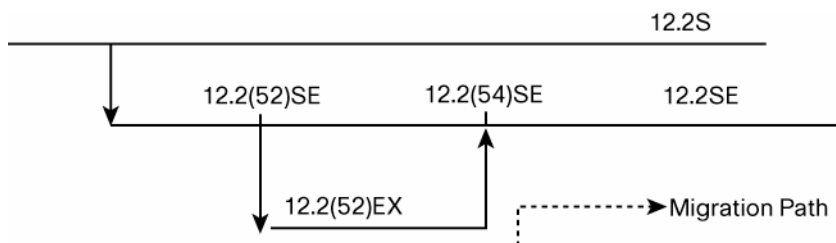


## Cisco IOS Software Release 12.2(52)EX for Enhanced EtherSwitch Service Modules used in the Integrated Services Router Generation 2

PB566835

This product bulletin describes the content and delivery information concerning Cisco IOS® Software Release 12.2(52)EX, which provides support for the SM-ES2\* and SM-ES3\* Enhanced EtherSwitch® Service Modules that are used in the Cisco® Integrated Services Routers Generation 2. Release 12.2(52)EX is a short-lived early deployment release parented to Release 12.2(52)SE and supporting Cisco Catalyst® 2960sm and Cisco Catalyst 3560e platforms. This release contains all new features delivered in the Release 12.2SE train up to Release 12.2(52)SE. The platform and features delivered with this early deployment release will be incorporated into Cisco IOS Software Release 12.2(54)SE and subsequent Cisco IOS Software 12.2SE train releases. (See Figure 1.)

**Figure 1.** Cisco IOS Software Release 12.2(52)EX Release Train and Migration Guide



### New Features in Cisco IOS Software Release 12.2(52)EX

The following features will be delivered in the initial Cisco IOS Software Release 12.2(52)EX. Cisco IOS Software Release 12.2(52)EX runs on the Enhanced EtherSwitch Service Modules that fit into the Integrated Services Routers Generation 2. The Integrated Services Routers Generation 2 run their own Cisco IOS Software Release 15.0(1)M or newer. Table 1 depicts which Enhanced EtherSwitch Service Modules fit into which Integrated Services Router Generation 2.

**Table 1.** Cisco IOS Software Release 12.2(52)EX New Features

Enhanced EtherSwitch Service Module	CISCO2911	CISCO2921	CISCO2951	CISCO 3925	CISCO 3945
SM-ES2-16-P	X	X	X	X	X
SM-ES3-16-P	X	X	X	X	X
SM-ES3G-16-P	X	X	X	X	X
SM-ES2-24	X	X	X	X	X
SM-ES2-24-P	X	X	X	X	X
SM-ES3-24-P	X	X	X	X	X
SM-ES3G-24-P	X	X	X	X	X
SM-D-ES2-48		X	X	X	X
SM-D-ES3-48-P		X	X	X	X
SM-D-ES3G-48-P		X	X	X	X

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

## Detailed Information

### Enhanced EtherSwitch Service Modules for Integrated Services Routers Generation 2

The Cisco Enhanced EtherSwitch Service Modules greatly expand the router's capabilities by integrating industry-leading Layer 2 and Layer 3 switching with feature sets identical to those found in the Cisco Catalyst 3560-E and Cisco Catalyst 2960 Series Switches. The new Cisco Enhanced EtherSwitch Service Modules are the first modules to take advantage of the increased capabilities on the Cisco 3900 and 2900 Series Integrated Services Routers. Additionally, these service modules enable Cisco's industry-leading power initiatives, Cisco EnergyWise, Cisco Enhanced Power over Ethernet (ePoE), and per-port PoE power monitoring—all of which enhance the ability of the branch office to scale to next-generation requirements and still meet important initiatives for IT teams to operate a power-efficient network. Furthermore, the Cisco Enhanced EtherSwitch Service Modules not only perform local line-rate switching and routing but also support direct service module-to-service module communication through the Integrated Services Router Generation 2 multigigabit fabric (MGF), which separates LAN traffic from WAN resources.

For more detailed information about the platforms and features being delivered in Cisco IOS Software Release 12.2(52)EX, reference

[http://www.cisco.com/en/US/products/ps10536/products\\_relevant\\_interfaces\\_and\\_modules.html - esm](http://www.cisco.com/en/US/products/ps10536/products_relevant_interfaces_and_modules.html - esm).

## Support

Cisco IOS Software Release 12.2(52)EX follows the standard Cisco support policy, as indicated at

<http://www.cisco.com/warp/public/437/27.html>.

## Product Numbers

See Table 2.

**Table 2.** Cisco IOS Software Release 12.2(52)EX Feature Sets, Images, and Memory Recommendations (Memory Fixed in These Platforms)

Platform	Software Feature Set	Product Code	Image	Flash	DRAM
Cisco Integrated Services Routers: Enhanced EtherSwitch Service Modules: Layer 2	Enhanced EtherSwitch Service Module Software for SM-ES2*	S296SLB-12252EX	c2960sm-lanbase-tar	32 MB	64MB
		S296SLBK9-12252EX	c2960sm-lanbasek9-tar	32MB	64MB
Cisco Integrated Services Routers: Enhanced EtherSwitch Service Modules: Layer 2/3	Enhanced EtherSwitch Service Module Software for SM-ES3*	S356EVT-12252EX	c3560e-universal-tar	64 MB	128MB
		S356EVK9T-12252EX	c3560e-universalk9-tar	64 MB	128MB

## Download Information

Since these modules are inserted into Cisco Integrated Services Routers, the software is downloaded from the same folder as the Cisco 2911, 2921, 2951, 3925, or 3945 routers. The following pointer is linked to the Cisco 2951 Integrated Services Router. The Enhanced EtherSwitch software is the same regardless of what router's folder it is posted in.

[http://tools.cisco.com/support/downloads/go/Model.x?mdfid=282774230&mdfLevel=Model&treeName=Routers&modelName=Cisco 2951 Integrated Services Router&treeMdfId=268437899](http://tools.cisco.com/support/downloads/go/Model.x?mdfid=282774230&mdfLevel=Model&treeName=Routers&modelName=Cisco%202951%20Integrated%20Services%20Router&treeMdfId=268437899)



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