Cisco IOS Software Packaging

General

Q. What are the software packages available for the Cisco® Catalyst® 6500?

A. Software packages for the Cisco Catalyst 6500 are dependent on the supervisor engines on the chassis. Table 1 is a summary of the various packages for the supervisor engines on the Cisco Catalyst 6500 Series.

Table 1. Packages Available

Software Packages	Sup2T	VS-Sup720-10G	Sup720-3B	Sup 32
Advanced Enterprise Services	K9 • S2TAEK9-12250SY NPE* • S2TAEK9N-12250SY	K9 (LAN and WAN) • SV33AEK9L-12233SXI • SV33FPD-12233SXI Non-K9 (WAN) • SV33AES-12233SXI	K9 (LAN and WAN) • S733AEK9L-12233SXI • S733AEK9-12233SXI Non-K9 (WAN) • S733AES-12233SXI	K9 (WAN) • S323AEK9-12233SXI Non-K9 (WAN) • S323AES-12233SXI
Advanced IP Services	K9 • S2TAIK9-12250SY NPE • S2TAIK9N-12250SY	K9 (LAN and WAN) • SV33AIK9L-12233SXI • SV33AIK9-12233SXI	K9 (LAN and WAN) • S733AIK9L-12233SXI • S733AIK9-12233SXI	K9 (WAN) • S323AIK9-12233SXI
IP Services	K9 • S2TISK9-12250SY • S2TISK9Z-12250SY (for bundles only) NPE • S2TISK9N-12250SY • S2TISK9NZ-12250SY (for bundles only)	K9 (WAN) • SV33ISK9-12233SXI Non-K9 (WAN) • SV33IS-12233SXI	K9 (LAN and WAN) • S733ISK9L-12233SXI • S733ISK9-12233SXI Non-K9 (WAN) • S733IS-12233SXI	K9 (WAN) • S323ISK9-12233SXI
IP Base	K9 • S2TIBK9-12250SY NPE • S2TIBK9N-12250SY	K9 (LAN) • SV33IBK9L-12233SXI Non-K9 (LAN) • SV33IBL-12233SXI	not available	K9 (LAN) • S323IBK9L-12233SXI Non-K9 (LAN) • S323IBL-12233SXI

Q. What is the difference between K9 and NPE images on the Supervisor Engine 2T?

A. NPE is an image for exporting to countries that might have import restrictions on encryption technologies. It does not allow payload encryption. The K9 image consists of cryptographic features such as Secure Shell (SSH) Protocol and support for IP Security (IPSec).

Q. What is the difference between K9 and non-K9 images on the Supervisor Engine 720 and Supervisor Engine 32?

A. The K9 image consists of cryptographic features such as SSH and support for IPSec, while the non-K9 images do not.

Q. What is the difference between LAN and WAN images on the Supervisor Engine 720 and Supervisor Engine 32?

A. The LAN image supports only LAN line cards for the Supervisor Engine 720 and Supervisor Engine 32. The WAN image supports both LAN and WAN cards such as SIP-200, SIP-400, SIP-600, and ES+ line cards. The WAN images include WAN features such as SVI-based Ethernet over Multiple Protocol Label Switching (EoMPLS), Virtual Private LAN Service (VPLS), and Hierarchical QoS(H-QoS).

Q. What is the digital signature?

A. The digital signature algorithm (DSA) is present in Cisco Catalyst 6500 (Supervisor Engine 2T only) Cisco IOS® Software packages to detect third-party interception. DSA is a requirement for Federal Information Processing Standards (FIPS) compliance.

Q. What is the difference between the various software packages?

A. There are four different software packages targeted to requirements in different places of the network, including campus access, data center access, aggregation, and core.

The following are major feature highlights found in each Cisco IOS Software package:

IP Base: Includes basic routing (Routing Information Protocol [RIP], static routing, Enhanced Interior Gateway Routing Protocol [EIGRP] Stub, Protocol Independent Multicast [PIM] Stub), Layer 2 capabilities, manageability, security, IPv6 host support, and quality of service [QoS]).

IP Services: Adds full IP routing (Open Shortest Path First [OSPF], EIGRP, Border Gateway Protocol [BGP], PIM), Cisco TrustSec® security (MacSec*, Secure Group Tagging[SGT]*, SGT Exchange Protocol [SXP], and Security Association Protocol [SAP]*), Control and Monitoring Processor (CMP)*, and Web Cache Communication Protocol (WCCP).

Advanced IP Services: Adds advanced IPv4 and IPv6 features, Secure Group Access Control Lists (SGACLs)*, Layer 3 VPN, Multiprotocol Label Switching (MPLS), EoMPLS, and VPLS.

Advanced Enterprise Services: Full Cisco IOS Software features, including AppleTalk and ATM support.

* Only available on Supervisor Engine 2T.

Q. How do I upgrade from one package to another premium package? For instance, from IP Services to Advanced IP Services?

A. A customer can upgrade from one package to another premium package using an upgrade CD (part number 6500-SW-SPARECD). If the customer has a Cisco SMARTnet® Service contract, that customer still must get the CD to upgrade the software package.

Q. Can a customer update from one software image to a minor release update version? For instance, from 12.2.(33)SXI2 to 12.2(33)SXI3?

A. Yes, customers can move to the updated version of image if they have a service contract that allows for software updates such as Cisco SMARTnet.

Q. Can customer upgrade from one major software image to another major release of that image? For instance, from 12.2.(33)SXI to 12.2(33)SXJ?

A. Yes, customers can move to the upgraded version of image if they have a service contract that allows for software upgrades such as Cisco SMARTnet.

Q. What is "spare software" or "a software spare" on the Cisco 6500 Series Switches? When do I need to order one?

A. "Spare" software includes a copy of Cisco IOS Software on a CD-ROM and, most importantly, a license to use that software. Spare software is required when a customer wants a new version of Cisco IOS Software and does not have a current maintenance agreement, or when the customer has purchased Cisco 6500 Series Switches from a third party. Software licenses are not transferable from owner to owner.

Q. If a customer wants to use a redundant supervisor in the same chassis, does the customer have to buy another software package for the second supervisor engine?

A. No, since it is a redundant card and only one is online at a time, a single software package will be required for this system.

Q. Will a software package be required if customer decides to move a redundant supervisor engine to another system?

A. Yes. If a redundant supervisor engine is moved to another system, the customer will need to have at least one license for each system.

Q. What happens when customer replaces a damaged chassis? Does the customer need to purchase another package?

A. Since the software package is tied to the supervisor engine, the customer will not need to purchase another package. The coverage will automatically be ported over to the supervisor engine on the new chassis.

Q. Is a license required for MacSec?

A. No. MacSec capability is available in the hardware. It is available only on Supervisor Engine 2T.

Q. Is there software licensing on the Cisco Catalyst 6500 Series?

A. Yes, there is software licensing on the Cisco Catalyst 6500 Series, but there is no Cisco software licensing infrastructure.

Q. What is the minimum software release for the Supervisor Engine 2T?

A. Cisco IOS Software Release 12.2(50)SY.

Software Package for VS Bundles

Q. Can I order IP Services and above within the bundle?

A. Yes, but only if a second (redundant) supervisor engine is configured within the bundle. However, if you stay with one (default) supervisor engine, then IP Base is the only valid option within the bundle.

Q. Is it possible to upgrade a bundle configuration with IP Services and above at a later point in time?

A. Yes, it is possible to upgrade the bundle with IP Services. CD includes Cisco IOS Software IP Base image at no additional cost and supports the VSS 1440 mode when configured with a single supervisor engine in each chassis. Furthermore, these bundles can be upgraded to support Cisco IOS Software IP Services image or above with either:

- The purchase of a redundant supervisor engine within the bundle. However, once a redundant supervisor is added, the system can only operate in a non-VSS mode.

- The purchase of a standalone Cisco IOS Software IP Services license outside of the bundle. This can be accomplished by purchasing 6500-SW-SPARECD and selecting the appropriate software from the "Supervisor 720 10G Software" or "Supervisor 2T software" options. For Advanced IP Services images or Advanced Enterprise images, you need to follow a two-step process of:
  1. Purchasing IP Services first.
  2. Purchasing either of the Advanced images.

Package Selection

Q. How do customers choose the best package for their network?

A. For help with package selection, refer to the [Cisco Catalyst 6500 Cisco IOS Software packaging product bulletin](#).

Q. What Cisco tools can determine the memory effects of new packages?

A. By using Cisco Feature Navigator at http://tools.cisco.com/ITDIT/CFN/jsp/index.jsp, registered customers and partners can search by feature or release and can compare different releases and feature sets.

Roadmap

Q. What future packaging changes are currently planned?

A. For consistent Cisco IOS Software behavior across platforms, Cisco IOS Software packaging 12.2 for Cisco Catalyst 6500 Series Switches will migrate to the Cisco IOS Software Release 15.0 componentized software train.

For more information about the Cisco IOS Software release migration strategy on Cisco Catalyst 6500 Series Switches, refer to [Catalyst 6500 software](#).

Q. Will the NPE image be available for the Supervisor Engine 32 or Supervisor Engine 720?

A. No. The NPE image is only available on the Supervisor Engine 2T.

For more information, contact ask-C6500@cisco.com.

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