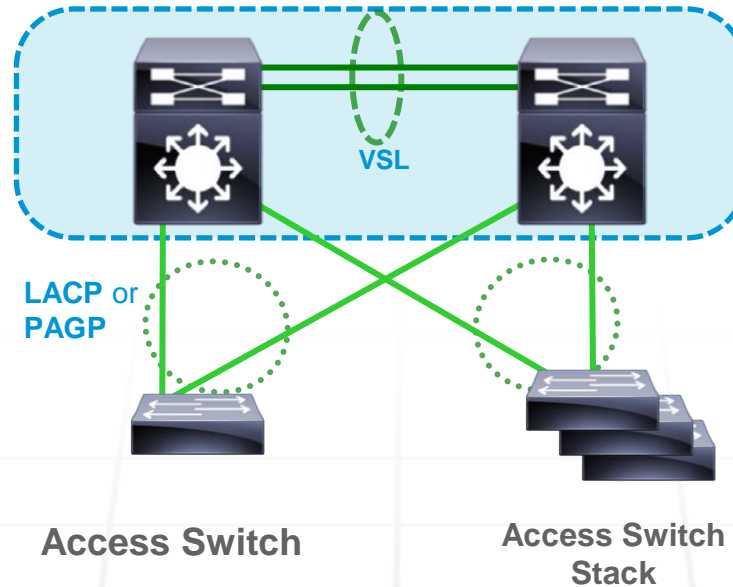
# Catalyst Virtual Switching System

## Topology Comparisons

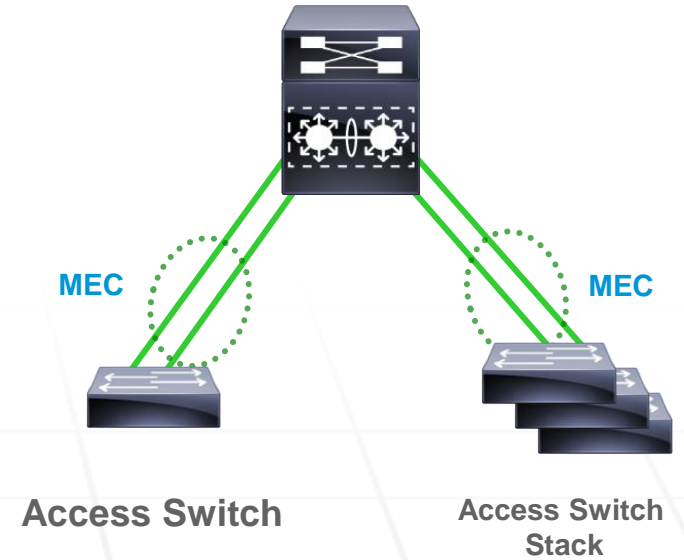
### Traditional



### VSS - Physical



### VSS - Logical



## Benefits of Virtual Switching

Simplify Operations by Eliminating STP, FHRP and Multiple Touch-Points

Double Bandwidth & Reduce Latency with Active-Active Multi-chassis EtherChannel (MEC)

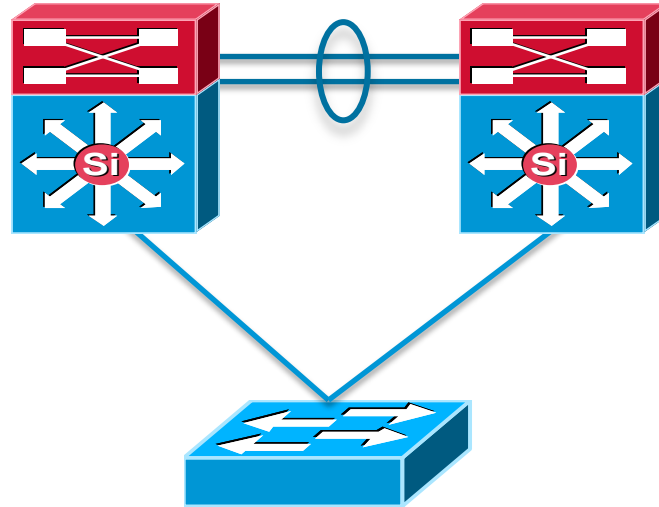
Minimizes Convergence with Sub-second Stateful and Graceful Recovery (SSO/NSF)

# Catalyst Virtual Switching System (VSS)

Simplified Next-Gen Campus Architecture

## Standalone Challenges

~~STP Loop~~  
~~FHRP~~  
~~FHRP Tunings~~  
~~PIM DR Priority~~  
~~PIM Tunings~~  
~~Protocol Dependent Scale~~  
~~Unicast Flooding~~  
~~Asymmetric Forwarding~~  
~~Network/System Redundancy Tradeoff~~  
~~Protocol Dependent Recovery~~  
~~CAM/ARP Tunings~~  
~~OSPF LSA/SPF Tuning~~  
~~Control/Mgmt/Forwarding Complexities~~

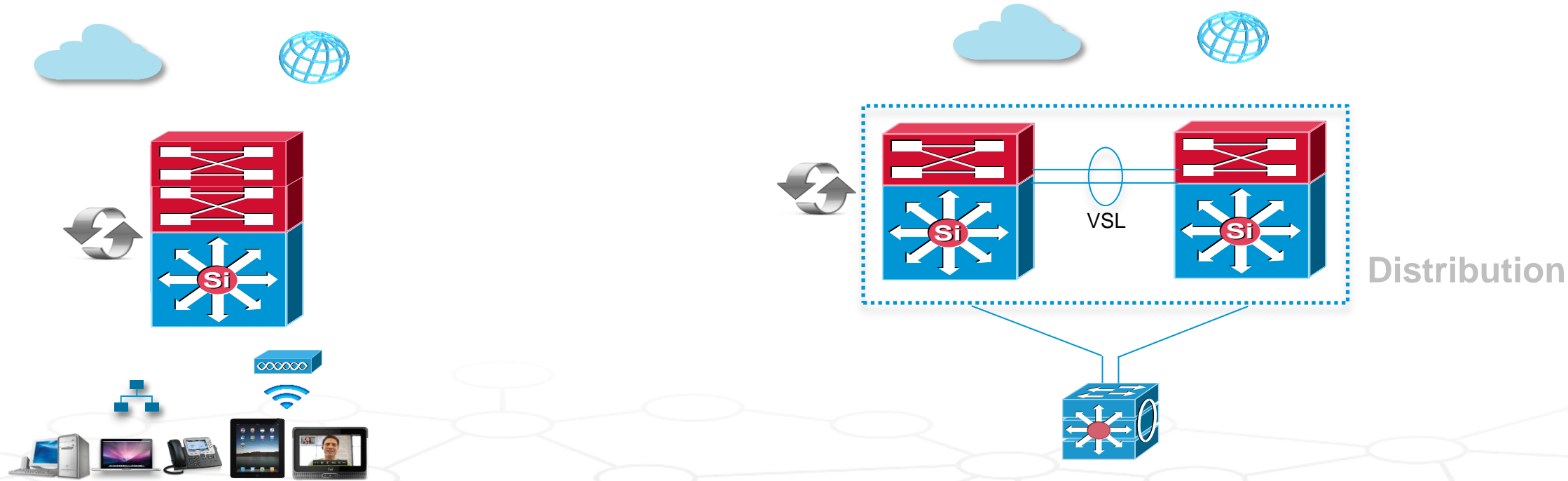


## Additional VSS Benefits

Network/System Level Redundancy  
Scale-independent Recovery  
Hardware Dependent Recovery  
Increase Unicast Capacity  
Increase Multicast Capacity  
Simplified Network Topologies  
Control-plane Simplicity  
Operational Simplicity  
L2-L4 Load Sharing  
Flat L2 Network

# System Redundancy with SSO/NSF

## Single and Dual Chassis Sup Redundancy



Access

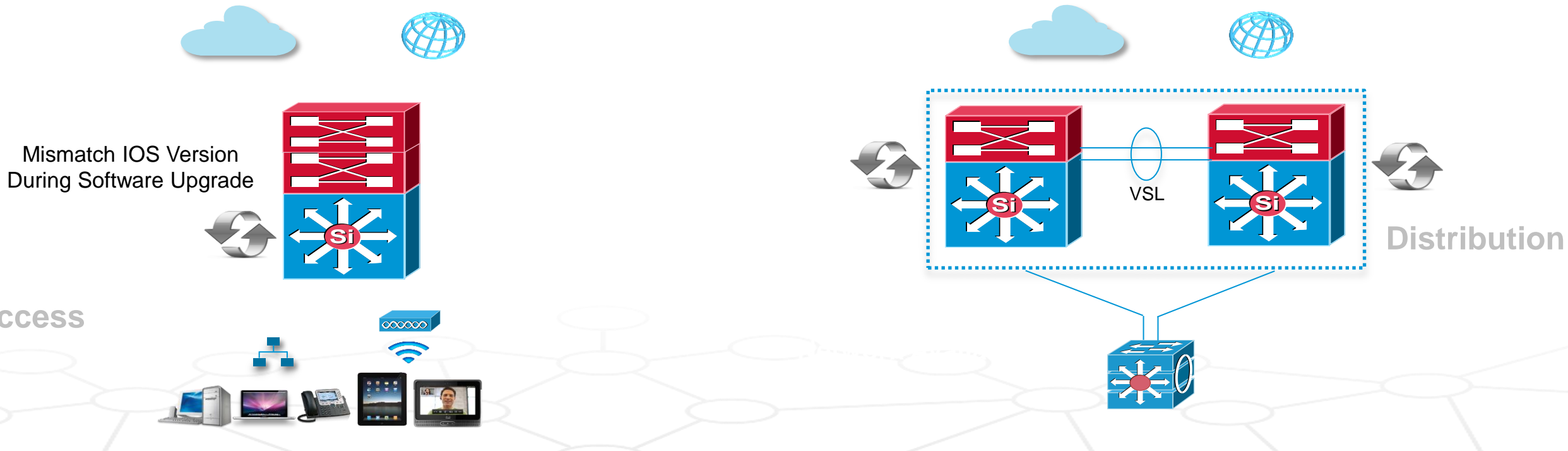
Distribution

- Non-Redundant Systems are Single-Points-Of-Failure
- Single-chassis Redundant Supervisors provide System-level Stateful & Graceful redundancy
- Protects network services, capacity and availability for Wired and WLAN end-points

- Cisco VSS provides inter-chassis redundancy
- Redundant Supervisors between both chassis provides VSS Stateful & Graceful redundancy
- Protects network services and availability at Access layer with redundant paths

# Operational Resiliency with ISSU

Delivering 99.999% Network Uptime



- Dual-Supervisor requires software consistency
- ISSU provides real-time single-chassis software upgrade. Reduces MTBF
- Protects network services, capacity and availability for Wired and WLAN end-points

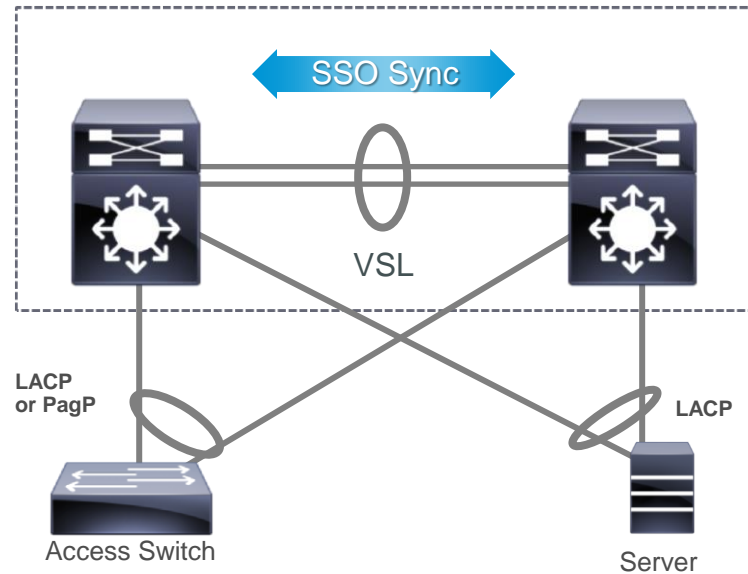
- Cisco VSS requires software consistency
- eFSU provides real-time dual-chassis software upgrade. Reduces MTBF
- Protects network services and availability at Access layer with redundant paths

# VSS Quad Sup SSO

Provide Optimal Business Continuity for BYOD & Collaboration

Now Shipping

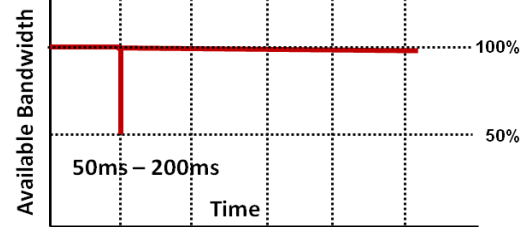
## Traditional VSS



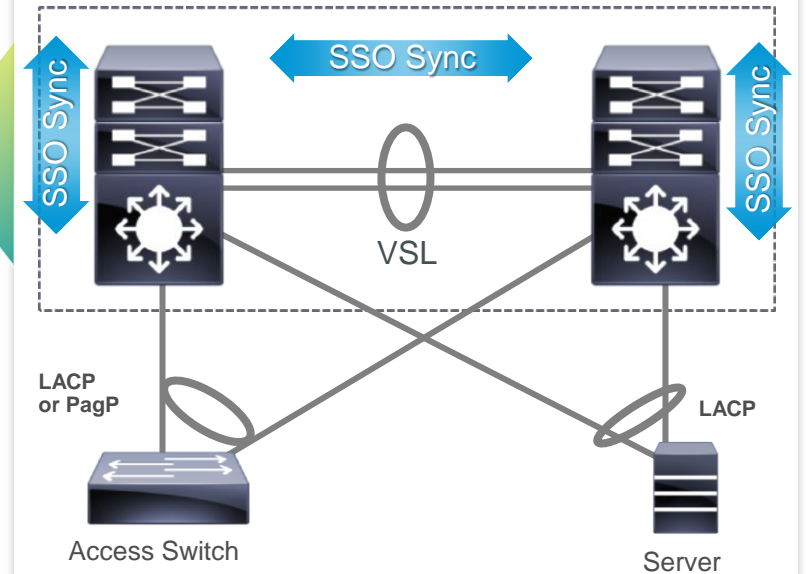
15.1(1)SY1 Support

Sup2T YES

Sup720 NO



## VSS Quad SUP SSO



### Inter-Chassis SSO & MEC

- If SSO Active Supervisor or Chassis fails, the SSO Standby Supervisor & Chassis will ensure all MEC remain operational
- Assumes Dual-Attach (MEC) Links! Any Single-Attach Links and local Modules are down until local Chassis is restored

### Maximized Bandwidth

- Traditional VSS with MEC maintains Network Topology (no convergence), but bandwidth drops to 50% until restoration
- VSS Quad Sup SSO with MEC maintains all Modules & Links for 100% bandwidth – convergence is only 50-200ms

### Intra-Chassis SSO & MEC

- SSO between VSS Chassis, and SSO between In-Chassis Active & In-Chassis Standby Supervisors.
- Maintains all local Modules & Links, to support Single-Attach and different Service-Modules



# Instant Access (IA) Overview



# Polling Question 3

## What is your level of experience with Catalyst Instant Access (FEX)?

- a) I am familiar with Catalyst VSS, but I have no idea about Instant Access.
- b) I am familiar with Nexus FEX, but I have no idea about Instant Access.
- c) I'm playing with Catalyst VSS & Instant Access in the lab.
- d) I'm running Catalyst VSS & Instant Access in production.

# IT Spends Most of Their Time in Repetitive Operational Actions for Access Switches

INTRODUCING

## Campus Instant Access



**28%**  
MONITORING,  
TROUBLESHOOTING

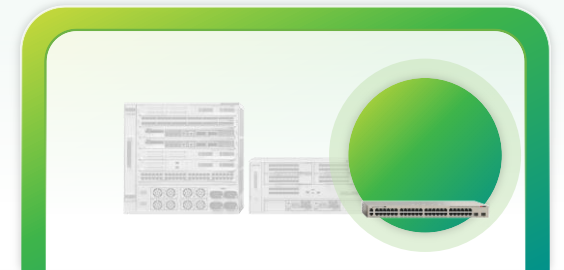
**19%**  
SECURITY  
CONFIGURATIONS

**18%**  
INITIAL INSTALL,  
CONFIGS, TESTING

**14%**  
UPGRADING  
EQUIPMENT

Source: A commissioned study conducted by Forrester Consulting for Cisco Systems, 2012

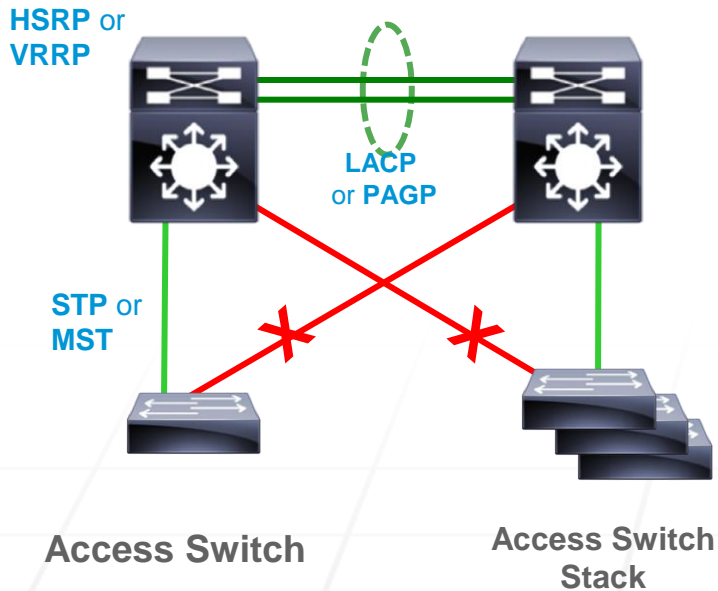
**Simple Install and Connect**  
**No More Repetitive Operations**



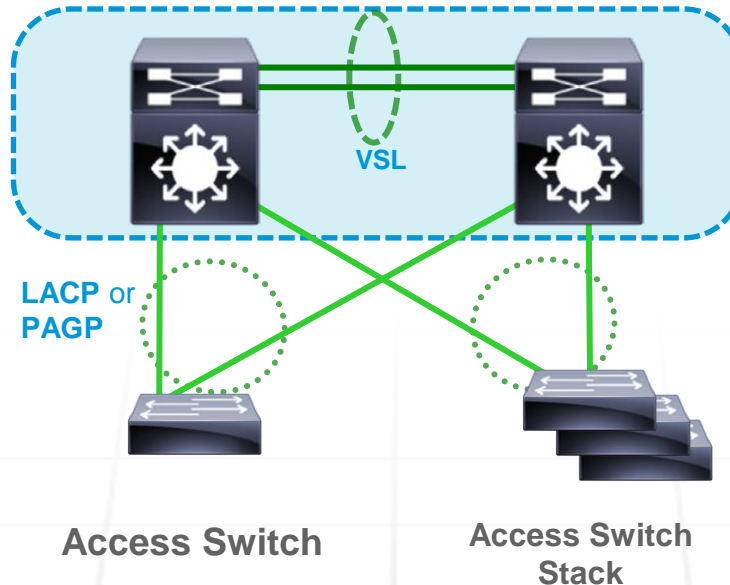
# Catalyst Instant Access

## Topology Comparisons

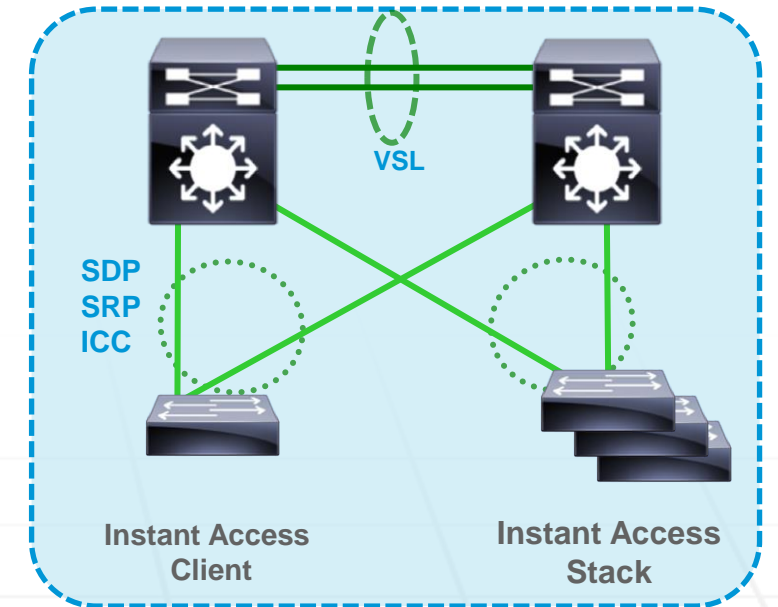
### Traditional



### VSS



### Instant Access



## Benefits of Instant Access

Simplify Operations across Entire Distribution POD

Deploy Premium Catalyst 6800 features at Access Layer

“Grow as you Go” with full “Plug & Play” IA client provisioning

# Catalyst Instant Access - Key Components

Instant Access Director & Client

## INSTANT ACCESS PARENT

Catalyst 6500-E



Sup2T



6904



FourX



Catalyst 6807-XL



Sup2T



6904



FourX



Catalyst 6880-X



## INSTANT ACCESS CLIENT

Catalyst 6800IA



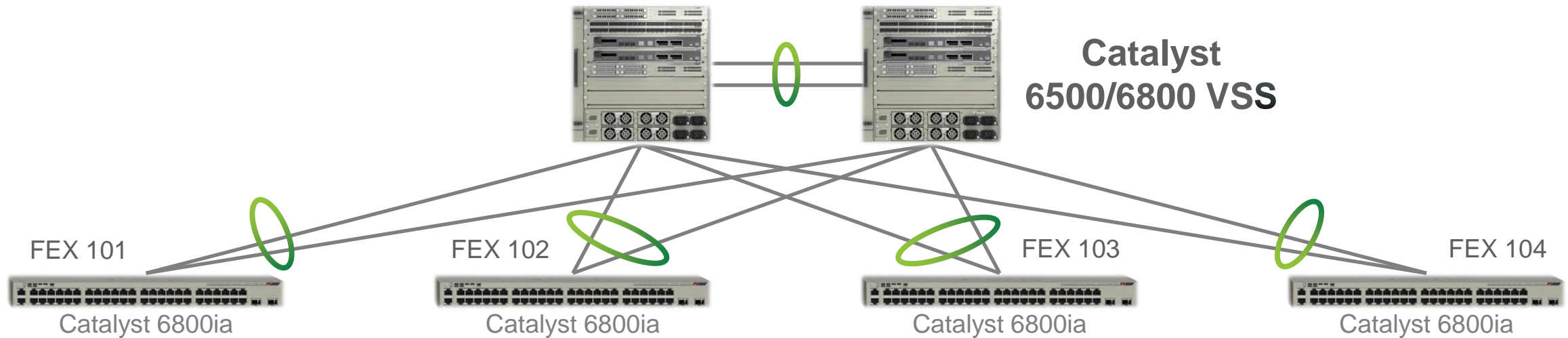
**STACK  
up to 3**

**RIGHT-SIZED, GROW-AS-YOU-GO NETWORKING!**



# Catalyst Instant Access

## Simplified Configurations



### Config on Parent:

```
interface Port-channel101
switchport mode fex-fabric
fex associate 101
!
interface Port-channel102
switchport mode fex-fabric
fex associate 102
!
interface GigabitEthernet101/1/0/1
switchport mode access
switchport access vlan 101
!
interface GigabitEthernet102/1/0/1
ip address 102.1.1.1 255.255.255.0
ipv6 address 2013:102:1:1::1/96
```

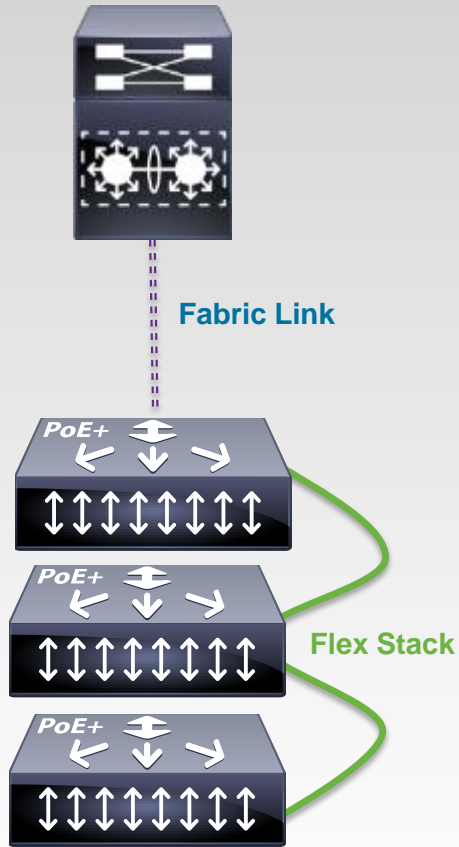
**No Configuration @  
Access Switches!**

**No Trunks Configured @  
Access to Distribution!**

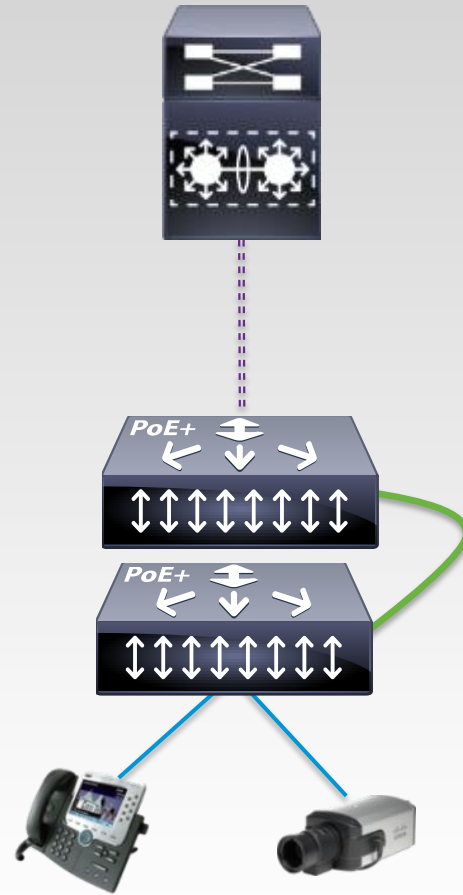
# Instant Access Capabilities

## Differences From DC FEX

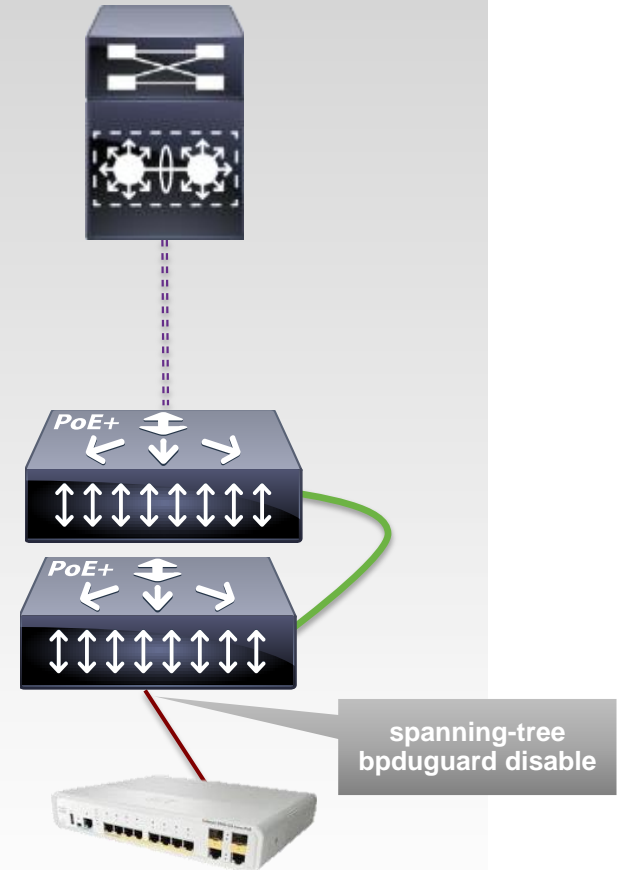
### FEX STACKING



### POE/POE+ CAPABILITY



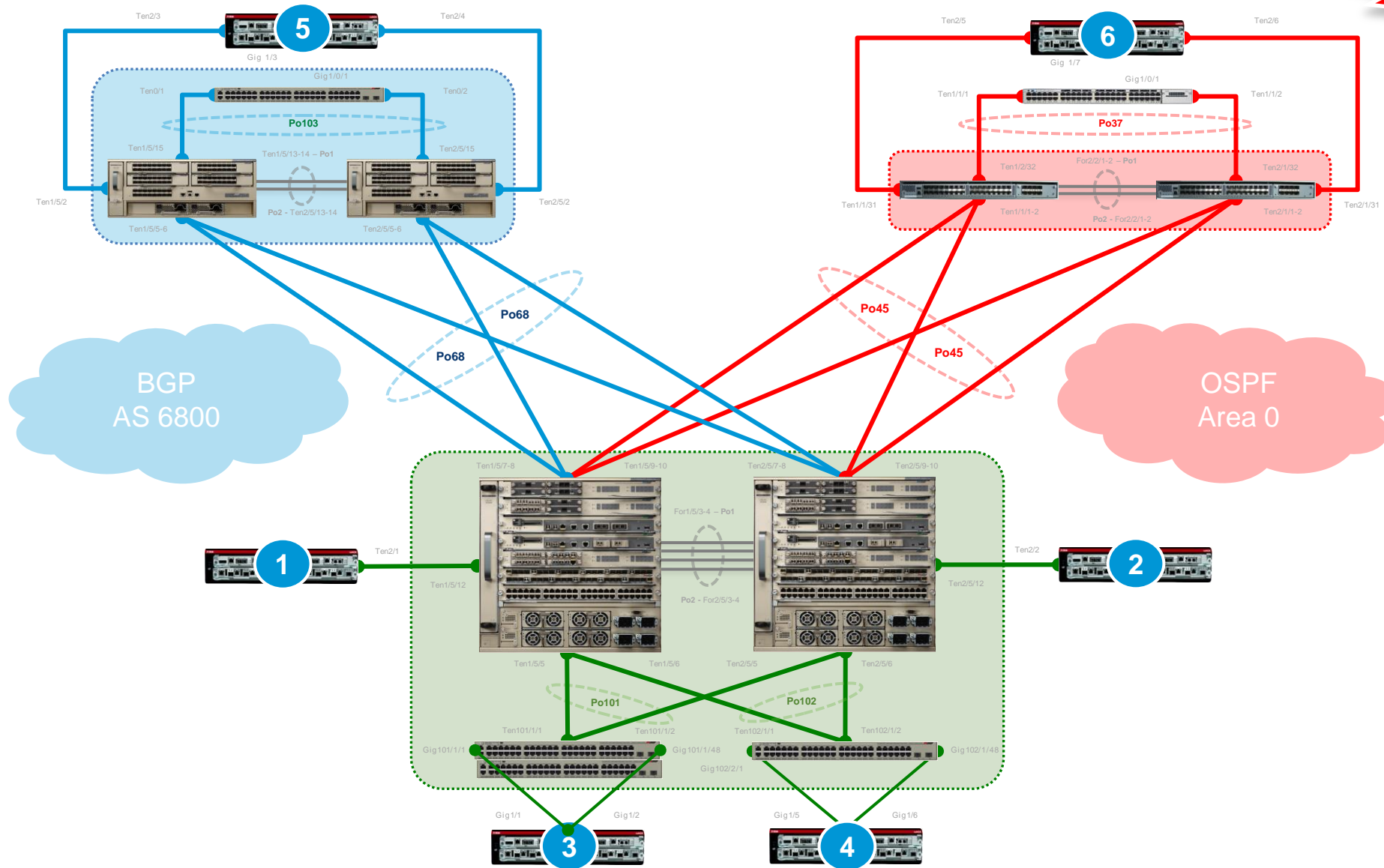
### REMOTE SWITCHES





# LIVE DEMO!!

## Catalyst 6800 with VSS & Instant Access





# Submit Your Questions Now!

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



We Appreciate Your Feedback!

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

**Cisco Press eBook**  
(value up to \$80 USD)

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 Vivek Baveja and Shawn Wargo)



If you have additional questions, you can ask them to Vivek and Shawn. They will be answering from February 3 through February 14, 2014.

<https://supportforums.cisco.com/thread/2263952>

You can catch the video or read the Q&A five business days after the event at

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

# Trivia Question (Select the correct answer)

**What do the Euro and the Cisco Catalyst 6000 Series Switches have in common?**

- A.** The Euro was introduced in 1999, the same year the Cisco Catalyst 6000 was released.
- B.** The Euro zone phased out previous currencies in favor of the Euro in 2002, the same year the Catalyst 6000 series was released.
- C.** The Euro was introduced in 1997, the same year the Cisco Catalyst 3000 and 6000 series were released.

# February Expert Series Webcast – Russian

## Topic: Advanced Features of Cisco Unified Border Element - Configuration and Troubleshooting



**Tuesday, February 11**

**12:00PM Moscow Time**

**9:00AM Brussels Time**

Join Cisco Expert:

**Vladimir Savostin**

During this webcast Technical Assistance Center (TAC) expert Vladimir Savostin will present a number of recent features of Cisco Unified Border Element with a focus on configuration and troubleshooting.

Registration for this live webcast:

[http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE\\_ID=R&SEMINAR\\_CODE=S19807&PRIORITY\\_CODE=](http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE_ID=R&SEMINAR_CODE=S19807&PRIORITY_CODE=)

# February Expert Series Webcast – Portuguese

## Topic: Cisco Nexus Virtual PortChannel (vPC)



Wednesday, February 12

11:00 a.m. Brasilia City Time

1:00 p.m. West Lisbon

5:00 a.m. San Francisco

8:00 p.m. New York

Join Cisco Expert:

**Felipe Lima**

During this live event, Felipe will provide the basic concepts offered by the Cisco Nexus Virtual PortChannel (vPC) features.

Registration for this live webcast:

[http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE\\_ID=P&SEMINAR\\_CODE=S19845&PRIORITY\\_CODE=](http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE_ID=P&SEMINAR_CODE=S19845&PRIORITY_CODE=)

# February Expert Series Webcast – English

## Topic: Troubleshooting Common Features of UCS and Nexus 1000v



Wednesday, February 19

10:00 a.m. PDT San Francisco

1:00 p.m. EDT New York

6:00 p.m. London

7:00 p.m. Paris

Join Cisco Expert:

### Vishal Mehta

During this live event, Cisco subject matter expert Vishal Mehta will cover UCS and Nexus 1000v features from a perspective of configuration, performance, best practices, and troubleshooting.

Registration for this live webcast:

[http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE\\_ID=E&SEMINAR\\_CODE=S19850&PRIORITY\\_CODE=](http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE_ID=E&SEMINAR_CODE=S19850&PRIORITY_CODE=)

# February Expert Series Webcast – Spanish

## Topic: IOS-XR - Installing and Upgrading Software and Introduction to Cisco Software Manager



Tuesday, February 25

9:00 a.m. Mexico City

10:30 a.m. Caracas

12:00 p.m. Buenos Aires

5:00 p.m. Madrid

Join Cisco Expert:

### Sergio Barragan

During this live event, Sergio will present Turboboot methods, CLI installation and IOS SR system upgrade.

Registration for this live webcast:

[http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE\\_ID=S&SEMINAR\\_CODE=S19871&PRIORITY\\_CODE](http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE_ID=S&SEMINAR_CODE=S19871&PRIORITY_CODE)



# March Expert Series Webcast – Japanese

## Topic: OSPF Introduction



**Tuesday, March 4**

**10:00 a.m. JST Tokyo**

**or**

**Monday, March 3**

**5:00 p.m. San Francisco**

Join Cisco Expert:

**Tsuyoshi Suzuki**

During this live event, Tsuyoshi will provide an overview of OSPF, how it works, terminologies and features to learn, and noteworthy points needed to learn when pursuing CCNA certification..

**Registration for this live webcast:**

[http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE\\_ID=J&SEMINAR\\_CODE=S19864&PRIORITY\\_CODE](http://tools.cisco.com/gems/cust/customerSite.do?METHOD=E&LANGUAGE_ID=J&SEMINAR_CODE=S19864&PRIORITY_CODE)

# Ask the Expert Events – Current English



## Topic: Troubleshooting Unified Contact Center Enterprise

Join Cisco Experts: **Goran Seltholfer**

Learn and ask questions about integrating Unified Contact Center Enterprise into your environment and troubleshooting the many features that are available.

**Ends February 14**

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## Topic: ASR9000 Hardware Architecture

Join Cisco Experts: **Satya Narra**

Learn and ask questions about software installation, SMU installation, ASR9000 architecture, installing (ASR9000 nv) and troubleshooting.

**Ends February 14**

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: Enterprise IPv6 Deployment

Join Cisco Experts: **Chip Nielsen**

Learn and ask questions about enterprise IPv6 deployment.

**Starts February 17**

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Join the discussion for these Ask The Expert Events:

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

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- Get **timely** answers to your technical questions
- Find **relevant** technical documentation
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<https://plus.google.com/110418616513822966153?prsrc=3#110418616513822966153/posts>



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



[https://play.google.com/store/apps/details?id=com.cisco.swtg\\_android](https://play.google.com/store/apps/details?id=com.cisco.swtg_android)



<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 or Russian we invite you to ask 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>
- Russian → <https://supportforums.cisco.com/community/russian>

# Cisco Technical Support Mobile App



Global community members can collaborate with colleagues and other support professionals with easy, on-the-go access to the community's breadth of technical resources in their local language.

With the latest version of the mobile app, you can now access the Spanish, Portuguese, Japanese and Russians communities.

<https://supportforums.cisco.com/community/netpro/online-tools/mobile-technical-support>

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<https://supportforums.cisco.com/community/netpro/idea-center/cafe/blog/2013/06/07/ratings-extended-to-documents-blogs-and-videos>



# Trivia Question (Select the correct answer)

**What do the Euro and the Cisco Catalyst 6000 Series Switches have in common?**

- A. The Euro was introduced in 1999, the same year the Cisco Catalyst 6000 was released.
- B. The Euro zone phased out previous currencies in favor of the Euro in 2002, the same year the Catalyst 6000 series was released.
- C. The Euro was introduced in 1997, the same year the Cisco Catalyst 3000 and 6000 series were released.

**Answer is A:**

The Euro was introduced in 1999, the same year the Cisco Catalyst 6000 was released.

# Thank You for Your Time

Please Take a Moment to Complete the Evaluation



Thank you.

