

Cisco IOS Software Release 12.0(4)XH

Introduction

This Product Bulletin describes the new features introduced in Cisco IOS(TM) software release 12.0(4)XH. It should be used in conjunction with Product Bulletin titled, Cisco IOS Software Release 12.0T.

New Features

12.0(4)XH is an Early Deployment (ED) release. This release is focused on enhanced services for VoIP applications for the Cisco AS5300, Cisco 2600 Series, and Cisco 3600 Series to market. Any ED release of software should be utilized first in a test network before being deployed in a production network.

The features delivered with this ED release will be immediately incorporated into the 12.0(6)T release. As such, maintenance for these features should be obtained from the 12.0T and 12.1 releases. For more information about the Cisco IOS software release process, please see Product Bulletin #537. Product Bulletin #537.

Detailed Information

12.0(4)XH delivers support for the following features.

TCL Scripting

12.0(4)XH supports Test Command Language (TCL) Scripting to provide a flexible scripting language capability to modify the Interactive Voice Response (IVR) call flow. All previously existing IVR scripts continue to be supported and are converted to TCL scripts. The Little IVR scripts continue to exist in IOS software while the TCL scripts are available to download from CCO. A set of professionally recorded audio prompts for IVR and TCL scripts are also available to download from CCO. Both scripts and prompts can be accessed while downloading the IOS software image.

Pre-Paid (Debit Card) Application

A new TCL script that performs pre-paid calling is also released with 12.0(4)XH. It allows the calls to be pre-rated and provide call cut off at the end of the available talk time.

Vendor Specific Attribute (VSA)

To support the information required by the debit card application and maximize flexibility, Cisco has expanded RADIUS Authentication, Authorization and Accounting (AAA) to support Vendor Specific Attribute. Prior to this release, the accounting information was sent in the Session ID attribute as overloaded information. Very limited user information can be sent in the data field. By configuring the Gateway and

the RADIUS server to communicate via VSA, the information that was previously sent in the Session ID is now assigned it's own unique attribute. In addition, flexibility was built in to define a customizable attribute. The RADIUS server can now get caller information not previously available.

Open Settlement Protocol Clearinghouse Solution

12.0(4)XH is the first release of IOS software that embeds Open Settlement Protocol (OSP) client software to enable the Service Providers who use Cisco Open Packet Telephony to communicate directly with a Clearinghouse Service Provider with Open Settlement Protocol, an ETSI TIHPON approved standard specification.

For more detailed information about the platforms and features being delivered in 12.0(4)XH, please reference the following document:

- Release Notes for Cisco AS5300 for Cisco IOS Release 12.0(4)XH
- Release Notes for Cisco 2600 Series for Cisco IOS Release 12.0(4)XH
- Release Notes for Cisco 3600 Series for Cisco IOS Release 12.0(4)XH

Product Numbers and Descriptions

Cisco IOS Software Release 12.0(4)XH can be ordered using the following product numbers.

Table 1 12.0(4)XH Product Numbers and Descriptions

Product Number	Description
S25CU-12.0.4XH	Cisco 2500 Series IOS IP/H323
S26CU-12.0.4XH	Cisco 2600 Series IOS IP/H323
S26AP-12.0.4XH	Cisco 2600 Series IOS ENTERPRISE PLUS
S26AL-12.0.4XH	Cisco 2600 Series IOS ENTERPRISE PLUS IPSEC 56
S362CU-12.0.4XH	Cisco 3620 Series IOS IP/H323
S362AP-12.0.4XH	Cisco 3620 Series IOS ENTERPRISE PLUS
S362AL-12.0.4XH	Cisco 3620 Series IOS ENTERPRISE PLUS IPSEC 56
S364CU-12.0.4XH	Cisco 3640 Series IOS IP/H323
S364AP-12.0.4XH	Cisco 3640 Series IOS ENTERPRISE PLUS
S364AL-12.0.4XH	Cisco 3640 Series IOS ENTERPRISE PLUS IPSEC 56
S53CVP-12.0.4XH	Cisco AS5300 Series IOS IP VOICE PLUS
S53AVP-12.0.4XH	Cisco AS5300 Series IOS ENTERPRISE VOICE PLUS
S53AVL-12.0.4XH	Cisco AS5300 Series IOS ENTERPRISE VOICE PLUS IPSEC 56
S25CU-12.0.4XH=	Cisco 2500 Series IOS IP/H323
S26CU-12.0.4XH=	Cisco 2600 Series IOS IP/H323
S26AP-12.0.4XH=	Cisco 2600 Series IOS ENTERPRISE PLUS
S26AL-12.0.4XH=	Cisco 2600 Series IOS ENTERPRISE PLUS IPSEC 56
S362CU-12.0.4XH=	Cisco 3620 Series IOS IP/H323
S362AP-12.0.4XH=	Cisco 3620 Series IOS ENTERPRISE PLUS
S362AL-12.0.4XH=	Cisco 3620 Series IOS ENTERPRISE PLUS IPSEC 56
S364CU-12.0.4XH=	Cisco 3640 Series IOS IP/H323
S364AP-12.0.4XH=	Cisco 3640 Series IOS ENTERPRISE PLUS
S364AL-12.0.4XH=	Cisco 3640 Series IOS ENTERPRISE PLUS IPSEC 56
S53CVP-12.0.4XH=	Cisco AS5300 Series IOS IP VOICE PLUS

Product Number	Description
S53AVP-12.0.4XH=	Cisco AS5300 Series IOS ENTERPRISE VOICE PLUS
S53AVL-12.0.4XH=	Cisco AS5300 Series IOS ENTERPRISE VOICE PLUS IPSEC 56
I26AL-12.0.4XH	Cisco 2600 Series IOS ENTERPRISE PLUS IPSEC 56
I362AL-12.0.4XH	Cisco 3620 Series IOS ENTERPRISE PLUS IPSEC 56
I364AL-12.0.4XH	Cisco 3640 Series IOS ENTERPRISE PLUS IPSEC 56
I53AL-12.0.4XH	Cisco AS5300 Series IOS ENTERPRISE PLUS IPSEC 56
FL53-V12.0.4XH=	Cisco AS5300 Series IOS ENTERPRISE VOICE PLUS IPSEC 56

Feature Sets, Images and Minimum Memory Requirements

Each of the 12.0(4)XH images has a minimum memory requirement for flash and DRAM.

Table 2 Feature Sets, Images, and Memory Requirements

Image Feature Sets	Images	Flash	DRAM
IP Voice Plus	c5300-is-mz	16MB	64MB
Enterprise Voice Plus	c5300-js-mz	16MB	64MB
Enterprise Voice Plus IPSEC 56	c5300-js56i-mz	16MB	64MB
IP/H323	c2500-ix-1	8MB	16MB
IP/H323	c2600-ix-mz	8MB	32MB
Enterprise Plus	c2600-js-mz	8MB	32MB
Enterprise Plus IPSEC 56	c2600-js56i-mz	8MB	40MB
IP/H323	c3620-ix-mz	8MB	32MB
Enterprise Plus	c3620-js-mz	16MB	48MB
Enterprise Plus IPSEC 56	c3620-js56i-mz	16MB	48MB
IP/H323	c3640-ix-mz	8MB	32MB
Enterprise Plus	c3640-js-mz	16MB	48MB
Enterprise Plus IPSEC 56	c3640-js56i-mz	16MB	48MB

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