



NEW CISCO IOS SOFTWARE RELEASE 12.1(22)EA2 FOR CISCO CATALYST 2955, 2950, 2950-LRE, AND 2940 SERIES AND CATALYST 2955 SWITCHES

OVERVIEW

Cisco Systems® announces Cisco IOS® Software updates for the Cisco® Catalyst® 2955, 2950, 2950-LRE, and 2940 series and Catalyst 2955 intelligent Ethernet switches. This product bulletin contains content and delivery information for Cisco IOS Software Release 12.1(22)EA2. For more information about the Cisco IOS Software release process, see Product Bulletin 537.

With this software release, Cisco Catalyst 2950 Series switches running Standard Image (SI) and Cisco Catalyst 2940 Series switches now support Secure Shell (SSH) Protocol. SSH provides a secure, remote connection to devices with more security than Telnet, using strong encryption when a device is authenticated. This software release supports SSH versions 1 and 2 (SSHv1 and SSHv2).

SSH is a cryptographic security feature that is subject to export restrictions. You must obtain authorization to use this feature and to download the cryptographic software files from Cisco. For more information, refer to the release notes for this release.

With Cisco IOS Software Release 12.1(22)EA2, Cisco Catalyst 2950 Series switches running Standard Image (SI) support data insertion with Dynamic Host Configuration Protocol (DHCP) option 82 (also known as DHCP relay agent). In residential, metropolitan Ethernet-access environments, DHCP can centrally manage IP address assignments for numerous subscribers. When the DHCP option 82 feature is enabled, a subscriber device is identified by the switch port through which it connects to the network (in addition to its MAC address). Multiple hosts on the subscriber LAN can be connected to the same port on the access switch and be uniquely identified. Because the DHCP clients and their associated DHCP server do not reside on the same IP network or subnet, a DHCP relay agent (the switch) is configured with a helper address to enable broadcast forwarding and to transfer DHCP messages between the clients and the server.

The default behavior for 802.1x with guest VLAN support on Cisco Catalyst 2950 and 2940 series switches is changed with this release. Client devices attempting to authenticate that support the 802.1x supplicant are not allowed in the guest VLAN if the 802.1x authentication fails. This implementation is consistent with Cisco Catalyst 4000 and 6000 series switches.

NEW FEATURES IN CISCO IOS SOFTWARE RELEASE 12.1(22)EA2

The new features shown in Table 1 are delivered in Cisco IOS Software Release 12.1(22)EA2.

Table 1. Cisco IOS Software Release 12.1(22)EA2 New Features

Feature	Cisco Catalyst 2955 Switch	Cisco Catalyst 2950 Series EI	Cisco Catalyst 2950 Series SI	Cisco Catalyst 2950 LRE Series	Cisco Catalyst 2940 Series
SSHv2	E	E	X	E	X
DHCP option 82	E	E	X	E	—
IEEE 802.1x with guest VLAN enhancement	—	X	X	X	X

SI—Standard Multilayer Image

EI—Enhanced Multilayer Image

X—Feature is new for this platform

E—Feature exists for this platform

Feature enhancements made to Cisco Network Management Software with this release are highlighted in Table 2.

Table 2. New Features in Cisco Network Management Software

Feature	Description
Cisco Device Manager	<p>Cisco Device Manager is a graphical device management tool that provides real-time views of the configuration and performance conditions for a single switch. It provides features such as Express Setup and Smartports to simplify switch management tasks. It also uses graphical, color-coded displays such as a Front Panel view of the switch, graphs, and animated indicators to simplify switch monitoring tasks.</p> <p>Cisco Device Manager can be launched from anywhere in your network through a Web browser such as Microsoft Internet Explorer or Netscape Navigator. The Cisco Catalyst 2955, 2950-LRE, 2950, and 2940 series and Catalyst 2955 switches extend support for Cisco Device Manager with this software release.</p>

The Layer 2+ capable fixed-configuration Cisco Catalyst switches supported with this software release are listed in Table 3.

Table 3. Layer 2+ Products Supported with this Release

Cisco Catalyst 2955 Enhanced Image EI Models	Cisco Catalyst 2950 Series Enhanced Image EI Models	Cisco Catalyst 2950 Series Standard Image SI Models	Cisco Catalyst 2950-LRE Series Models	Cisco Catalyst 2940 Series Models
2955C-12	2950T-24	2950-12	2950LRE-24-997	2940-8TF
2955S-12	2950C-24	2950-24	2950ST-24-LRE	2940-8TT
2955T-12	2950G-12-EI	2950SX-24	2950ST-8-LRE	
	2950G-24-EI	2950SX-48		
	2950G-48-EI	2950T-48		
	2950G-24-EI-DC			

ADDITIONAL RESOURCES

Software Download

The following software is available for download:

Cisco Catalyst 2955 Switches: <http://www.cisco.com/cgi-bin/tablebuild.pl/cat2955>.

Cisco Catalyst 2950 Series Switches: <http://www.cisco.com/cgi-bin/tablebuild.pl/cat2950>.

Cisco Catalyst 2950 LRE Series Switches: <http://www.cisco.com/cgi-bin/tablebuild.pl/cat2950LRE>.

Cisco Catalyst 2940 Series Switches: <http://www.cisco.com/cgi-bin/tablebuild.pl/cat2940>.

Due to export restrictions on strong cryptography, a separate image is required for cryptographic features (Secure Shell Protocol, Simple Network Management Protocol Version 3, and Kerberos Protocol). These software images can be downloaded from the corresponding Triple Data Encryption Standard area of the links provided in this section.

Product Information

Cisco Catalyst 2955 Switches:

<http://www.cisco.com/go/catalyst2955>.

Cisco Catalyst 2950 Series Switches:

<http://www.cisco.com/go/catalyst2950>.

Cisco Catalyst 2950 LRE Series Switches:

<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat2940/index.htm>.

Cisco Catalyst 2940 Series Switches:

<http://www.cisco.com/go/catalyst2940>.

Cisco Catalyst 2955, 2950, 2950 LRE, and 2940 series and Catalyst 2955 release notes:

<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat2950/index.htm>.

<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat2940/index.htm>.

Support

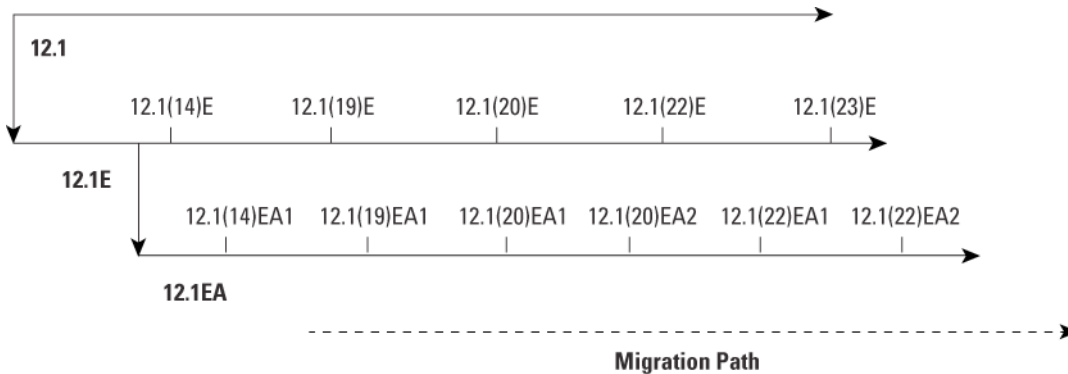
Cisco IOS Software Release 12.1(22)EA2 follows the standard Cisco support policy as indicated at:

http://www.cisco.com/en/US/products/products_end-of-life_policy.html.

Software Image Migration Guide

Figure 1 displays Cisco IOS Software Release 12.1(22)EA2 relative to the 12.1 and 12.1E releases and identifies the recommended migration path. For more information about the Cisco IOS Software release process, see Product Bulletin 537.

Figure 1. Cisco IOS Software Release 12.1EA Release Train





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.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 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 <http://www.cisco.com/go/offices>.**

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia • Cyprus
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

Copyright © 2004 Cisco Systems, Inc. All rights reserved. CCIP, CCSP, the Cisco *Powered* Network mark, Cisco Unity, Follow Me Browsing, FormShare, and StackWise are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, 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, Internet Quotient, IOS, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, LightStream, Linksys, MGX, MICA, the Networkers logo, Networking Academy, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, RateMUX, Registrar, ScriptShare, SlideCast, SMARTnet, StrataView Plus, Stratm, SwitchProbe, TeleRouter, The Fastest Way to Increase Your Internet Quotient, TransPath, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States 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. (0411R) 204108.52_ETMG_CC_11.04

