

# cisco Software Release 6.2.1 on the Catalyst 4000 Family

## Software Release 6.2 Hardware Features

Hardware Features	Hardware/Software Dependencies
Catalyst 4000 48-port 100BASE-FX line card WS-X4148-FX-MT	Requires CatOS Software Release 6.2(1)

## Software Features [all requiring Cisco CatOS Supervisor Software version 6.2(1)]

Software Feature	Description
<b>Layer 2 Traceroute</b>	The Layer 2 Traceroute utility allows you to identify the physical path that a packet will take when going from a source to a destination. The Layer 2 Traceroute utility determines the path by looking at the forwarding engine
<b>MAC Address Traffic Filter</b>	You can filter traffic based on a host's MAC address so that packets that are tagged with that specific source MAC address are discarded. When you specify a MAC address filter, incoming traffic from that host MAC address will be dropped and packets addressed to that host will not be forwarded.
<b>Private VLANs</b>	A Private VLAN is a Layer 2 network structure not uncommon to, but rather an extension, of the common VLAN. Within a Private VLAN there are three separate port designations. Each port designation has its own unique set of rules that regulate a connected endpoint's ability to communicate with other endpoints connected to ports within the Private VLAN. The three port designations are promiscuous, isolated, and community.
<b>MISTP</b>	MISTP (Multiple Instances of Spanning Tree) allows you to group multiple VLANs under a single instance of spanning tree. MISTP combines the Layer 2 load-balancing benefits of PVST+ with the lower CPU load of IEEE 802.1Q.
<b>BPDU Packet Filtering</b>	This feature provides the functionality to allow the user to block portfast enabled non-trunk ports from transmitting BPDUs. Essentially, Spanning Tree will not run on these ports.
<b>BPDU Skew Detection</b>	This feature detects whether BPDUs are processed at regular time intervals or not. The skewing is detected every time a BPDU for a VLAN is skewed for more than (hello time + 1 sec) and a syslog message is displayed when a BPDU is skewed for more than 50% of max_age time. This message can be used by the customer to make sure that a link is not overloaded and thus avoids causing potential spanning tree loops in the network.
<b>HC-RMON Media Independent Table</b>	This feature will add Media Independent Table support to provide information for full and/or half duplex links as well as high capacity links.

Software Feature	Description
IEEE 802.1x	IEEE 802.1x is a standard based solution to apply security and access control on devices connected to the switch. This access control protocol is a port based solution to authenticate devices that are connected to the switch ports. Switches that are configured to authenticate their ports will try to authenticate their peers when a link is established.
Local Command Accounting	This feature will add a debugging utility to record the last ~100 commands executed within the system. Contents are retrievable via a show command and will stay over a power cycle.
Loopguard (Uplink-guard)	A loopguarded port is prevented from becoming designated if the port stops receiving BPDUs. This feature avoids loops in the network because of unidirectional failures or other software failures.
VMPS/Dynamic VLAN support for VVID	Dynamic VLAN is the feature that enables a user to retain the same VLAN even when the user moves to another port in the network. Multi VLAN Access Ports (MVAP) are the ports which belong to two VLANs: VVID and PVID. This allows the user to separate voice traffic (VVID) and data traffic (PVID) to different VLANs. Currently the dynamic ports can belong to only one VLAN at a time. All the hosts on a dynamic port must be in the same VLAN. Requests for users to be in a different VLAN will be rejected.  With this feature enhancement, the user can configure a VVID on a dynamic port to carry the voice traffic. The VLAN for the data traffic will be dynamically assigned based on the user.

## Orderable Software Images

The table below lists the software versions and applicable ordering information for the Catalyst 4000 Family Supervisor Engine Software.

**Caution:** Always back up the switch configuration file before upgrading or downgrading the switch software to avoid losing all or part of the configuration stored in NVRAM. When downgrading switch software, you will lose your configuration. Use the **write network** command or the **copy config tftp** command to back up your configuration to a Trivial File Transfer Protocol (TFTP) server. Use the **copy config flash** command to back up the configuration to a Flash device.

Orderable Product Number	Description	Image
SC4K-SUP-6.2.1	Catalyst 4K Supervisor Flash Image, Release 6.2.1	cat4000
SC4K-SUP-6.2.1=	Spare	
SC4K-SUPCV-6.2.1	Catalyst 4K Supervisor Flash Image w/CiscoView, Release 6.2.1	cat4000-cv
SC4K-SUPCV-6.2.1=	Spare	
SC4K-SUPK9-6.2.1	Catalyst 4K Supervisor Flash Image w/CiscoView, Release 6.2.1	cat4000-k9
SC4K-SUPK9-6.2.1=	Spare	

For more detailed information concerning this software release, please refer to the Catalyst 4000 Family release notes.

Also, please review the Catalyst 4000 Family documentation at:

<http://www.cisco.com/warp/public/cc/pd/si/casi/ca4000/index.shtml>

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