

# General Deployment Release Status for Catalyst 4000, 5000, and 6000 Family Software Version 5.5(7)

A blue and white graphic of a globe with latitude and longitude lines, positioned on the left side of the page.

Table of Contents

Hardware Support

Software Support

- Network Scalability
- Quality of Service
- Network Management
- Network Security
- Network Resiliency
- Multicast Services

Catalyst Software Release Numbering Scheme

Software Train Life Cycle

Catalyst 4000, 5000 and 6000 Family Software Release Train Types and Definitions

- Early Deployment (ED) Release
- Pre-General Deployment (Pre-GD) Release
- General Deployment (GD) Release
- GD-Mature Maintenance

Milestone Dates

Release Train Status Transition Time Frames

Catalyst 4000, 5000 and 6000 Family Software Train Status (as of Q1CY01)

Catalyst 4000, 5000 and 6000 Family Software Maintenance Guidelines

Cisco Systems is proud to announce the availability of generally deployable (GD) software for the Catalyst® 4000, 5000, and 6000 family of switches in the 5.x code train.

Overview

This product bulletin is intended to announce the GD code status for the 5.x train while detailing the hardware and software support provided in the release. A discussion of the software release strategy and release trains for the Cisco Catalyst 4000, 5000, and 6000 family local-area network (LAN) switch Supervisor software has also been included in this product bulletin for reference.



Cisco Systems recently solicited feedback to a survey posted on the Cisco.com Web site from the Catalyst 4000, 5000, and 6000 customer base in order to gauge relative quality of the 5.x code train. Over 1000 customers responded to the survey with very positive responses and comments. Given the maturity of the software platform, the wide and successful deployment of the software into the Catalyst 4000, 5000, and 6000 customer base, and the positive responses to the survey, Cisco elevated the 5.x code train to GD status.

Catalyst 4000, 5000, and 6000 family software versions 5.5(7) and later are to be considered GD. Version 5.5(7) offers the following aggregate hardware and software support, portions of which were delivered previously in switch software versions 5.1 through 5.5.

## Hardware Support

### 5.1(1)

Catalyst 5000 Supervisor II-G (WS-X5540)

Catalyst 5000 Supervisor III-G (WS-X5550)

Catalyst 5000 Router Switch Feature Card (RSFC) (WS-F5541)

Catalyst 5000 24-port 10BaseFL MM (WS-X5015)

Catalyst 5000 36-port 10/100BaseTX Telco w/1 slot (WS-X5239-TEL)

Catalyst 4000 24-port 1000BaseSX (WS-X4424-SX-MT)

Catalyst 4000 32-port 10/100BaseTX RJ-45 (WS-X4232-RJ-XX)

Catalyst 4000 4-port 100BaseFX MT-RJ Plug-in module (WS-U4504-FX-MT)

### 5.1(1)CSX

- Catalyst 6000 Supervisor Engine 1 (WS-X6K-SUP1-2GE)
- Catalyst 6000 8-port 1000BaseX GBIC (WS-X6408-GBIC)
- Catalyst 6000 24-port 100BaseFX MM MT-RJ (WS-X6224-100FX-MT)
- Catalyst 6000 48-port 10/100BaseTX RJ-45 (WS-X6248-RJ-45)
- Catalyst 6006 Chassis (WS-C6006)
- Catalyst 6009 Chassis (WS-C6009)
- Catalyst 6506 Chassis (WS-C6506)
- Catalyst 6509 Chassis (WS-C6509)
- Catalyst 6000 Layer2 Switching Card (WS-F6020)

### 5.2(1)CSX

- Catalyst 6000 48-port 10/100BaseTX RJ-21 (WS-6248-TEL)
- Catalyst 6000 Multilayer Switch Module (WS-6302-MSM)

### 5.3(1a)CSX

- Catalyst 6000 Layer3 Switching Card (WS-F6K-PFC)
- Catalyst 6000 Multilayer Switch Feature Card (WS-F6K-MSFC)
- Catalyst 6000 24-port 10BaseFL MT-RJ (WS-X6024-10FL-MT)
- Catalyst 6000 Dual Phy ATM Module (WS-X6101-OC12-MMF)
- Catalyst 6000 Dual Phy ATM Module (WS-X6101-OC12-SMF)
- Catalyst 6000 16-port 1000BaseSX MT-RJ (WS-X6416-GE-MT)
- Catalyst 6000 24-port 100BaseFX MM MT-RJ (WS-X6224A-100FX)
- Catalyst 6000 48-port 10/100BaseTX RJ-45 (WS-X6248A-RJ-45)
- Catalyst 6000 48-port 10/100BaseTX RJ-21 (WS-6248A-TEL)
- Catalyst 6000 Multilayer Switch Module (WS-6302A-MSM)



- Catalyst 6000 8-port 1000BaseX GBIC (WS-X6408A-GBIC)
- Catalyst 6000 Supervisor 1- 2-port 1000BaseX GBIC (WS-X6K-SUP1A-2GE)

#### 5.4(1)

- Catalyst 5000 24-port 100BaseFX MM MT-RJ (WS-X5237-FX-MT)
- Catalyst 4006 Chassis (WS-X4006)
- Catalyst 4000 Supervisor 2 (WS-X4013)
- Catalyst 4000 16-port RJ-45 1000BaseTX, 2 GBIC (WS-X4416-2GB-TX)
- Catalyst 4000 12-port RJ-45 1000BaseTX, 2GBIC (WS-X4412-2GB-TX)
- Catalyst 2980 80-port 10/100TX RJ-45 Switch w/2 GBIC (WS-C2980G)
- Catalyst 4000 24-port 100BaseFX MT-RJ (WS-X4124-FX-MT)
- Catalyst 4000 48-port 10/100BaseTX RJ-21 (WS-X4148-RJ21)
- Catalyst 6509 Vertical Chassis (WS-X6509SP)
- Catalyst 6000 Family AC power supply (WS-CAC-2500W)
- Catalyst 6000 Multilayer Switch Feature Card 2 (WS-F6K-MSFC2)
- Catalyst 6000 Flex WAN module (WS-X6182-2PA)
- Catalyst 6000 16-port 1000BaseTX RJ-45 (WS-X6316-GE-TX)
- Catalyst 6000 12-port 1000BaseLX SC (WS-X6412-LX-SC)
- Catalyst 6000 24-port 100BaseFX MM MT-RJ (WS-X6324-MM-MT)
- Catalyst 6000 48-port 10/100BaseTX RJ-45 (WS-X6348-RJ45)

#### 5.5(1)

- Catalyst 4000 Layer3 Engine (WS-X4232-L3)
- Catalyst 4000 Voice/WAN Gateway (WS-X4666)
- Catalyst 4000 Gabby Accelerator Module (WS-X4019)
- Catalyst 4000 400 watt DC power supply
- Catalyst 4000 RMON Module (WS-X6380-NAM)
- Catalyst 6000 Voice Daughter Card (WS-F6K-VPWR)
- Catalyst 6000 24-port FXS analog line module (WS-X6624-FXS)
- Catalyst 6000 8-port T1/DSP farm (WS-X6608-T1)
- Catalyst 6000 8-port E1 (WS-X6608-E1)

#### Software Support

For a more extensive list of software features in the version 5.x train, refer to the following product bulletins and release notes: [http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/relnotes/78\\_6218.htm](http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/relnotes/78_6218.htm)

<http://>

[cisco.google.com/cisco?client=cisco&q=cache%3Ahttp%3A%2F%2Fwww%2Eecisco%2Ecom%2Fwarp%2Fpublic%2Fcc%2Fgeneral%2Fbulletin%2Findex%2Eshtml+product+bulletins](http://cisco.google.com/cisco?client=cisco&q=cache%3Ahttp%3A%2F%2Fwww%2Eecisco%2Ecom%2Fwarp%2Fpublic%2Fcc%2Fgeneral%2Fbulletin%2Findex%2Eshtml+product+bulletins)

#### Network Scalability

- Spanning Tree Protocol Backbone fast
- Spanning Tree Protocol Uplink fast
- Spanning Tree Protocol Port fast
- Regular Static VLANs
- Dynamic Virtual LANs (VLANs)/Virtual Management Policy Server (VMPS)
- Private VLANs
- VLAN Trunking Protocol (VTP), VTP pruning



- Inter Switch Link (ISL), 802.1Q, Dynamic Trunking Protocol (DTP)
- UniDirectional Link Detection (UDLD) Protocol
- Spanning Tree, Per VLAN Spanning Tree + (PVST+)
- Root guard
- EtherChannel
- Generic Attribute Registration Protocol (GARP) Multicast Routing Protocol (GMRP)/GARP VLAN Registration Protocol (GVRP)
- Multi-layer switching

#### **Quality of Service (QoS)**

- QoS Weighted Random Early Detection (WRED), Weighted Round Robin (WRR)
- QoS policing and classification
- Common Open Policy Services (COPS)
- Resource Reservation Protocol + (RSVP+)

#### **Network Management**

- Simple Network Management Protocol (SNMP), MIB II, SNMP traps
- SNMP version 3
- Remote monitoring (RMON), Network Applications Management (NAM)
- NetFlow Statistics
- Embedded CiscoView
- Switched Port Analyzer (SPAN)
- Remote SPAN
- Broadcast suppression
- Command line interface

#### **Network Security**

- VLAN access control list (VACL)
- IP permit list
- Telnet client
- Secure port filtering
- TACACS+
- RADIUS
- Protocol Filtering

#### **Network Resiliency**

- Supervisor redundancy
- High Availability

#### **Multicast Services**

- IP Multicast
- Internet Group Management Protocol (IGMP)
- Cisco Group Management Protocol (CGMP)
- Multi-layer Switching



## Catalyst Software Release Numbering Scheme

Release X.Y(n)zzz, where:

- X Denotes a train, for example, the "5 train"
- X.Y Denotes a feature set, for example, "Release 5.1"
- (n) Denotes the maintenance/bug fix level, for example, "5.1(1)"
- zzz Denotes a special release, for example, "5.1(1)CSX"

## Software Train Life Cycle

Each Catalyst 4000, 5000, and 6000 family software release is a member of a release train. Each release train consists of two phases: the Early Deployment (ED) release phase and the General Deployment (GD) release phase. ED releases are the early life stages of the train, and the GD releases are considered the later life stages, where new functionality is added and where bug fixes are applied.

There are three classifications within the GD release phase. Those include pre-GD, GD, and GD-Mature Maintenance. Once the train has transitioned to maintenance mode, it enters pre-GD. After all requirements are met for the train, the train transitions to GD status, and eventually to GD-Mature Maintenance once the train is near its end of life.

## Catalyst 4000, 5000, and 6000 Family Software Release Train Types and Definitions

### Early Deployment (ED) Release

- Deliver new functionality to market quickly
- Generally delivered every three to six months
- Typically there are several ED releases in each train before it goes to pre-GD, and then GD status
- When a train is in the ED stage of its life cycle, delivery of bug fixes often requires moving to the next ED release, which includes new functionality.

### Pre-General Deployment (Pre-GD) Release

- The software train is now at the mature "Feature Freeze" stage in its life cycle
- Typically there are several maintenance releases in this stage

A train is designated as "pre-GD" when no new functionality is being added and only bug fixes are applied (for example, this becomes a maintenance train)

### General Deployment (GD) Release

- Goal is stability
- GD maintenance releases are generally delivered every six to 10 weeks
- Must meet rigid criteria including defect arrival rate thresholds and a customer feedback survey in order to achieve GD status. In order to achieve GD status a software release train must meet the following criteria:
  1. Minimal deployment time frame of three months in the field
  2. Installed and running on at least 1000 systems in the field (determined by number of systems shipped from Cisco manufacturing plus the number of downloads from Cisco.com)
  3. Arrival rate for customer-found severity 1 bugs less than 10 per month
  4. Successfully pass a detailed Customer Satisfaction Survey with responses from at least 100 customers. To pass there must be agreement that there are no quality problem areas. Any problems must be addressed by engineering

### GD-Mature Maintenance

- A train is designated as "GD-Mature Maintenance" when it is close to end of life. Only severity 1 bugs are fixed in this stage



### Milestone Dates

- End of Sales (EOS)---the date at which product is removed from the price list and is no longer orderable through the normal, nonexception, order fulfillment process
- End of Engineering (EOE)---the date after which scheduled maintenance releases are not produced and the software is removed from Cisco.com.
- End of Life (EOL)---the date after which the software release is no longer supported by Cisco customer support

### Release Train Status Transition Time Frames

From the start of a train there are multiple ED releases before feature freeze at which point the train becomes pre-GD.

- On average it takes 12 months before a train reaches pre-GD status
- From Pre-GD it takes six months on average to achieve GD status
- GD to GD-Mature Maintenance will generally occur in eight to 12 months
- GD-Mature Maintenance to EOE is no less than three months and generally not longer than 6 months
- The Cisco customer support group continues to provide support for a release train until it reaches its EOL, which is generally six months after EOE

### Catalyst 4000, 5000, and 6000 Family Software Maintenance Guidelines

To better ensure the stability of the each release train as it ages, less change is allowed in the source code base. The level of change that is allowed depends on the severity of the problem and its effect on the release's stability. Table 1 identifies the minimal severity level required at different milestones in the release train's life.

Table 1: Bug Fixes for Each Release Type

Release Status	Committed Fixes
GD-Mature Maintenance	S1
GD	S1-S2
Pre-GD	S1-S3
ED	S1-S4
Development Mainline	S1-S5

Table 2: Bug Security Level Definitions

Level	Definitions
S1	Catastrophic
S2	Severe
S3	Moderate
S4	Minor
S5	Cosmetic/Enhancement Request

Please forward any questions, comments, or feedback regarding this product bulletin to:

Ask-c6000-pm@cisco.com

Ask-c5000-pm@cisco.com

Ask-c4000-pm@cisco.com



Corporate Headquarters  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

European Headquarters  
Cisco Systems Europe  
11, Rue Camille Desmoulins  
92782 Issy Les Moulineaux  
Cedex 9  
France  
[www.cisco.com](http://www.cisco.com)  
Tel: 33 1 58 04 60 00  
Fax: 33 1 58 04 61 00

Americas Headquarters  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-7660  
Fax: 408 527-0883

Asia Pacific Headquarters  
Cisco Systems Australia, Pty., Ltd  
Level 17, 99 Walker Street  
North Sydney  
NSW 2059 Australia  
[www.cisco.com](http://www.cisco.com)  
Tel: +61 2 8448 7100  
Fax: +61 2 9957 4350

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the

**Cisco.com Web site at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).**

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia • Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam •

Copyright © 2001 Cisco Systems, Inc. All rights reserved. Catalyst, Cisco, Cisco Systems, the Cisco Systems logo, and EtherChannel are registered trademarks of Cisco Systems, Inc. and its affiliates in the U.S. and certain other countries. All other trademarks mentioned in this document are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0104R)

05/10/01/CMC