



Product Bulletin No. 3085

## Cisco Catalyst OS Software Release 8.5 for Cisco Catalyst 6500 Series Switches

The Cisco® Catalyst® Operating System (Catalyst OS) Software Release 8.5 for the supervisor engine supports the Cisco Catalyst 6500 Series multilayer switches.

### OVERVIEW

Cisco Catalyst OS continues to provide innovative features in the areas of security, operational manageability, high availability, and Metro Ethernet, helping customers to deploy scalable, highly available, and secure networks from the access layer to the WAN edge. Catalyst OS as a Layer 2 forwarding software targets the wiring closets or access-layer service deployments. With Catalyst OS and Cisco IOS® Software, the system in a hybrid mode can be used for offering Layer 2–4 services suited for WAN edge, core, and distribution-layer deployments. Cisco Systems® is committed to delivering feature enhancements in Catalyst OS, supporting Layer 2–7 services.

Cisco Catalyst OS Software Release 8.5 supports four generations of Catalyst 6500 Series supervisor engines—Supervisor Engine 1A, Supervisor Engine 2, Supervisor Engine 32, and Supervisor Engine 720.

Catalyst OS 8.5 supports all hardware and software supported in Release 8.4. In addition, Catalyst OS 8.5 brings the following important capabilities to the Catalyst 6500 Series:

- Catalyst OS 8.5 enhances the suite of Catalyst 6500 Series inline-power modules with an inline-power daughter card (WS-F6K-GE48-AF/A). In addition to supporting IEEE 802.3af as well as Cisco pre-standard voice, this enhanced Power over Ethernet (PoE) daughter card also supports new features such as the ability to limit maximum power per port in hardware, shut down misbehaving ports (ports drawing more power than allocated) to provide over-current protection, and measure real-time and historical power usage at a per-port level to help optimize power allocation.
- Catalyst OS 8.5 also bolsters the WAN edge portfolio by adding support for the Cisco Enhanced FlexWAN Module (WS-X6582-2PA)
- Catalyst OS 8.5 adds another dimension to the Cisco Identity Based Networking Services (IBNS) portfolio with the introduction of MAC Authentication Bypass and Web Authentication Proxy. These new security features help customers to integrate Cisco IBNS, providing authentication mechanisms for clients that do not support 802.1x supplicant functionality by providing a MAC address-based and HTTP-based mechanism to control access to the network.
- Catalyst OS 8.5 introduces Inaccessible Authentication Bypass with IEEE 802.1x, extending the Cisco IBNS suite of features and allowing customers access to their critical servers in the event of backend authentication server failure, providing better operational manageability and control over their networks.
- Catalyst OS 8.5 simplifies operations and enhances configuration flexibility with the introduction of customizable Smartports. Cisco Smartports increase configuration consistency, reduce provisioning overhead, and help businesses realize the full potential of their networks. Support for text-mode configuration allows the system to boot up faster and also enhances configuration-management capability especially for large configurations.
- With the introduction of Generic Online Diagnostics (GOLD) in Catalyst OS 8.5, customers now have access to enhanced diagnostic capabilities that complement existing high-availability solutions such as Stateful Switchover (SSO). GOLD makes available a variety of diagnostic tests, some of which run non-intrusively in the background while the rest can be triggered on demand by the administrator.
- Metro Ethernet deployments gain advantages from the release of Catalyst OS 8.5. With the introduction of Ethernet Operation, Administration, and Maintenance (OAM) (802.3ah), network operators have instant access to powerful tools that help them to monitor the health of the network and pinpoint the location of the failing links. With Catalyst OS 8.5, the Catalyst 6500 Series extends its leadership in Layer 2 Metro Ethernet deployments.

- The Catalyst 6500 Series with Catalyst OS 8.5 continues to deliver industry-leading high-availability solutions with the introduction of Flex Link. You can now use an alternative link-redundancy mechanism by turning off the Spanning Tree Protocol on the ports configured as Flex Links.
- Most importantly, the Cisco Catalyst 6500 with Cisco Catalyst OS 8.5 provides more compelling reasons for customers to continue migration from their Cisco Catalyst 5000 or Cisco Catalyst 5500 to Cisco Catalyst 6500 converged networks.

## NEW HARDWARE SUPPORT

Table 1 summarizes the *new* hardware support offered by Catalyst OS 8.5 with various supervisor engine modules, as well as support continued from Catalyst OS 8.4. For more details, please refer to the Cisco Catalyst OS Software release notes, available at the links within the “For More Information” section.

**Table 1.** New Hardware Support Matrix Summary

Hardware	Cisco Supervisor Engine 1A	Cisco Supervisor Engine 2	Cisco Supervisor Engine 32	Cisco Supervisor Engine 720
<b>Chassis</b>	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4
<b>Policy Features Cards (PFCs)</b>	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4
<b>Ethernet Switching Modules</b>	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4	The same support as Cisco Catalyst OS 8.4
<b>Layers 4–7 Service Modules</b>	Supports all of the existing Layer 4–7 service modules	Supports all of the existing Layer 4–7 service modules	Supports all of the existing Layer 4–7 service modules	Supports all of the existing Layer 4–7 service modules
<b>Communications Media Modules</b>	Supports all of the existing communication media modules: WS-X6582-2PA	Supports all of the existing communication media modules: WS-X6582-2PA	Supports all of the existing communication media modules: WS-X6582-2PA	Supports all of the existing communication media modules: WS-X6582-2PA
<b>IEEE Power Daughter Cards</b>	Supports all of the existing IEEE power daughter cards, including the latest: WS-F6K-GE48-AF/A	Supports all of the existing IEEE power daughter cards, including the latest: WS-F6K-GE48-AF/A	Supports all of the existing IEEE power daughter cards, including the latest: WS-F6K-GE48-AF/A	Supports all of the existing IEEE power daughter cards, including the latest: WS-F6K-GE48-AF/A
<b>Gigabit Interface Converters (GBICs), Small Form-Factor Pluggable (SFP) Optics, XENPAK</b>	Adds support for: <ul style="list-style-type: none"> <li>• GLC-FE-100EX</li> <li>• GLC-FE-100ZX</li> <li>• DWDM-XEPAK-xx-xx</li> <li>• XENPAK-10GE-ZR</li> </ul>	Adds support for: <ul style="list-style-type: none"> <li>• GLC-FE-100EX</li> <li>• GLC-FE-100ZX</li> <li>• DWDM-XEPAK-xx-xx</li> <li>• XENPAK-10GE-ZR</li> </ul>	Adds support for: <ul style="list-style-type: none"> <li>• GLC-FE-100EX</li> <li>• GLC-FE-100ZX</li> <li>• DWDM-XEPAK-xx-xx</li> <li>• XENPAK-10GE-ZR</li> </ul>	Adds support for: <ul style="list-style-type: none"> <li>• GLC-FE-100EX</li> <li>• GLC-FE-100ZX</li> <li>• DWDM-XENPAK-xx.xxx</li> <li>• XENPAK-10GE-ZR</li> </ul>

**Note:** Distributed forwarding with the Catalyst 6500 Series Distributed Forwarding Card (DFC) and DFC3A/3B/3BXL is not supported using Cisco Catalyst OS Software releases.

## NEW SOFTWARE FEATURES

Cisco Catalyst OS Software Release 8.5 supports all of the software features previously supported *up to* Release 8.4 on the Catalyst 6500 Series. In addition, 8.5 adds the following *new* software features (Table 2). For more detailed information, please refer to the release notes, available at the links within the “For More Information” section.

**Table 2.** Software Features of Cisco Catalyst OS Software Release 8.5

Software Feature	Description
<b>IBNS Enhancements</b>	<ul style="list-style-type: none"> <li>• MAC Authentication Bypass</li> <li>• Web Authentication Proxy</li> <li>• IEEE 802.1x—Inaccessible Authentication Bypass</li> </ul>
<b>High-Availability Enhancements</b>	<ul style="list-style-type: none"> <li>• Flex Links</li> <li>• GOLD—Generic Online Diagnostics</li> </ul>
<b>Metro Ethernet Enhancements</b>	<ul style="list-style-type: none"> <li>• IEEE 802.3ah Ethernet OAM—Ethernet Operations Administration and Maintenance</li> </ul>
<b>Configuration Enhancements</b>	<ul style="list-style-type: none"> <li>• SmartPorts—Customizable Configuration</li> <li>• Text Configuration Mode Optimization</li> </ul>

## SOFTWARE SUPPORT MATRIX

Tables 3 lists the software support combinations for various Cisco Catalyst 6500 Series supervisor engines in Cisco Catalyst OS Software and hybrid environments.

**Table 3.** Software Support Matrix

Image	Supervisor Engine 1A	Supervisor Engine 2	Supervisor Engine 32	Supervisor Engine 720
<b>Cisco Catalyst OS Software-Only Deployments</b>				
Cisco Catalyst OS Software Release 8.5	X	X	X	X
<b>Hybrid Environment</b>				
Cisco Catalyst OS Software Release 8.5	X	X	X	X
Cisco IOS Software Release 12.1(26)E3	X	X	Not supported	Not supported
Cisco IOS Software Release 12.2(14)SX2	Not supported	Not supported	Not supported	X
Cisco IOS Software Release 12.2(17d)SXB10	Not supported	Not supported	X	X
Cisco IOS Software Release 12.2(18)SXD	Not supported	Not supported	Not supported	Not supported
Cisco IOS Software Release 12.2(18)SXF	Not supported	X	X	X

Table 4 lists the software versions and applicable ordering information for the Cisco Catalyst 6500 Series software.

**Caution:** Back up the switch configuration file *before* you upgrade or downgrade the switch software. When you downgrade switch software, you lose your configuration. Issue the “write network” command or the “copy config tftp” command to back up your configuration to a TFTP server. Issue the “copy config flash” command to back up the configuration to a flash memory device.

**Note:** The image names (image version suffix such as 8-5-1, 8-5-2, 8-5-3) will differ based on the latest available maintenance release for 8.5; the image names in this table reflect version 8.5(1) of release 8.5.

**Table 4.** Software Ordering Information

Product Number	Description	Image
SC6K-SUPK8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 1A flash image, Cisco Catalyst OS Software Release 8.5	cat6000-supk8.8-5-1.bin
SC6K-SUPK8-8.5=	Spare	
SC6K-SUP2K8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 2 flash image, Cisco Catalyst OS Software Release 8.5	cat6000-sup2k8.8-5-1.bin
SC6K-SUP2K8-8.5=	Spare	
SC6K-S323K8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 32 PFC3 flash image, Cisco Catalyst OS Software Release 8.5	cat6000-sup32pfc3k8.8-5-1.bin
SC6K-SUP323K8-8.5=	Spare	
SC6K-S7K8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 720 flash image, Cisco Catalyst OS Software Release 8.5	cat6000-sup720k8.8-5-1.bin
SC6K-S7K8-8.5=	Spare	
SC6K-SCVK8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 1A flash image with CiscoView, Cisco Catalyst OS Software Release 8.5	cat6000-supcvk8.8-5-1.bin
SC6K-SCVK8-8.5=	Spare	
SC6K-S2CVK8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 2 Flash image with CiscoView, Cisco Catalyst OS Software Release 8.5	cat6000-sup2cvk8.8-5-1.bin
SC6K-S2CVK8-8.5=	Spare	
SC6K-S323CVK8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 32 PFC3 flash image with CiscoView, Cisco Catalyst OS Software Release 8.5	cat6000-sup32pfc3cvk8.8-5-1.bin
SC6K-S32CVK8-8.5=	Spare	
SC6K-S7CVK8-8.5	Cisco Catalyst 6500 Series Supervisor Engine 720 flash image with CiscoView, Cisco Catalyst OS Software Release 8.5	cat6000-sup720cvk8.8-5-1.bin
SC6K-S7CVK8-8.5=	Spare	
SC6K-SUPK9-8.5	Cisco Catalyst 6500 Series Supervisor Engine 1A flash image with SSH, Cisco Catalyst OS Software Release 8.5	cat6000-supk9.8-5-1.bin
SC6K-SUPK9-8.5=	Spare	
SC6K-SUP2K9-8.5	Cisco Catalyst 6500 Series Supervisor Engine 2 flash image with SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup2k9.8-5-1.bin
SC6K-SUP2K9-8.5=	Spare	

Product Number	Description	Image
<b>SC6K-SUP323K9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 32 PFC3 flash image with SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup32pfc3k9.8-5-1.bin
<b>SC6K-SUP323K9-8.5=</b>	Spare	
<b>SC6K-S7K9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 720 flash image with SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup720k9.8-5-1.bin
<b>SC6K-S7K9-8.5=</b>	Spare	
<b>SC6K-SCVK9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 1A flash image with CiscoView and SSH, Cisco Catalyst OS Software Release 8.5	cat6000-supcvk9.8-5-1.bin
<b>SC6K-SCVK9-8.5=</b>	Spare	
<b>SC6K-S2CVK9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 2 flash image with CiscoView and SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup2cvk9.8-5-1.bin
<b>SC6K-S2CVK9-8.5=</b>	Spare	
<b>SC6K-S323CVK9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 32 PFC3 flash image with CiscoView and SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup32pfc3cvk9.8-5-1.bin
<b>SC6K-S323CVK9-8.5=</b>	Spare	
<b>SC6K-S7CVK9-8.5</b>	Cisco Catalyst 6500 Series Supervisor Engine 720 flash image with CiscoView and SSH, Cisco Catalyst OS Software Release 8.5	cat6000-sup720cvk9.8-5-1.bin
<b>SC6K-S7CVK9-8.5=</b>	Spare	

#### FOR MORE INFORMATION

For more information, see the Cisco Catalyst 6500 Series release notes at:

<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/relnotes/index.htm>

Cisco Catalyst 6500 Series documentation is available at: <http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/index.htm>

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