

# CISCO IOS SOFTWARE RELEASE 12.3(4)XG

This product bulletin describes the content and delivery information for Cisco IOS® Software Release 12.3(4)XG. It should be used in conjunction with the Cisco IOS Software Release 12.3T product bulletin. Cisco IOS Software Release 12.3(4)XG is a short-lived, early deployment release that will be supported in the fifth release of Cisco IOS Software Release 12.3T. This release supports the Cisco® 1700 Series modular access routers (Cisco 1701, 1710, 1711, 1712, 1720, 1721, 1751, 1751-V, and 1760), and well as the Cisco 800 and SOHO Series routers.

The platform and features delivered with this early deployment release will be incorporated immediately into the fifth release of Cisco IOS Software Release 12.3T. The timeframe for the availability of the fifth release of the Cisco IOS Software Release 12.3T train is the third calendar quarter of 2004. This timeframe is subject to change.

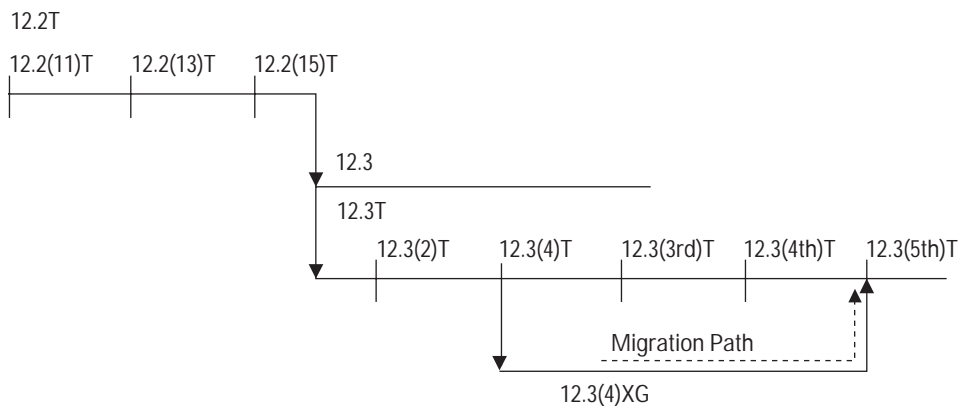
Future early deployment releases will be provided for maintenance support until Cisco IOS Software Release 12.3(4)XG becomes available in the fifth release of Cisco IOS Software Release 12.3T.

In addition to the supported features described in this product bulletin, more information is available in the release notes for Cisco IOS Software Release 12.3(4)XG.

Customers should prepare to upgrade using the migration path shown in Figure 1.

**Note:** This 12.3(4)XG release only lists features that are new to the respective platforms. No new features are introduced for the ICS 7700 platforms. For these products, Release 12.3(4)XG is a maintenance release only.

**Figure 1**  
Cisco IOS Software Release 12.3(4)XG Release Train and Migration Guide



## NEW FEATURES IN CISCO IOS SOFTWARE RELEASE 12.3(4)XG

Table 1 lists the features delivered in the Cisco IOS Software Release 12.3(4)XG.

**Table 1** New Features: Cisco 800, SOHO, and 1700 Series Routers

New Features	Cisco SOHO 91	Cisco SOHO 96	Cisco SOHO 97	Cisco 827-4V	Cisco 828	Cisco 831	Cisco 836	Cisco 837
<b>New Hardware</b>	-	-	-	-	-	-	-	-
<b>New Software Features</b>								
DPD Keep Alive Enhancement	-	-	-	-	-	X	X	X
SNMPv3	-	-	-	-	X	X	X	X
Baseline IPv6	-	-	-	-	-	X	X	X
Baseline QoS	-	-	-	-	-	X	X	X
L2TP Client	X	X	X	-	-	-	-	-
Config Copy MIB	-	-	-	-	X	X	X	X
Interoperability with Nokia DSLAM for ADSL over ISDN—Annex B	-	X	-	-	-	-	X	-
Lucent Stinger Interop for ETSI	-	X	-	-	-	-	X	-

New Features	Cisco 1701	Cisco 1710	Cisco 1711	Cisco 1712	Cisco 1720	Cisco 1721	Cisco 1751/1751-V	Cisco 1760
<b>New Hardware</b>								
WIC-1SHDSL-V2	No	No	No	No	No	Yes	Yes	Yes

## DETAILED INFORMATION

### New Hardware

#### Single Port Multiline (Four-Wire) G.SHDSL WIC

Supported Platforms: Cisco 1721, 1751/1751-V, and 1760 Series routers; supported in 'y7' legacy images, and all cross-platform images.

A single port multiline Multirate Symmetrical High-Speed Digital Subscriber Line (G.SHDSL) WAN interface card (WIC), or WIC-1SHDSL-V2, provides G.SHDSL feature support for Two-Wire Mode and Four-Wire Mode for SHDSL on the Cisco 1700 Series Modular Access Routers. The WIC-1SHDSL-V2 incorporates the 2.x firmware version and the latest hybrid circuit from Globespan.

### New Software Features

#### Configurable "KeepAlive" Behavior for Dead Peer Detection

Supported Platforms: Cisco 831, 836, and 837 Series Routers; All Images

Dead Peer Detection (DPD) is our "keepalive" protocol for Internet Key Exchange (IKE). keepalive packets are not sent if traffic is received. This lowers the overhead associated with DPD, since on a heavily loaded network very few keepalive packets will be sent because traffic is being received on the tunnels. In addition, DPD sends keepalive packets only if there is user traffic to send (and no user traffic is received). This was done to be consistent with the relevant Request for Comments (RFC) and to try to keep keepalive traffic (and hence overhead) to a minimum.

In this release, a new command line interface (CLI) command is added. It allows the user to configure IKE DPD so that DPD sends the keepalive packets whether or not there is outbound user data. That is, as long as there is no inbound user data, the keepalive packets will be sent at the configured keepalive interval.

If the new command is not configured, the DPD keepalive behavior will be unchanged from the current implementation (keepalive packets will only be sent if there is outbound user traffic and no inbound traffic).

For more detail on DPD “keepalive” protocol please see: [http://www.cisco.com/en/US/products/sw/secursw/ps2308/products\\_user\\_guide\\_chapter09186a008015cffb.html#1018981](http://www.cisco.com/en/US/products/sw/secursw/ps2308/products_user_guide_chapter09186a008015cffb.html#1018981)

### **SMNP V3**

Supported Platforms: Cisco 828, 831, 836, and 837 Series Routers; All Images

SNMP v3 including support for encrypted management traffic.

### **BASELINE IPV6**

Supported Platforms: Cisco 831, 836, and 837 Series Routers; Plus Images Only

Support of the baseline initiatives IPv6 features—providing IPv6 support to all Cisco 830 Series platforms. Further details in release notes.

### **BASELINE QOS**

Supported Platforms: Cisco 831, 836, and 837 Series Routers; All Images

Support of the baseline initiative for QoS, enhancing and testing further QoS features to support all applicable baseline advanced QoS—features in all Cisco 830 Series platforms. Further details in release notes.

### **NOKIA INTEROPERABILITY FOR CISCO SOHO 96 AND 836 SERIES ROUTERS**

Interoperability with DSLAMs from Nokia, four and port line-cards in annex-B mode.

### **CISCO-CONFIG-COPY-MIBFOR CISCOWORKS**

Supported Platforms: Cisco 828, 831, 836, and 837 Series Routers; All Images

This is a MIB that allows for CiscoWorks to manipulate configuration, more precisely get and put configurations to a Cisco IOS Software device.

### **L2TP VOLUNTARY TUNNELING (CLIENT-INITIATED L2TP SUPPORT)**

Supported Platforms: Cisco SOHO 91, SOHO 96, and SOHO 97 Series Routers; All Images

With support of the L2TP client feature, the Cisco SOHO 90 Series routers can initiate an L2TP session to L2TP network server (LNS) situated on the network. The Point-Point Protocol (PPP) session will be terminated on the LNS.

This feature allows for easier management since the existing PPP infrastructure concepts can be used.

### **LUCENT STINGER INTEROPERABILITY**

Supported Platforms: Cisco SOHO 96, and 836 Series Routers

Interoperability with DSLAMs from Lucent with ETSI encapsulation.

### **Cisco IOS Software Release 12.3(4)XG Memory Requirements and Product Numbers**

Tables 2 and 3 provide the feature sets, images, and memory recommendations for Cisco IOS Software Release 12.3(4)XG.

- Cisco 1710 Security Access Router is limited to 16 MB Flash memory.
- Security Device Manager (SDM) is not supported on Cisco 1710.
- SDM comes by default with the images that contain security feature sets.
- Regarding the Cross-Platform Images, see product bulletin “Cisco IOS Software Release 12.3

**Table 2** Cisco IOS Software Release 12.3(4)XG Cisco SOHO and 800 Feature Sets, Images, and Memory Recommendations

Platform	Feature Set	Image Name	Image File Name	Recommended Memory	
				Flash	DRAM
Cisco 827-4V	IP/VOICE	Cisco 827-4V IOS IP/VOICE	c820-v6y6-mz	12MB	48MB
	IP/VOICE PLUS	Cisco 827-4V IOS IP/VOICE PLUS	c820-sv6y6-mz	12MB	48MB
	IP/FW/VOICE	Cisco 827-4V IOS IP/FW/VOICE	C820-ov6y6-mz	12MB	48MB
	IP/FW VOICE PLUS 3DES	Cisco 827-4V IOS IP/FW/VOICE PLUS 3DES	C820-k9osv6y6-mz	12MB	48MB
Cisco 828	IP	Cisco 828 Series IOS IP	c828-y6-mz	8MB	20MB
	IP/FW	Cisco 828 Series IOS IP/FW	c828-oy6-mz	8MB	20MB
	IP PLUS	Cisco 828 Series IOS IP PLUS	c828-sy6-mz	8MB	32MB
	IP/FW/PLUS 3DES	Cisco 828 Series IOS IP/FW/PLUS 3DES	c828-k9osy6-mz	8MB	32MB
Cisco 831	IOS IP/FW 3DES	Cisco 831 IOS IP/FW 3DES	c831-k9o3y6-mz	12MB	48MB
	IOS IP/FW/PLUS 3DES	Cisco 831 IOS IP/FW PLUS 3DES	c831-k9o3sy6-mz	12MB	48MB
Cisco 836	IOS IP/FW 3DES	Cisco 836 IOS IP/FW 3DES	c836-k9o3y6-mz	12MB	48MB
	IOS IP/FW/PLUS 3DES	Cisco 836 IOS IP/FW PLUS 3DES	c836-k9o3sy6-mz	12MB	48MB
	IOS IP/FW/PLUS DIAL BACKUP 3DES	Cisco 836 IOS IP/FW PLUS DIAL BACKUP 3DES	c836-k9o3s8y6-mz	12MB	48MB
Cisco 837	IOS IP/FW 3DES	Cisco 837 IOS IP/FW 3DES	c837-k9o3y6-mz	12MB	48MB
	IOS IP/FW/PLUS 3DES	Cisco 837 IOS IP/FW PLUS 3DES	c837-k9o3sy6-mz	12MB	48MB
SOHO91	IP/FW 3DES	Cisco SOHO91 Series IP/FW 3DES	soho91-k9oy6-mz	8MB	32MB
SOHO96	IP/FW 3DES	Cisco SOHO96 Series IP/FW 3DES	soho96-k9oy1-mz	8MB	32MB
SOHO97	IP/FW 3DES	Cisco SOHO97 Series IP/FW 3DES	soho91-k9oy1-mz	8MB	32MB

**Table 3** Cisco IOS Software Release 12.3(4)XG Cisco 1700 Legacy and Cross-Platform Feature Sets, Images, and Memory Recommendations

**Table 3** Recommended Memory for Cisco 1700 Series Routers—Legacy Images and Cross-Platform Images

Cisco 1700 Legacy Images				Recommended Memory	
Platform	Image Name	Feature Set	Image File Name	Flash	DRAM
Cisco 1710 (1)	Cisco 1700 IOS Software IP/FW/IDS Plus IP Security (IPSEC) Triple Data Encryption Standard (3DES)	IP/FW/IDS Plus IPSEC 3DES	c1710-k9o3sy-mz	16MB	64MB
Cisco 1710 (1)	Cisco 1700 IOS Software IP/IPX/AT/IBM/FW/IDS Plus IPSEC 3DES	IP/IPX/AT/IBM/FW/IDS Plus IPSEC 3DES	c1710-bk9no3r2sy-mz	16MB	96MB
Cisco 1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/VOX Plus	IP/ADSL/VOX Plus	c1700-sv8y7-mz	32MB	96MB

**Table 3** Recommended Memory for Cisco 1700 Series Routers—Legacy Images and Cross-Platform Images (Continued)

Cisco 1700 Legacy Images				Recommended Memory	
Cisco 1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/VOX/FW/IDS Plus IPSEC 3DES	IP/ADSL/VOX/FW/IDS Plus IPSEC 3DES	c1700-k9o3sv8y7-mz	32MB	96MB
Cisco 1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/IPX/AT/IBM/VOX/FW/IDS Plus IPSEC 3DES	IP ADSL/IPX/AT/IBM/VOX/FW/IDS Plus IPSEC 3DES	c1700-bk9no3r2sv8y7-mz	32MB	128MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL Plus	IP ADSL/Plus	c1700-sy7-mz	16MB	64MB
Cisco 1720/1721/1751/1751-V/1760	Cisco 1700 IOS Software IP	IP	c1700-y-mz	16MB	48MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/IPX/AT/IBM Plus	IP ADSL/IPX/AT/IBM Plus	c1700-bnr2sy7-mz	16MB	96MB
Cisco 1701/1711/1712/1721/1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/IPX/AT/IBM/FW/IDS Plus IPSEC 3DES	IP ADSL/IPX/AT/IBM/FW/IDS Plus IPSEC 3DES	c1700-bk9no3r2sy7-mz	32MB	96MB
Cisco 1701/1720/1721/1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL	IP/ADSL	c1700-y7-mz	16MB	48MB
Cisco 1701/1711/1712 /1721/1751/1751-V/1760	Cisco 1700 IOS Software IP/ADSL/FW/IDS Plus IPSEC 3DES	IP/ADSL/FW/IDS Plus IPSEC 3DES	c1700-k9o3sy7-mz	16MB	64MB
Cisco Cross-Platform Images				Recommended Memory	
Platform	Image Name	Feature Set	Image File Name	Flash	DRAM
Cisco 1751/1751-V/1760	Cisco 1700 IP VOICE	IP VOICE	c1700-ipvoice-mz	32MB	96MB
Cisco 1701/1711/1712/1721/1751/1751-V/1760	Cisco 1700 IOS SOFTWARE ADVANCED IP SERVICES	ADVANCED IP SERVICES	c1700-advipservicesk9-mz	32MB	96MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 IOS SOFTWARE SP SERVICES	SP SERVICES	c1700-spservicesk9-mz	32MB	96MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 IOS SOFTWARE ENTERPRISE SERVICES	ENTERPRISE SERVICES	c1700-entservicesk9-mz	32MB	96MB
Cisco 1701/1711/1712/1721/1751/1751-V/1760	Cisco 1700 IOS SOFTWARE ADVANCED ENTERPRISE SERVICES	ADVANCED ENTERPRISE SERVICES	c1700-adventerprisek9-mz	32MB	128MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 IP BASE	IP BASE	c1700-ipbase-mz	16MB	64MB
Cisco 1701/1721/1751/1751-V/1760	Cisco 1700 ENTERPRISE BASE	ENTERPRISE BASE	c1700-entbase-mz	16MB	64MB
Cisco 1701/1711/1712/1721/1751/1751-V/1760	Cisco 1700 ADVANCED SECURITY	ADVANCED SECURITY	c1700-advsecurityk9-mz	16MB	64MB

**DOWNLOAD INFORMATION**

Customers can download Cisco IOS Software Release 12.3(4)XG from the <http://www.cisco.com> software image library.

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