CISCO SYSTEMS

Competitive Cross-Reference Sales Tool

Cisco Catalyst® 2950 Series Switches vs. 3Com SuperStack 3 3300/4300/4400 Switches

Cisco delivers superior availability, security, and quality of service features than 3Com—for greater overall value.

Business networks face new demands every day—desktop computing power is rising, bandwidth-hungry applications are multiplying, the volume of sensitive data is expanding, and companies are deploying IP phones, wireless access points, and other devices on the LAN.

As a result, networks must meet new, higher standards for network availability, security, and control via quality of service (QoS). The Cisco Catalyst 2950 Series offers all that and more, delivering intelligent services to the network edge.

Following are just a few of the reasons why the Cisco Catalyst 2950 Series is a better choice than comparable 3Com products.

Cisco Catalyst 2950 Series Switches Offer More

Superior Availability
Ensures employees can access data at all times, locally and remotely

More features to increase network uptime and employee productivity, including:
- Spanning-Tree Protocol (STP) enhancements such as PortFast, UplinkFast, CrossStack UplinkFast, BackboneFast, and 802.1 s/w for faster uplink failover recovery
- EtherChannel® technology to logically group ports for incremental bandwidth
- Per-VLAN Spanning-Tree Protocol Plus (PVST+) for load sharing across uplinks, doubling available bandwidth
- Voice VLAN capabilities enable all voice traffic to be carried on a VLAN designated for IP telephony, simplifying IP phone installation and network administration and troubleshooting

Enhanced Security
Protects data across the network from internal and external threats

More features to mitigate internal security concerns and protect partner/customer interactions, including:
- Secure Shell (SSH) and Secure Network Management Protocol v3 (SNMPv3) to provide network security by encrypting administrator traffic, preventing unauthorized users from accessing passwords or configuration information (available Q3CY02, EI versions only)
- 802.1x, the industry standard for port-level authentication, to ensure users are logged on and authenticated before data packets are transmitted
- Filtering incoming traffic flows on port basis in hardware based on Layer 2–4 access control parameters (ACPs) to prevent unauthorized users from accessing restricted areas of the network (EI versions only)
- Port security prevents unauthorized users from accessing the network by limiting the number of MAC addresses allowed per port; an aging feature is used to remove MAC addresses after a specified time to allow another device to connect to the same port
- Private VLAN edge provides security and isolation between ports on a switch, ensuring that voice traffic travels directly from its entry point to the aggregation device through a virtual path and cannot be directed to a different port
- MAC address notification allows administrators to be notified of new users added and removed from the network

Advanced Quality of Service
Prioritizes critical traffic and applications to get the most out of available bandwidth

More features to improve network efficiency and lower administration costs, including:
- Additional egress (outgoing) queues and Weighted Round Robin (WRR) allow network administrators to be more discriminating and specific when making scheduling/priority decisions on outgoing packets
- Rate limiting ensures that the appropriate amount of bandwidth is allocated to each user, allowing administrators to prioritize traffic for certain users (EI versions only)

Easier Management
Simplifies and greatly streamlines network management tasks

More features to save time and resources with Cisco Cluster Management Suite (CMS) Software, which allows users to configure, troubleshoot, and perform software upgrades on multiple switches at once via a standard Web browser.

Other features include:
- Topology maps for a comprehensive layout of all clustered switches
- Link graphs and reports for real-time traffic updates
- Configuration templates and guide modes to minimize training
- Cisco CMS is embedded in the switch—no installation is required

3Com Weaknesses

- The SuperStack 3 4400 platform is limited to stacking of up to eight units and does not support switch clustering, so each device must be individually managed.

- The SuperStack 3 QoS implementation does not allow administrators to be as discriminating in scheduling and prioritizing traffic and allocating bandwidth— particularly important in networks that support IP telephony.

- The SuperStack product family provides limited investment protection because the SuperStack 3 4400 cannot be stacked with the 3300/4300 devices using stacking interfaces. Also, the 1000BASE-T and SX modules cannot be shared between switches.

- Without security filtering, MAC address notification, and Secure Shell (SSH), the SuperStack does not deliver the optimal LAN security needed to prevent against internal security threats.

Investment Protection with Cisco Catalyst Switches

Cisco network platforms running Cisco IOS® Software form a unified system, providing a firm foundation for building Internet applications, while reducing training, management, and troubleshooting costs.

In addition:
- Cisco is the worldwide leader in switching, offering scalable, end-to-end networking solutions to meet the needs of enterprise customers both today and tomorrow.

- Cisco develops innovative technology such as TACACS+, enhanced Spanning-Tree Protocol, Cisco Fast EtherChannel and Gigabit EtherChannel technology, and Cisco Discovery Protocol, which have been adopted by the industry and Cisco competitors.

Cisco Catalyst 2950 Series Switches vs. 3Com SuperStack 3 3300/4300/4400/4400 SE Switches

	Cisco 2950-12/24 Switches (Standard Image)	Cisco 2950 G/T/C Switches (Enhanced Image)	3Com SS 3 3300 Switches	3Com SS 3 4300 Switches	3Com SS 3 4400 and 4000 SE Switches
Configuration Information	12 or 24 fixed 10/100 ports, wire-speed standalone switch	12, 24, or 48 fixed 10/100 ports with 2 GBIC ports or 24 fixed 10/100 ports with 2 1000BASE-T or 100BASE-FX ports, wire-speed standalone switch	12 or 24 10/100 ports, stackable with 1 expansion slot (XM, TM, SM, MM)/ 1 stacking port	48 10/100 ports, stackable with 4 expansion slots	SS3 4400, 24 or 48 10/100 ports, stackable with 2 expansion slots

Availability

Redundancy					
Spanning-Tree Protocol (802.1d)	Yes	Yes	Yes	Yes	Yes
PortFast	Yes	Yes	No	No	Yes, FastStart
UplinkFast	Yes	Yes	No	No	Yes, resilient links
CrossStack UplinkFast	No	Yes (G)	No	No	No
BackboneFast	Yes	Yes	No	No	No
Rapid Spanning-Tree Protocol (802.1w)	No	Yes	No	No	Yes
Multiple Spanning Tree (802.1s)	No	Yes	No	No	No
Per-VLAN Spanning Tree Plus (PVST+)	Yes	Yes	No	No	No
Multicast Management					
IGMP (Internet Group Management Protocol) snooping	Yes	Yes	Yes	Yes	Yes
Immediate leave, fast join	Yes	Yes	No	No	No
Bandwidth Optimization					
Cisco Fast/Gigabit EtherChannel	Yes, up to eight ports	Yes, up to eight ports	Yes, up to two ports	Yes, up to four ports	Yes, up to four ports
VLAN Trunking Protocol (VTP) pruning	Yes	Yes	No	No	No
Voice VLAN	Yes	Yes	No	No	No
Dynamic VLAN assignment	Yes	Yes	No	No	No
Dynamic Trunking Protocol (DTP)	Yes	Yes	No	No	No
Multicast VLAN Registration	Yes	Yes	No	No	No

Quality of Service

802.1p class of service (CoS)	Yes	Yes	Yes	Yes	Yes
DiffServ Code Point (DSCP)/ type of service (ToS)	No	Yes	No	No	Yes (4400 SE requires software upgrade)
Number of egress queues per port	Four	Four	Two	Two	Four
Rate limiting	No	Yes	No	No	No
Weighted Round Robin (WRR)	Yes	Yes	No	No	Yes, but unconfigurable
Strict priority scheduling	Yes	Yes	Yes	Yes	Yes
Configurable CoS to queue mapping	Yes	Yes	No, fixed CoS	No	No, honor only

Security

Security filtering	No	Yes	No	No	Yes (4400 SE requires software upgrade)
802.1x authentication	Yes	Yes	No	No	No
Port security, MAC aging	Yes	Yes	No	No	Yes, but no MAC aging
MAC address notification	Yes	Yes	No	No	Yes
Private VLAN Edge	Yes	Yes	No	No	No
TACACS+ and RADIUS	Yes	Yes	No	No	No
Multilevel console security	Yes	Yes	No, does not allow read-only access	No, does not allow read-only access	No, does not allow read-only access
Secure Shell (SSH) and SNMPv3	No	Yes	No	No	No

Web Management

Web Management					
Single IP Management for a virtual stack of up to 16 switches	Yes, with Cisco CMS	Yes, with Cisco CMS	No, limited to only 3300 and 1100; can only view one switch at a time	Only able to manage 4300 switches; can only view one switch at a time	Must manage 4000/ 4400 SE switches separately; cannot configure across stack
Cluster upgrade	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No cluster upgrade; stack upgrade available for 4400 or 4400 SE only
Topology maps with IP phone discovery and wireless AP management integration	Yes, with Cisco CMS	Yes, with Cisco CMS	No, must download network supervisor	No, must download network supervisor	No, must download network supervisor
Multiple device and port management configuration in minutes	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
Configuration templates, guide modes, and embedded help	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No
Solution wizards for easy deployment of voice, video, and priority data in the network	Yes, with Cisco CMS	Yes, with Cisco CMS	No	No	No, must download network supervisor

For more information

www.cisco.com/go/catalyst2950

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