



Product Bulletin No. 3229

## New Cisco IOS Software Release 12.1(22)EA7 for Cisco Catalyst 3550, Catalyst 2950, Catalyst 2950 LRE, and Catalyst 2940 Series and Catalyst 2955 Switches

Cisco Systems® announces Cisco IOS® Software updates for the Cisco® Catalyst® 3550, Catalyst 2950, Catalyst 2950 LRE, and Catalyst 2940 series and Cisco Catalyst 2955 Intelligent Ethernet switches.

This new release furthers Cisco leadership in providing secure, reliable, and feature-rich LAN switching solutions. This product bulletin contains content and delivery information for Cisco IOS Software Release 12.1(22)EA7.

The following new features are available with Cisco IOS Software Release 12.1(22)EA7:

- **AutoInstall with saved configuration**—This enhancement allows customers to configure the AutoInstall capability and override the default behavior and have AutoInstall retrieve and install a configuration file even when a configuration is saved on the switch. Upon power down, the device loses the additional configurations and reverts to basic configuration.
- **Option-82 data insertion**—Dynamic Host Configuration Protocol (DHCP) can centrally manage the IP address assignments for a large number of subscribers. When the DHCP option-82 feature is enabled on the switch, 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 are uniquely identified. The DHCP option-82 feature is supported only when DHCP snooping is globally enabled and on the VLANs to which subscriber devices using this feature are assigned.
- **IEEE 802.1x with restricted VLAN (Auth-Fail-VLAN)**—Allows end devices that fail 802.1x authentication to be placed into a VLAN of choice. 802.1x starts the reauthentication timer in auth-fail-vlan state, and it continues asking the end device for its authentication credentials upon expiration of the reauthentication timer. After the end device is properly authenticated, the switch port moves to the VLAN specified in the authentication, authorization, and accounting (AAA) response. If the end device is not authenticated, the switch port stays in its current auth-fail-vlan state.
- **Increased number of VLANs (to 128)**—Expands the number of VLANs a Catalyst 2940 or Catalyst 2950 (Standard Image) switch can support from 12 and 64, respectively to 128.

Table 1 lists new features of Cisco IOS Software Release 12.1(22)EA7.

**Table 1.** Cisco IOS Software Release 12.1(22)EA7 New Features

Feature	Cisco Catalyst 3550 Series Enhanced Multilayer Image	Cisco Catalyst 3550 Series Standard Multilayer Image	Cisco Catalyst 2955 Switch Enhanced Image	Cisco Catalyst 2950 Series Enhanced Image	Cisco Catalyst 2950 Series Standard Image	Cisco Catalyst 2950 LRE Series	Cisco Catalyst 2940 Series Standard Image
AutoInstall with Saved Configuration	N	N	N	N	N	N	X
Option-82 Data Insertion	E	E	E	E	E	E	X
IEEE 802.1x with Restricted VLAN (Auth-Fail-VLAN)	N	N	X	X	X	N	X
Increased Number of VLANs (to 128)	–	–	–	–	X	–	X

E Feature exists for this platform.

N No plans to add platform support for this feature.

X Feature is new for this platform.

Table 2 lists the Layer 2+ capable fixed-configuration Cisco Catalyst switches supported with this software release.

**Table 2.** Layer 2+ Products Supported with This Release

Cisco Catalyst 2955 Enhanced Image EI Part Numbers	Cisco Catalyst 2950 Series Enhanced Image EI Part Numbers	Cisco Catalyst 2950 Series Standard Image SI Part Numbers	Cisco Catalyst 2950 LRE Series Part Numbers	Cisco Catalyst 2940 Series Part Numbers
<ul style="list-style-type: none"> <li>• 2955C-12</li> <li>• 2955S-12</li> <li>• 2955T-12</li> </ul>	<ul style="list-style-type: none"> <li>• 2950T-24</li> <li>• 2950C-24</li> <li>• 2950G-12-EI</li> <li>• 2950G-24-EI</li> <li>• 2950G-48-EI</li> <li>• 2950G-24-EI-DC</li> </ul>	<ul style="list-style-type: none"> <li>• 2950-12</li> <li>• 2950-24</li> <li>• 2950SX-24</li> <li>• 2950SX-48</li> <li>• 2950T-48</li> </ul>	<ul style="list-style-type: none"> <li>• 2950LRE-24-997</li> <li>• 2950ST-24-LRE</li> <li>• 2950ST-8-LRE</li> </ul>	<ul style="list-style-type: none"> <li>• 2940-8TF</li> <li>• 2940-8TT</li> </ul>

## 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>

Because of export restrictions on strong cryptography, a separate image is required for cryptographic features (Secure Shell [SSH] Protocol, Simple Network Management Protocol Version 3 [SNMPv3], and Kerberos Protocol). These software images can be downloaded from the corresponding Triple Data Encryption Standard (3DES) 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/en/US/products/hw/switches/ps4916/index.html>
- Cisco Catalyst 2940 Series switches: <http://www.cisco.com/go/catalyst2940>
- Cisco Catalyst 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>

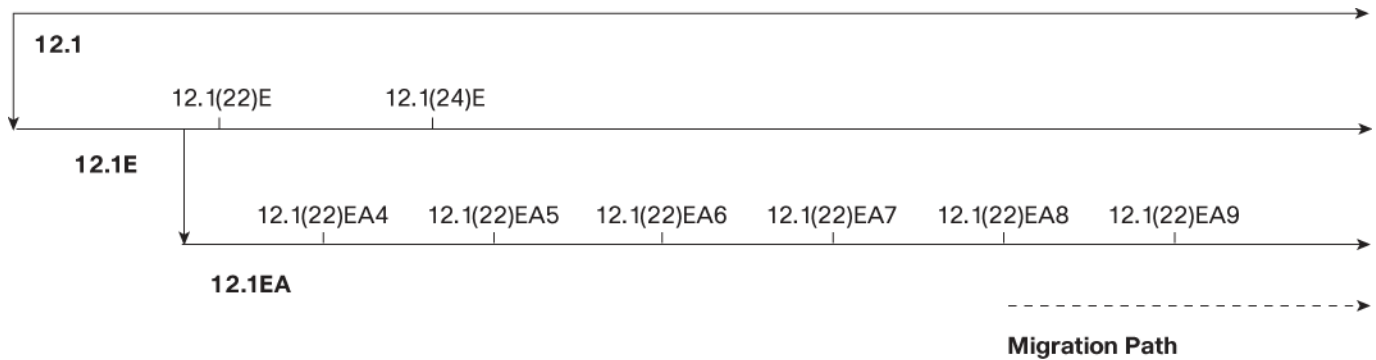
### Support

Cisco IOS Software Release 12.1(22)EA7 follows the standard Cisco support policy indicated at [http://www.cisco.com/en/US/products/products\\_end-of-life\\_policy.html](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)EA7 relative to the 12.1 and 12.1E releases and identifies the recommended migration path.

**Figure 1.** Cisco IOS Software Release 12.1EA Release Train



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