

Cisco IOS Packaging

PB2855

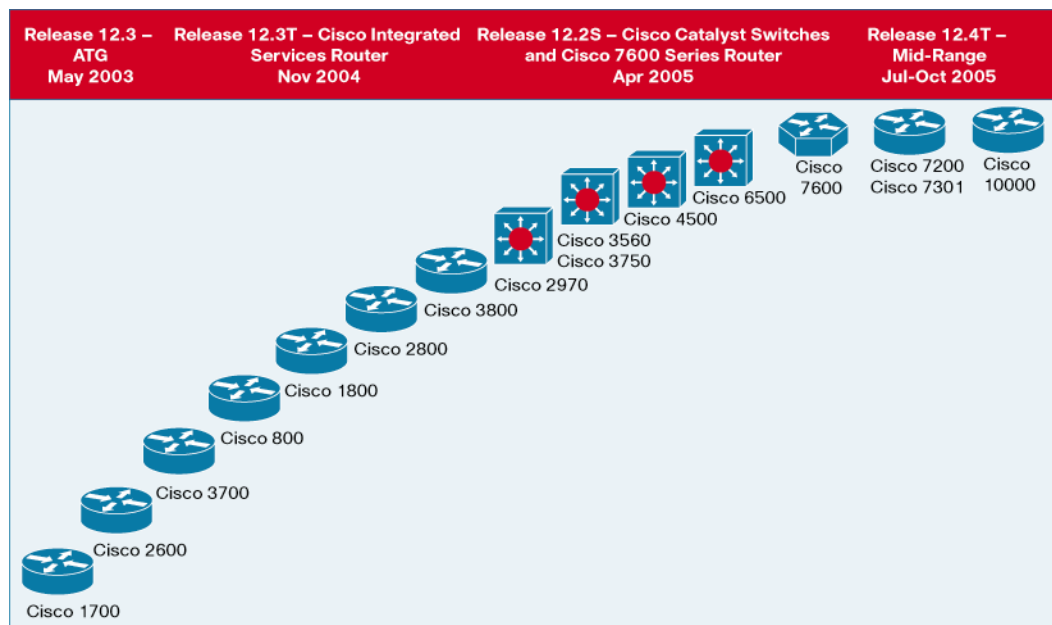
Last Updated: December 2008

This Product Bulletin articulates the new Cisco IOS® Packaging for Cisco switches, including the availability of new packages and the associated Cisco IOS Software Release migration strategy.

Cisco IOS Software is the world's leading network infrastructure software, delivering a seamless integration of technology innovation, business-critical services, and hardware support. Currently operating on millions of active systems, ranging from the small home office router to the core systems of the world's largest service provider networks, Cisco IOS Software is the most widely leveraged network infrastructure software in the world.

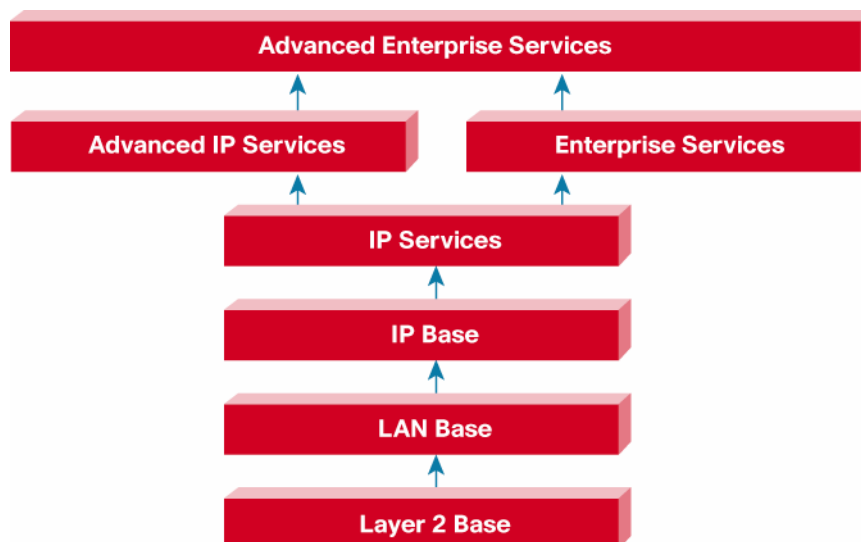
Today's customers need more flexible and consistent software packaging to address their complex network environments. Cisco is expanding its Cisco IOS Packaging to switches via Cisco IOS Software Release 12.2S, creating a new foundation for Cisco IOS Software features and functionality.

Figure 1. Cisco IOS Packaging Roadmap



Cisco IOS Packaging redefines and simplifies the current Cisco IOS Software feature sets across Cisco Catalyst Switches and offers one simple framework applicable to the entire switching portfolio, including feature parity and consistency across all the packages. This new model also provides closer realignment between the routers and switches that run Cisco IOS Software.

Figure 2. Cisco IOS Packaging for Switches



Cisco developed the seven new packages to replace the current images for the targeted switches and to satisfy requirements in three typical market categories: Layer 2, LAN Access, LAN Aggregation and Internet/WAN Edge.

The first two packages, Layer 2 Base and LAN Base, are offered for Layer 2 on the Cisco 2900 Series; therefore, these are not applicable to other Cisco Catalyst switches. The IP Base package is the most basic package offered across the Layer 3 Cisco Catalyst switches. The IP Services package is an advanced Cisco IOS Software feature set that contains full IP routing capabilities. Three additional premium packages offer new Cisco IOS Software feature combinations that address more complex network requirements. All features merge in the most premium package—Advanced Enterprise Services—which integrates support for all routing protocols, including Security with VPN.

Some important aspects of this new framework include:

- Feature Inheritance Principle
- Feature Consistency across platforms
- Improved Image Naming

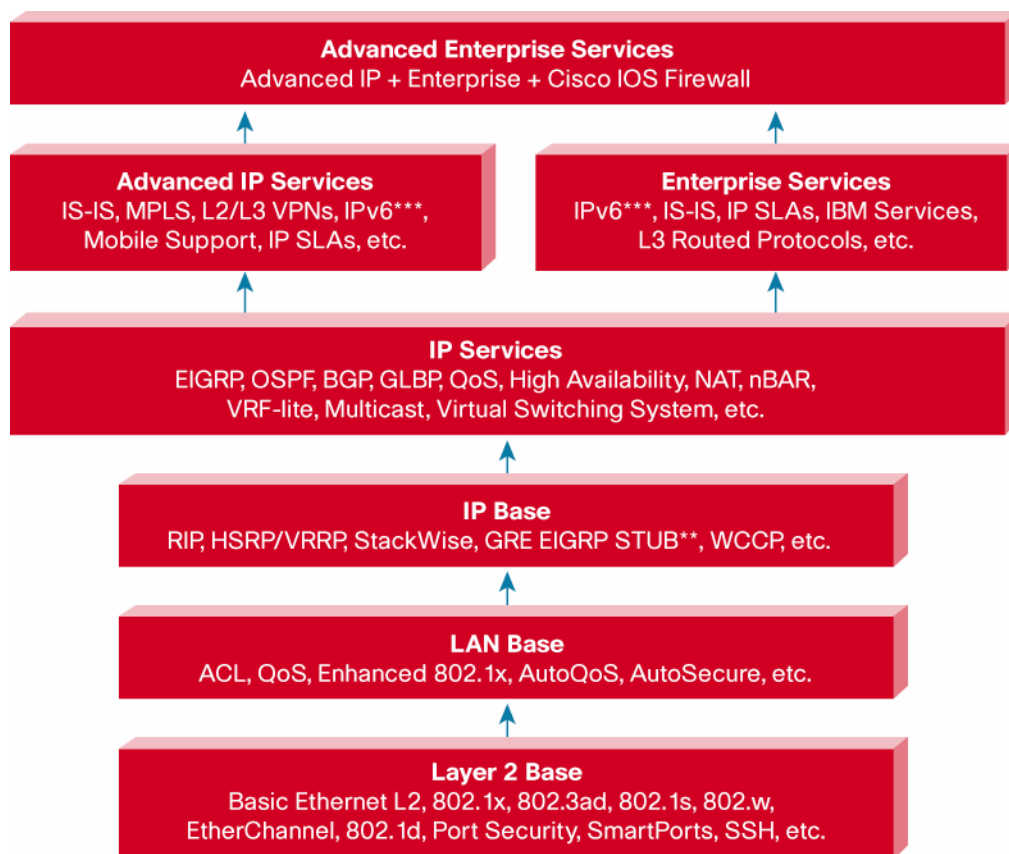
Cisco IOS Packaging is currently available in Cisco IOS Software Releases 12.3, 12.3T, 12.4, and higher releases supporting the Cisco 800, 1700, 1800, 2600, 2800, 3700, and 3800 Series Routers.

The Cisco 7200 Series and Cisco 7301 Router offer Cisco IOS Packaging in Cisco IOS Software Release 12.4T.

New Packaging Feature Inheritance Principle

Feature inheritance is a powerful aspect of Cisco IOS Packaging. Once a feature is introduced, it is always present in the more comprehensive packages; for example, all the features in IP Base are in IP Services, Advanced IP Services, Enterprise Services, and Advanced Enterprise Services. Feature inheritance clarifies the feature content of the different packages and illustrates their relationship.

Figure 3. New Packaging for Cisco IOS Switches



** EIGRP-STUB in IP Base will be available on the Cisco Catalyst 4500 Series (Sup4) and the Cisco Catalyst 6500 Series.

*** Starting with 12.2(33)SX1 on the 6500 series, Cisco is offering packaging parity for IPv6 with IPv4 such that IPv6 feature support for a technology will be packaged in the same feature set as IPv4. This parity will be extended to other platforms in the future.

New Packaging Naming Convention

Cisco IOS Packaging also simplifies image naming. Each name has been designed to effectively convey the high-level feature content of, and the inheritance characteristics for, the new packages.

- Base: entry level image
- Services: adds premium Cisco IOS Software features, such as BGP and High Availability
- Enterprise: adds in the routing protocols, including IBM, Novell, IPX, IPv6
- Advance: adds Cisco IOS Security features, including VPN and Cisco IOS Firewall

New Package Descriptions

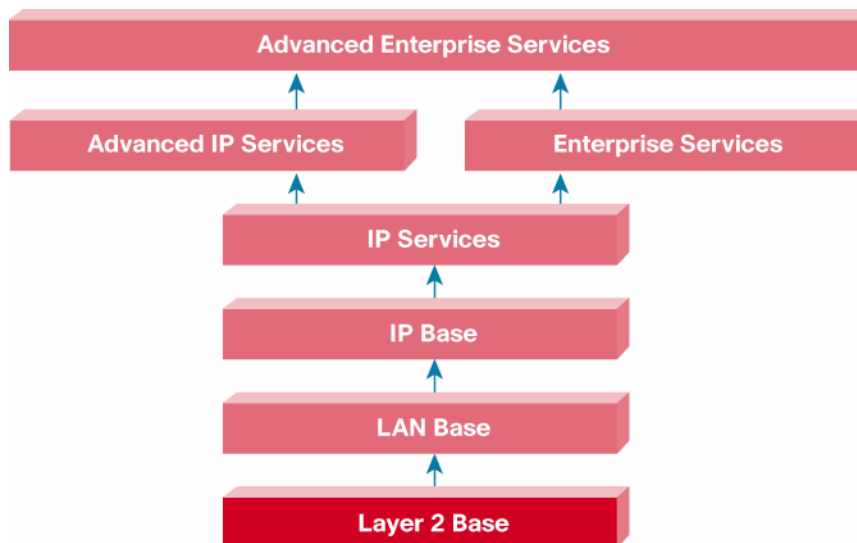
Product Definitions

Cisco designed the new packages to satisfy various market requirements and services categories. A focused package is provided as an entry point within each category. One step up, comprehensive packages provide additional functionality and combine features from different categories to meet required combinations. All packages converge in the Advanced Enterprise Services integrating all mainstream functionality. The following paragraphs provide descriptions and market requirements of each feature set.

Cisco IOS Packaging for Switches Layer 2 Base [c2900-layer2basek9-mz]

- Layer 2 Base is a baseline set of Cisco IOS Software services required for the Layer 2 Ethernet switched environment. It includes IEEE Ethernet functionality, including IEEE 802.1D support, 802.1x point authentication, 802.3ad EtherChannel, 802.1s/w Rapid Spanning Tree, Port Security, SmartPorts, and SSHv2.
- Deployment Guidelines: Typically Wiring Closet

Figure 4.



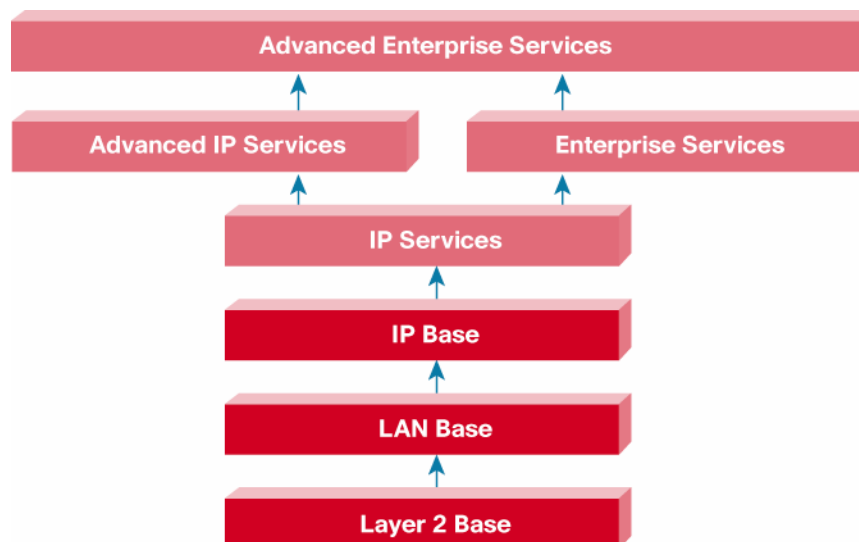
Cisco IOS Packaging for Switches LAN Base [c2900-lanbasek9-mz]

- LAN Base includes advanced LAN features for Cisco switches. It includes everything in the Layer 2 Base, plus Cisco AutoQoS, Cisco AutoSecure, Advanced 802.1x, Advanced Access Lists (Layer 2-4 filtering, Time Based ACLs, Port Based ACLs), and Advanced QoS (Layer 2-4 Classification, Ingress policing, Ingress Rate Limiting, DSCP Classification).
- Deployment Guidelines: Wiring Closet

Cisco IOS Packaging for Switches IP Base [c6500-ipbasek9-mz]

- IP Base is a baseline set of Layer 2 and Layer 3 Cisco IOS Software services required to operate Cisco Switches. IP Base includes all the features of LAN Base, plus Edge IP Routing (Static, RIP, EIGRP-STUB & Basic PIM), HSRP/ VRRP, and GRE Tunneling.
- Deployment Guidelines: LAN Wiring Closet

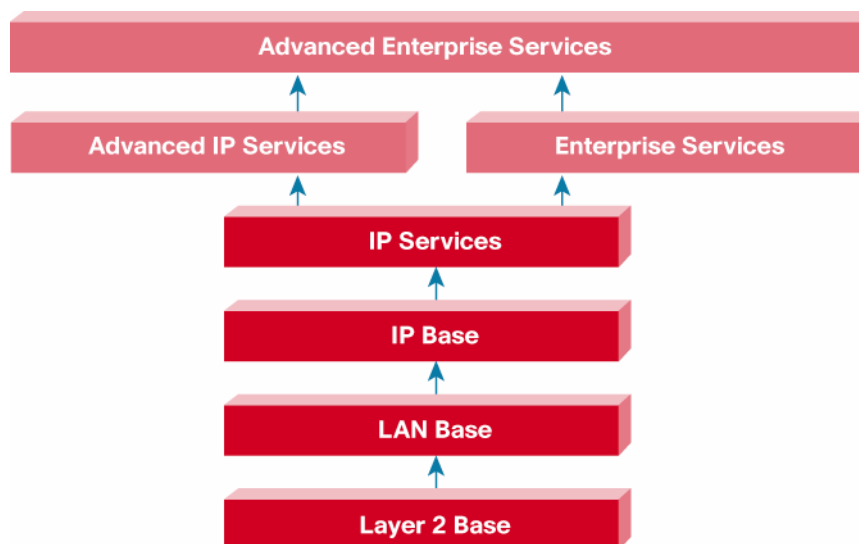
Figure 5.



Cisco IOS Packaging for Switches IP Services [c6500-ipservicesk9-mz]

- IP Services is an advanced Cisco IOS Software feature set that requires full IP routing capabilities. IP Services includes all the features of IP Base plus full IP routing (EIGRP, OSPF & PIM), BGP, Policy Based Routing, GLBP, High Availability, Redundant PR+, Multi-VRF, WAN Protocols¹, enhanced QoS functionality (NBAR)¹, and Catalyst 6500 Virtual Switching System.
- Deployment Guidelines: Advanced Wiring Closet, Switch Aggregation (Distribution and Core)

Figure 6.

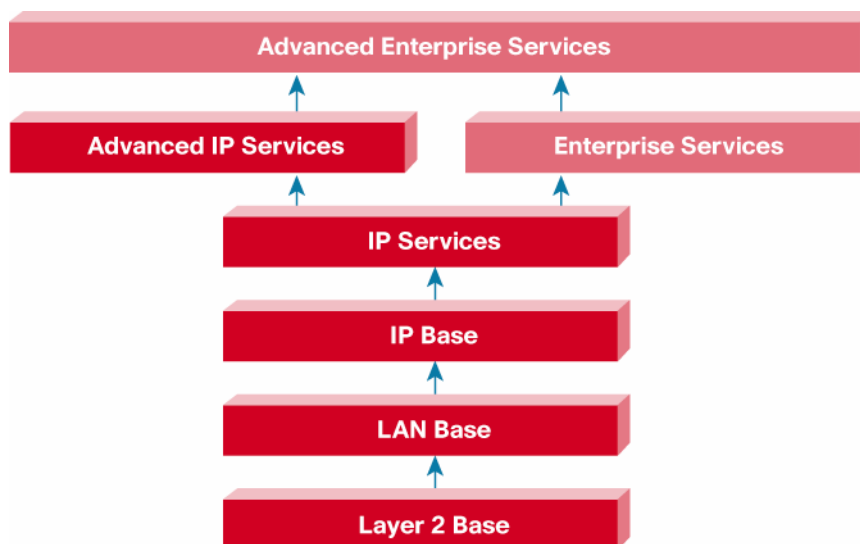


¹ Not all Switches support WAN Protocols and NBAR.

Cisco IOS Packaging for Switches Advanced IP Services [c6500-advipservicesk9]

- Advanced IP Services is a comprehensive set of Cisco IOS Software features designed for IP-only networks. It includes all the features of IP Services plus additional features including ISIS, MPLS, Layer 2 VPNs, Layer 3 VPNs, and IPv6.
- Deployment Guidelines: Service Provider Environments, Enterprise: Campus WAN and Metro Edge

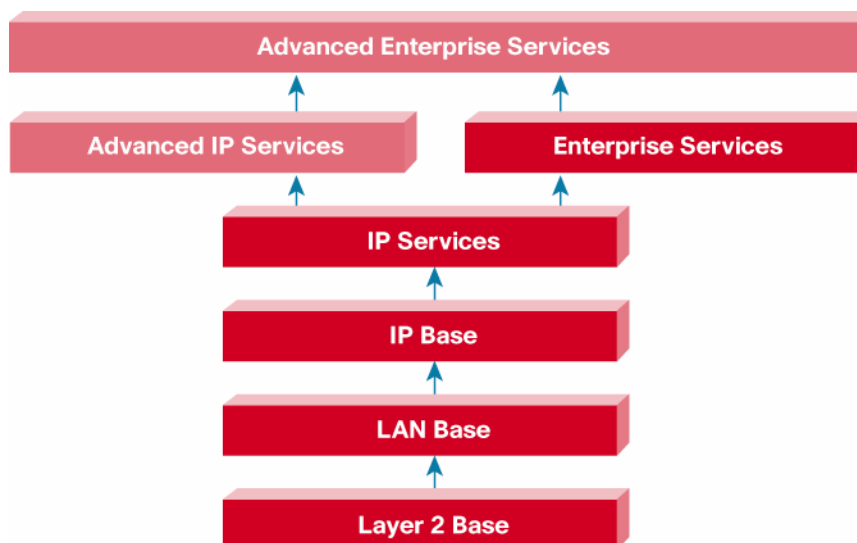
Figure 7.



Cisco IOS Packaging for Switches Enterprise Services [c6500-entservicesk9]

- Enterprise Services is a comprehensive set of Cisco IOS Software features for Enterprise environments. The Enterprise Services package includes IPv6, all the features of IP Services and additional features for Layer 3 multi-protocol environments, such as AppleTalk Routing, IPX Routing, and IBM Networking Services.
- Deployment Guidelines: Switch Aggregation (Distribution and Core), WAN edge, Metro edge

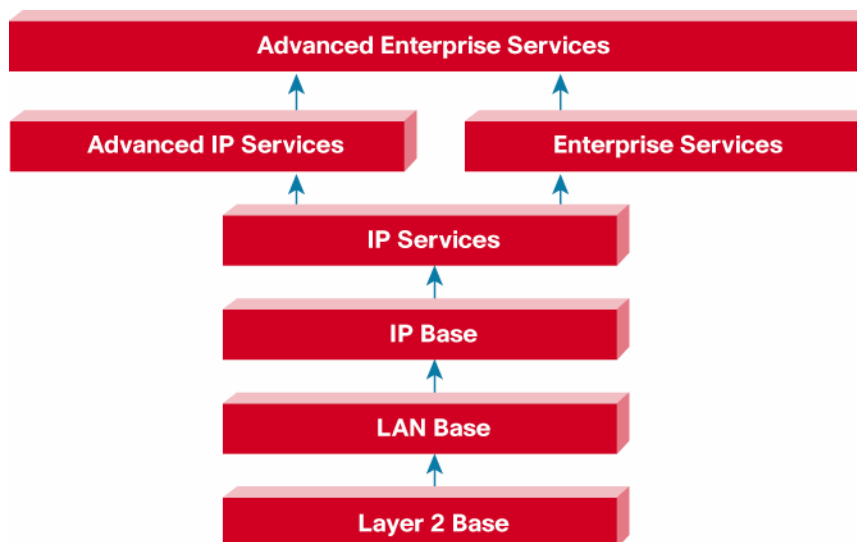
Figure 8.



Cisco IOS Packaging for Switches Advanced Enterprise Services [c6500-adventservicesk9]

- Advanced Enterprise Services merges support for all Enterprise and IP protocols (ie: AppleTalk, Novell, IPX, ISIS, and BGP) and adds Advanced Security (IOS Firewall, IDS) features. It is the most feature rich package and it includes all the features of IP Services and Enterprise Services.
- Deployment Guidelines: Switch Aggregation (Distribution and Core), Internet edge, WAN edge, Metro edge

Figure 9.



For detailed information about these packages in Cisco IOS Software Release 12.2S, please visit: <http://www.cisco.com/go/packaging/>

Export Controls

Export controls on strong encryption (greater than 56-bit DES strength) vary according to type, strength, territory, end-use, and end-user. Visit the Cisco Encryption Sales Support Tool to determine eligibility for Cisco strong encryption solutions.

Send an email to Export Compliance (export@cisco.com) for further clarification. Please include the word “crypto” or “encryption” in the subject line to ensure proper routing of your inquiry.

Support

Cisco IOS Software Release 12.2S family follows the standard Cisco IOS Software lifecycle policy, as outlined in Cisco IOS Software Product Lifecycle Dates & Milestones, Product Bulletin 2214: http://www.cisco.com/en/US/products/sw/iOSSwrel/ps5187/prod_bulletin0900aecd801eda8a.html

To learn more about the older feature sets and memory implications of the new feature sets for a specific platform, refer to Cisco Feature Navigator: <http://tools.cisco.com/ITDIT/CFN/jsp/index.jsp>

Download Information

Customers with a SMARTNet contract can download the new Cisco IOS Software packages from Cisco.com: <http://www.cisco.com/public/sw-center/sw-ios.shtml>

Note that SmartNet and other support contracts are transferable to any image suggested as a migration path.

References

- Cisco IOS Packaging: <http://www.cisco.com/go/packaging/>
- Cisco IOS Packaging questions: iospackaging@cisco.com



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