

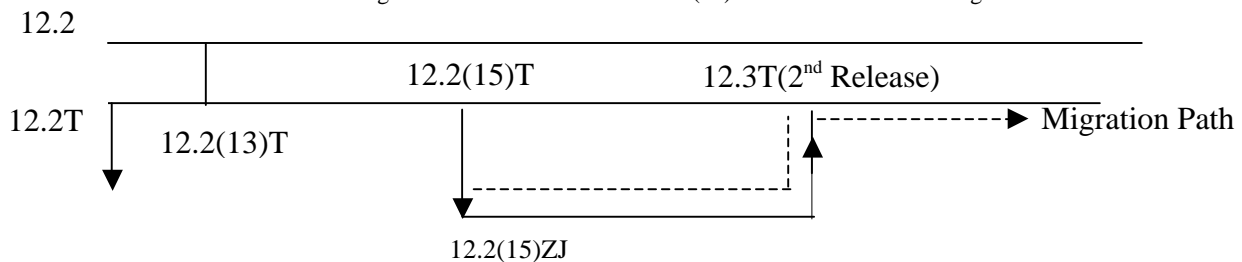
# Cisco IOS X-Release 12.2(15)ZJ

## Introduction

This Product Bulletin describes the content and delivery information concerning Cisco IOS(TM) software release 12.2(15)ZJ. It should be used in conjunction with Product Bulletin titled, Cisco IOS Software Release 12.2T. 12.2(15)ZJ is a short lived Early Deployment (ED) release parented to 12.2(15)T and supporting Cisco c1751, c1751-V, c1760, c26xxXM, c2691, c3631, c3640/A, c3660, c3725, c3745 platforms. This release contains all existing features delivered in 12.2T up to 12.2(15)T. In addition to the new features listed below in this release.

The platform and features delivered with this ED release will be immediately incorporated into Cisco IOS 12.3T (2<sup>nd</sup> Release) and subsequent Cisco IOS 12.3T releases. **It is important to note that there are 3 planned rebuilds for this ED release. In addition, please note the migration path to the latest T release. Customers should prepare to upgrade using this migration path**

Diagram 1: Cisco IOS Release 12.2(15)ZJ Release Train and Migration Guide





## New Features in Cisco IOS Release 12.2(15)ZJ

The following features will be delivered in the initial release of 12.2(15)ZJ.

Table 1. Cisco IOS Release 12.2(15)ZJ New Features

New Feature	Cisco 1751	Cisco 1751-V	Cisco 1760	Cisco 2600XM	Cisco 2691	Cisco 3631	Cisco 3640/A	Cisco 3660	Cisco 3725	Cisco 3745
SRST 3.0	x	x	x	x	x		x	x	x	x
SIP SRST	x	x	x	x	x		x	x	x	x
ITS 3.0	x	x	x	x	x		x	x	x	x
Voice/fax network modules				x	x		x	x	x	x
Security and QoS features				x	x	x	x	x	x	x
Enhanced ITU-T G.168 Echo Cancellation				x	x		x	x	x	x
ADSL over ISDN				x	x			x	x	x
PLAR (Private Line Automatic Ring-down) for Trading Turrets				x	x			x	x	x
DPNSS Backhaul				x					x	x
Frame Relay Switched Virtual Circuits (SVC) over ISDN				x	x		x	x	x	x
NM16A/S				x	x	x	x	x	x	x
MGCP controlled backhaul of BRI signaling in conjunction with Cisco CallManager				x	x		x	x	x	x
DES/3DES/AES VPN Encryption Module (AIM-VPN/BPII)				x						
Customizable Tone Download to Cisco IOS MGCP Gateways from Cisco Call Manager				x	x		x	x	x	x

Please see the next section for documents that address details on these new features. Any ED release of software should be utilized first in a test network before being deployed in a production network.

### Detailed Feature Information

#### SRST 3.0

SRST is an existing IP Telephony solution that allows IP phones on remote branch sites to "fallback" to its default gateway on the site and perform basic functions such as placing outgoing PSTN calls and receiving incoming PSTN calls. The 3.0 version adds more capability such as call conferencing (3 party).

#### SIP SRST

This project provides basic survivability for SIP phones using SRST.

The following features are being added:

- SIP phones fallback to the SRST router
- Support for SRST with SIP trunking to separate SIP-PSTN gateways



- Symmetric GW-to-GW DTMF relay
- SIP Register support
- SIP Registrar support
- Redirect handling for VoIP-to-VoIP calls
- Cisco SIP phone support

### **ITS 3.0**

IOS Telephony Services Version 3.0 delivers the next-generation ITS feature set.

#### **Voice/fax network modules**

Cisco's new voice/fax network modules provide the ability to directly connect the PSTN and legacy telephony equipment to Cisco 2600, 3600, and 3700 multiservice routers. This enables important applications such as IP telephony, toll bypass, and full gateway integration. The voice/WAN interface cards supported by the new NMs are: 2 and 4 port FXS; 2 and 4 port FXO; 2 port DID, E/M, CAMA, and BRI (S/T); and 1 and 2 port T1/E1. Note: Support with Cisco CallManager using MGCP requires Cisco CallManager 3.3(3) or later.

#### **Security and QoS features**

Today EtherSwitch has a flawed QoS implementation for Voice. Our current emphasis on Multi Services for Branch routers Voice, Data, Video (AVVID) this flaw must be corrected ASAP. The QoS to CoS is a quality of service value not working today in layer 2 802.1q header. Today Skyhawk does not support 802.1X, this Port authentication feature is supported on all DSBUs and Catalyst Switches. Both these important market features will be corrected in this Feature.

#### **Enhanced ITU-T G.168 Echo Cancellation**

With this release, the Enhanced ITU-T G.168 Echo Cancellation feature is extended to additional voice platforms -- the 5421 DSP in NM-HDA High Complexity and Medium Complexity, 5421 DSP in AIM-Voice Medium Complexity, and the Cat4K AGM platform using 5409 SP medium complexity digital and high complexity analog WICs.

#### **ADSL over ISDN**

ADSL over ISDN WIC for key EMEA countries like Germany, Belgium, Netherlands, Switzerland, Austria, etc. where there is a large installed base of ISDN lines. Customers want to leverage their current investments and also benefit from lower service costs of DSL.

#### **PLAR (Private Line Automatic Ring-down) for Trading Turrets**

Switched H.323 PLAR (Private Line Automatic Ring-down) for Trading Turrets (re-establishes PLAR connection after hold). This feature re-establishes an H.323 call automatically if one end hangs up or goes on hold and then goes off-hook again. This provides PLAR functionality which is expected in the financial industry for trading Turret operation of PLAR.

#### **DPNSS Backhaul**

DPNSS (Digital Private Network Signalling System) is a standard and open protocol that is defined for use between PBXs in a private network, enabling complex features to work on a network basis. A number of customers who have such networks are looking to migrate them to VoIP technology however the basic premise of DPNSS transparency must be maintained in the new environment. This feature provides a suitable CPE gateway with DPNSS backhaul capability.

#### **Frame Relay Switched Virtual Circuits (SVC) over ISDN**

Support FR SVCs over ISDN links. A common use of the functionality in network topology is to put such link as a backup route.



### **NM16A/S**

16 port multi-interface synchronous or asynchronous serial network module for 2600/3600/3700 routers

### **MGCP controlled backhaul of BRI signaling in conjunction with Cisco CallManager**

This feature enables MGCP controlled backhaul of gateway BRI signaling in conjunction with Cisco CallManager. Note: Requires Cisco CallManager 3.3(2)

### **DES/3DES/AES VPN Encryption Module (AIM-VPN/BPII)**

VPN Encryption Module AIM-VPN/BPII

### **Customizable Tone Download to Cisco IOS MGCP Gateways from Cisco Call Manager**

This project ensures full compatibility between the IOS voice gateways and the Cisco CallManager 3.3 release. Specifically, it addresses the internationalization and localization feature enhancements in the CCM 3.3 release as well as the Network Specific Facilities ISDN route pattern changes.

For more detailed information about the platforms and features being delivered in [12.2\(15\)ZJ](#), please reference the following documents:

**2600:**

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/2600/rn2600zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/2600/rn2600zj.htm)

**3600:**

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/3600/rn3600zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/3600/rn3600zj.htm)

**3700:**

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/3700/rn3700zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relnt/3700/rn3700zj.htm)

**1700:**

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122relnt/1700/index.htm>

### **Support**

Cisco IOS software release 12.2(15)ZJ follows the standard Cisco support policy as indicated in the following link.  
<http://www.cisco.com/warp/public/437/27.html>

### **Product Numbers**

Table 2. Cisco IOS Release 12.2(15)ZJ Feature Sets, Images, and Memory Recommendations

Platform	Software Feature Set	Product Code	Image	Flash	DRAM
c1751-V, c1751-V, c1760	Cisco 1700 IOS IP/VOX PLUS	S17CV8P-12215ZJ	c1700-sv8y-mz	16MB	64MB
c1751-V, c1760	Cisco 1700 IOS IP/ADSL/VOX PLUS	S17C7V8P-12215ZJ	c1700-sv8y7-mz	32MB	96MB
c1751-V, c1760	Cisco 1700 IOS IP/ADSL/VOX/FW/IDS PLUS IPSEC 56	S17C7V8K8-12215ZJ	c1700-k8o3sv8y7-mz	32MB	96MB
c1751-V, c1760	Cisco 1700 IOS IP/ADSL/VOX/FW/IDS PLUS IPSEC 3DES	S17C7V8K9-12215ZJ	c1700-k9o3sv8y7-mz	32MB	96MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS IP Plus	S26CP-12215ZJ	c2600-is-mz	32MB	96MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS IP PLUS IPSEC 3DES	S26CK9-12215ZJ	c2600-ik9s-mz	32MB	128MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS IP/FW/IDS PLUS IPSEC 3DES	S26CHK9-12215ZJ	c2600-ik9o3s-mz	32MB	128MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS ENTERPRISE PLUS	S26AP-12215ZJ	c2600-js-mz	32MB	128MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS ENTERPRISE PLUS/H323 MCM	S26APU-12215ZJ	c2600-jsx-mz	32MB	128MB
c2610XM-c2611XM, c2620XM-c2621XM c2650XM-c2651XM	Cisco 2600 Ser IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S26AHK9-12215ZJ	c2600-jk9o3s-mz	32MB	128MB
c2691	Cisco 2691 Series IOS IP PLUS	S269CP-12215ZJ	c2691-is-mz	32MB	128MB
c2691	Cisco 2691 Series IOS IP/FW/IDS PLUS IPSEC 3DES	S269CHK9-12215ZJ	c2691-ik9o3s-mz	64MB	192MB
c2691	Cisco 2691 Series IOS ENTERPRISE PLUS	S269AP-12215ZJ	c2691-js-mz	64MB	192MB
c2691	Cisco 2691 Series IOS ENTERPRISE PLUS/H323 MCM	S269APU-12215ZJ	c2691-jsx-mz	64MB	192MB
c2691	Cisco 2691 Series IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S269AHK9-12215ZJ	c2691-jk9o3s	64MB	192MB
c3631	Cisco 3631 Ser IOS TELCO FEATURE SET	S363T-12215ZJ	c3631-telco-mz	32MB	64MB
c3631	Cisco 3631 Ser IOS TELCO PLUS FEATURE SET	S363TP-12215ZJ	c3631-telcoent-mz	64MB	128MB
c3640, c3640A	Cisco 3640 Ser IOS IP PLUS	S364CP-12215ZJ	c3640-is-mz	32MB	96MB
c3640, c3640A	Cisco 3640 Ser IOS IP/FW/IDS PLUS IPSEC 3DES	S364CHK9-12215ZJ	c3640-ik9o3s-mz	32MB	128MB
c3640, c3640A	Cisco 3640 Ser IOS ENTERPRISE PLUS	S364AP-12215ZJ	c3640-js-mz	32MB	128MB
c3640, c3640A	Cisco 3640 Ser IOS ENTERPRISE PLUS/H323 MCM	S364APU-12215ZJ	c3640-jsx-mz	32MB	128MB
c3640, c3640A	Cisco 3640 Ser IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S364AHK9-12215ZJ	c3640-jk9o3s-mz	32MB	128MB
c3660	Cisco 3660 Ser IOS IP PLUS	S366CP-12215ZJ	c3660-is-mz	32MB	128MB
c3660	Cisco 3660 Ser IOS IP/FW/IDS PLUS IPSEC 3DES	S366CHK9-12215ZJ	c3660-ik9o3s-mz	64MB	128MB
c3660	Cisco 3660 Ser IOS ENTERPRISE PLUS	S366AP-12215ZJ	c3660-js-mz	64MB	128MB
c3660	Cisco 3660 Ser IOS ENTERPRISE PLUS/H323 MCM	S366APU-12215ZJ	c3660-jsx-mz	64MB	128MB
c3660	Cisco 3660 Ser IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S366AHK9-12215ZJ	c3660-jk9o3s-mz	64MB	128MB



Platform	Software Feature Set	Product Code	Image	Flash	DRAM
c3725	Cisco 3725 Ser IOS IP PLUS	S372CP-12215ZJ	c3725-is-mz	32MB	128MB
c3725	Cisco 3725 Ser IOS IP/FW/IDS PLUS IPSEC 3DES	S372CHK9-12215ZJ	c3725-ik9o3s-mz	64MB	192MB
c3725	Cisco 3725 Ser IOS ENTERPRISE PLUS	S372AP-12215ZJ	c3725-js-mz	64MB	192MB
c3725	Cisco 3725 Ser IOS ENTERPRISE PLUS/H323 MCM	S372APU-12215ZJ	c3725-jsx-mz	64MB	192MB
c3725	Cisco 3725 Ser IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S372AHK9-12215ZJ	c3725-jk9o3s-mz	64MB	192MB
c3745	Cisco 3745 Ser IOS IP PLUS	S374CP-12215ZJ	c3745-is-mz	32MB	128MB
c3745	Cisco 3745 Ser IOS IP/FW/IDS PLUS IPSEC 3DES	S374CHK9-12215ZJ	c3745-ik9o3s-mz	64MB	192MB
c3745	Cisco 3745 Ser IOS ENTERPRISE PLUS	S374AP-12215ZJ	c3745-js-mz	64MB	192MB
c3745	Cisco 3745 Ser IOS ENTERPRISE PLUS/H323 MCM	S374APU-12215ZJ	c3745-jsx-mz	64MB	192MB
c3745	Cisco 3745 Ser IOS ENTERPRISE/FW/IDS PLUS IPSEC 3DES	S374AHK9-12215ZJ	c3745-jk9o3s-mz	64MB	192MB

### Download Information

Customers can download Cisco IOS Release 12.2(15)ZJ software from Cisco Connection Online (CCO) in the Software Image Library.

2600:

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/2600/rn2600zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/2600/rn2600zj.htm)

3600:

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/3600/rn3600zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/3600/rn3600zj.htm)

3700:

[http://lbj.cisco.com/push\\_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/3700/rn3700zj.htm](http://lbj.cisco.com/push_targets1/ucdit/cc/td/doc/product/software/ios122/122relInt/3700/rn3700zj.htm)

1700:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122relInt/1700/index.htm>



#### Corporate Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA

www.cisco.com  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

#### European Headquarters

Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands

www-europe.cisco.com  
Tel: 31 0 20 357 1000  
Fax: 31 0 20 357 1100

#### Americas Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA

www.cisco.com  
Tel: 408 526-7660  
Fax: 408 527-0883

#### Asia Pacific Headquarters

Cisco Systems, Inc.  
Capital Tower  
168 Robinson Road  
#22-01 to #29-01  
Singapore 068912

www.cisco.com  
Tel: +65 317 7777  
Fax: +65 317 7799

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

**Cisco 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 • Zimbabwe

All contents are Copyright © 1992–2002, Cisco Systems, Inc. All rights reserved. CCIP, the Cisco Arrow logo, the Cisco *Powered* Network mark, the Cisco Systems Verified logo, Cisco Unity, Follow Me Browsing, FormShare, Internet Quotient, iQ Breakthrough, iQ Expertise, iQ FastTrack, the iQ logo, iQ Net Readiness Scorecard, Networking Academy, ScriptShare, SMARTnet, TransPath, and Voice LAN are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, Discover All That's Possible, The Fastest Way to Increase Your Internet Quotient, and iQuick Study are service marks of Cisco Systems, Inc.; and Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, the Cisco IOS logo, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherSwitch, Fast Step, GigaStack, IOS, IP/TV, LightStream, MGX, MICA, the Networkers logo, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, RateMUX, Registrar, SlideCast, StrataView Plus, Stratm, SwitchProbe, TeleRouter, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks mentioned in this document or Web site 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. (0206R)