CISCO IOS SOFTWARE RELEASE 12.3T

Q. What type of customer will be interested in deploying Cisco IOS® Software Release 12.3T?

A. Cisco recommends Release 12.3T for Enterprise, Access, and Service Provider Aggregation customers who need to:

- Drive business productivity with increased security, improved voice quality and functionality to the branch office, and enhanced Quality of Service (QoS)
- Deploy or upgrade IPv6, NetFlow, and associated management features
- Deploy small remote offices and teleworkers who depend on secure Internet access and corporate network connectivity
- Implement new content delivery features, network voice enhancements, improved security, and valuable management and deployment tools

Q. Where can customers download Release 12.3T?

A. Visit the Software Center on Cisco.com to download any release product. To download Release 12.3T, please visit:

http://www.cisco.com/public/sw-center/sw-ios.shtml

This site also provides valuable Cisco IOS Software information about hardware/software compatibility, and ordering procedures. Please ensure that you are entitled to access and download the release through an active SMARTnet contract or purchased feature license.

Q. Are there any special memory requirements related to the deployment of Release 12.3T?

A. Prior to installing 12.3T, please consult the Cisco IOS Upgrade Planner for memory requirements, which may vary depending upon hardware produce and image feature set selections:

http://www.cisco.com/go/iosplanner

TYPES OF CISCO IOS SOFTWARE RELEASES

Q. What type of release is Release 12.3T?

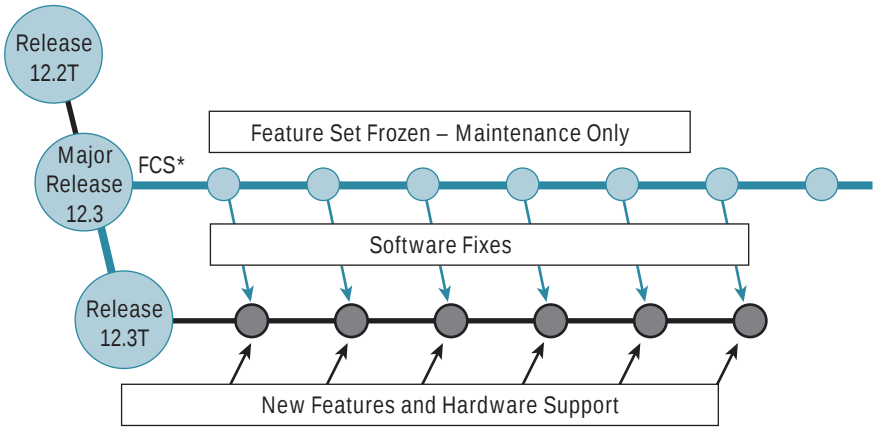
A. Release 12.3T is a new technology (T) release, which incorporates the functionality of Major Release 12.3, new features, hardware support, and application-specific releases.

Q. What is the relationship between a major release and a new technology release?

A. Major releases consolidate the new technology releases from the previous release family. For example, Major Release 12.3 is a consolidation of all features and hardware support in the Release 12.2T family. Major releases receive software fixes on regular basis, but no new features or hardware support.

New technology releases are derived from the major release that shares the same number. For example, Release 12.3T is derived from Major Release 12.3. Figure 1 shows that Release 12.3T is formed from Major Release 12.3, in addition to new features and hardware support.

Figure 1
Major Release and New Technology Release Relationship



*First Commercial Shipment (FCS) is the date at which the release is first available to customers on Cisco.com

Q. What is the relationship between Release 12.3T and Release 12.3(n)T?

A. The numbering scheme with a T suffix (ie: 12.3T) is applied to a family of new technology releases. The formal numbering scheme is 12.3(n)T, where 'n' represents the release number (ie: 12.3(4)T). New features, software improvements, and other enhancements are rolled out via the next new technology release at approximately sixteen week intervals, which is in line with market requirements and the strict Cisco quality schedule.

Q. How do Release 12.3(n)T releases differ from each other?

A. Each Cisco IOS Software new technology release is built upon the previous release. It adds new software features and hardware support, in addition to software fixes for previous major and new technology releases.

RELEASE NUMBERING

Q. Why is Release 12.3(2)T the first instance of 12.3T?

A. If a major release and a new technology release have the same maintenance number (the number in the parenthesis), this means that they are "fix for fix" equivalent, or they have incorporated the same software fixes.

Release 12.3(2)T is the first release of the Release 12.3T family; however, it contains software fixes that were not incorporated in Major Release 12.3(1), which became available to customers on 5/19/03. Since these releases are not software "fix for fix" equivalent, it would be misleading to number this first release as 12.3(1)T.

Q. How will this affect the numbering of subsequent instances of Release 12.3T and Major Release 12.3?

A. Major Release 12.3 and Release 12.3T will share the same release number only if they ship with software "fix for fix" compatibility. However, if the next maintenance of Release 12.3T contains additional fixes beyond those contained in the prior major release, the release numbers will differ.

CISCO IOS SOFTWARE RELEASE PORTFOLIO

Q. How is Release 12.3T positioned within the Cisco IOS Software release portfolio?

A. The Cisco IOS Software Release Portfolio currently includes:

- Major Release 12.3 (May 2003) is the latest example of how Cisco software delivers benefits through innovation and integration. It is a consolidated release designed for Enterprise, Access, and Cisco channel partners. It delivers innovative, optimized features that enable easy access to Voice, Security, and Quality of Service (QoS), and the leading-edge functionality and platform support introduced in Cisco IOS Software Release 12.2T.
- The Release 12.3T family (July 2003) delivers advanced technologies that drive business productivity by delivering Security, Voice, and Wireless innovations to Enterprise, Access, and Service Provider Aggregation customers. Cisco is issuing the Release 12.3T family as a series of individual releases, each of which creates significant revenue opportunities. Release 12.3(4)T, the second of these 12.3T releases, supports nearly one hundred new features across more than thirty Cisco platforms.
- Designed for the largest Enterprise and Service Provider networks that demand world-class network availability, scalability, security, and IP Services, Release 12.2S is a single release family that delivers a carefully selected combination of leading-edge technologies and high-end hardware support, all built upon the very latest advances in Cisco IOS Software Infrastructure. Release 12.2(18)S (August 2003), the second customer release of the Release 12.2S family, delivers infrastructure innovation and technology leadership with more than new features.

RELEASE 12.3(11)T

Q. What new hardware support is delivered in Release 12.3(11)T?

A. Release 12.3(11)T powers the Cisco 3800 Series Router, part of the new series of Cisco Integrated Services Routers. This represents the first hardware/software system to deliver secure, wire-speed data, voice, video, and security services to small and medium-sized businesses, Enterprise branch offices, and Service Providers who offer managed services. By speeding application deployment and reducing operating complexity, customers realize a lower total cost of ownership.

The Cisco 3800 Series Router delivers secure, concurrent services in the largest and most demanding Enterprise branch offices.

Q. What new features are highlighted in Release 12.3(11)T?

A. Release 12.3(11)T extends the benefits of Cisco IOS High Availability to the small and medium sized business and branch office by minimizing router downtime during planned or unplanned outages.

Cisco IOS Warm Upgrade significantly reduces planned downtime for Cisco IOS Software devices during upgrades to new Cisco IOS Software images. This improves the overall availability of hardware with single route or switch processors. Users implementing Cisco IOS Warm Upgrade will typically enjoy an eighty percent reduction in downtime during an image upgrade.

Cisco IOS IPsec Stateful Failover enables a backup router to take control of terminating IPsec traffic if the primary router or circuit is affected by an outage. It greatly improves failover time, as compared to a stateless IPsec/ Hot Standby Router Protocol (HSRP) outage.

RELEASE 12.3(8)T

Q. What new features and hardware support are highlighted in Release 12.3(8)T?

A. In order to maximize the value of the network, Cisco customers are continually integrating new technologies, hardware, and services into the existing infrastructure. In recognition of the challenges this can pose, Cisco IOS Software Release 12.3(8)T delivers network intelligence with integrated features that secure branch office communications, automate the deployment of new applications, and optimize the flow of outbound traffic.

- Dynamic Multipoint VPN (DMVPN) enables zero-touch deployment of IPsec networks. DMVPN Spoke-to-Spoke Functionality is an enhancement that enables the secure exchange of data between two branch offices without traversing the head office. This improves network performance by reducing latency and jitter, while optimizing head office bandwidth utilization.
- Cisco AutoQoS: AutoDiscovery "Trust" Option extends the power of Cisco AutoQoS for the Enterprise to those routers on which Differentiated Services Code Point (DSCP) values have already been assigned to traffic at the network edge. This option enables customers to automatically set the Quality of Service (QoS) policy on routers by allowing the network to "trust" internally established priority levels for various types of traffic.
- Cisco IOS Optimized Edge Routing (OER) delivers automatic routing performance optimization and allows customers to minimize bandwidth costs and engineering operating expenses. Cisco IOS OER leverages Cisco IOS Netflow and Cisco IOS Service Assurance Agent to choose the optimal outbound route based on cost minimization, load distribution policy, and overall network performance.
- Release 12.3(8)T3, an update to Release 12.3(8)T, introduces support for two of the new Cisco Integrated Services Routers: the Cisco 2800 and 1800 Series Routers. The Cisco 2800 Series Router supports wide deployment of concurrent services without compromising router performance. The Cisco 1800 Series Router provides secure data connectivity. It represents a fivefold performance increase, as compared to prior generations of the Cisco 1700 Series Router.

RELEASE 12.3(7)T

Q. What new features and hardware support are highlighted in Release 12.3(7)T?

A. Release 12.3(7)T, extends the robust suite of Cisco IOS Security capabilities with features that further reduce network vulnerability. Like all releases in the 12.3T family, it also supports innovations that span multiple technology areas. In addition to the features highlighted below, it includes advancements in IP Routing, IPv6, Multicast, and Quality of Service (QoS). Cisco customers can use Release 12.3(7)T to protect sensitive data and corporate resources from malicious attacks.

- The Cisco 1711 and 1712 Security Access Routers deliver an integrated security solution: high-speed IPsec Triple Data Encryption Standard (3DES) and Advanced Encryption Standard (AES) performance, stateful firewall with URL filtering, intrusion detection systems (IDS), and Cisco AutoSecure.
- Role-based Command Line Interface (CLI) Access enables administrators to secure configuration and monitoring options with enhanced management capabilities. By defining CLI access based on administrative roles, network/security router administrators can exercise more precise control over the use of Cisco IOS Software commands throughout their network.

- Transparent Cisco IOS Firewall, or Layer 2 Firewall, simplifies network provisioning with easy deployment via the network's existing IP addressing scheme. It offers distinct advantages over conventional Layer 3 Firewalls, which require resource-intensive subnet separations during deployment.
- Cisco IOS Firewall for IPv6 enables Cisco IOS Firewall to statefully inspect both IPv4 and IPv6 packets on a single interface. The secure co-existence of IPv4 and IPv6 enables an organization to better manage its IPv6 migration process.

RELEASE 12.3(4)T

Q. What new features and hardware support are highlighted in Release 12.3(4)T?

A. Release 12.3(4)T delivers nearly one hundred new features across more than thirty Cisco hardware products. Highlights include:

Secure Business Productivity

- **Secure Shell Version 2**
  - Secure Shell version 2 (SSHv2) provides powerful new authentication and encryption capabilities. More options are now available for tunneling additional types of traffic over the encrypted connection, including file-copy and email protocols. Network security is enhanced by a greater breadth of authentication functionality, including digital certificates and more two-factor authentication options.
- **Control Plane Policing**
  - Control Plane Policing protects the network against malicious Denial of Service (DoS) attacks, allowing businesses to maintain productivity without interruption. It also enables bandwidth management by allowing users to control the maximum rate of traffic transmitted or received on an interface. Users can partition their networks into multiple priority levels or classes of service by using the packet marking functionality.

Deploy Voice with Confidence

- **Cisco CallManager Express**
  - Cisco CallManager Express is the latest enhancement to the suite of Cisco IP Communication solutions. Cisco now offers worldwide small business customers and autonomous small enterprise branch offices, an entry-level IP Telephony solution integrated directly into Cisco IOS Software.

    When deployed in conjunction with Cisco Unity Express, Cisco CallManager Express provides a complete voice solution with voice mail and auto-attendant capabilities. The products enable the deployment of XML network-based applications via the recently expanded series of Series IP phones.
- **Cisco IOS Service Assurance Agent for Voice over IP**
  - Cisco IOS Service Assurance Agent (SAA) for Voice over IP (VoIP) verifies network preparedness and QoS effectiveness prior to VoIP deployment. It protects against network downtime during installation, and ensures the availability and performance of the voice network after installation.

Ensure Uninterrupted Workflow

- **Dynamic Security Associations and Key Distribution**

- Dynamic Security Associations and Key Distribution improves user mobility experience by eliminating the need for multiple authentications. By enabling a Mobile IP client to use the Windows login information to generate shared keys between it and the Home Agent, users can leverage existing authentication infrastructure and eliminate the need for additional configurations. For network administrators, this feature simplifies Mobile IP provisioning and increases mobility security through dynamic re-keying.

Powerful New Hardware Support

- **Cisco IDS Network Module**
  - The Cisco IDS Network Module for the Cisco 2600XM and 3700 Series Routers and the Cisco 3660 Router is part of the Cisco Intrusion Detection System (IDS) sensor portfolio and the Cisco Intrusion Protection System. With the increased complexity of security threats, achieving efficient network intrusion security solutions is critical to maintaining a high level of protection. Vigilant protection helps ensure business continuity and minimizes the effect of costly intrusions.

RELEASE 12.3(2)T

Q. What new features and hardware support are highlighted in Release 12.3(2)T?

A. Release 12.3(2)T delivers nearly seventy new features across more than thirty Cisco hardware products. Highlights include:

- **Cisco 830 Series Access Router—Manageable, Scalable, and Reliable Access**
  - The Cisco 830 Series Router combines for the first time the power of an integrated router and a security appliance—a capability unmatched in the industry. The Cisco 830 Series Router uses the valuable management and deployment tools within Release 12.3(2)T to deliver the industry's lowest total cost of ownership for small remote offices and teleworkers who depend on secure Internet and corporate network access.
- **Cisco Security Device Manager—Simplified Router Deployment**
  - Cisco Security Device Manager (SDM) is an intuitive, web-based device management tool embedded in Cisco access routers. Cisco SDM simplifies router and security configuration through intelligent agents, enabling customers to quickly and easily deploy, configure, and monitor the security features of a Cisco access router without requiring knowledge of the Cisco IOS Software command line interface.

CISCO IOS SOFTWARE RELEASE POLICY

Q. What is the Cisco IOS Software Release Policy?

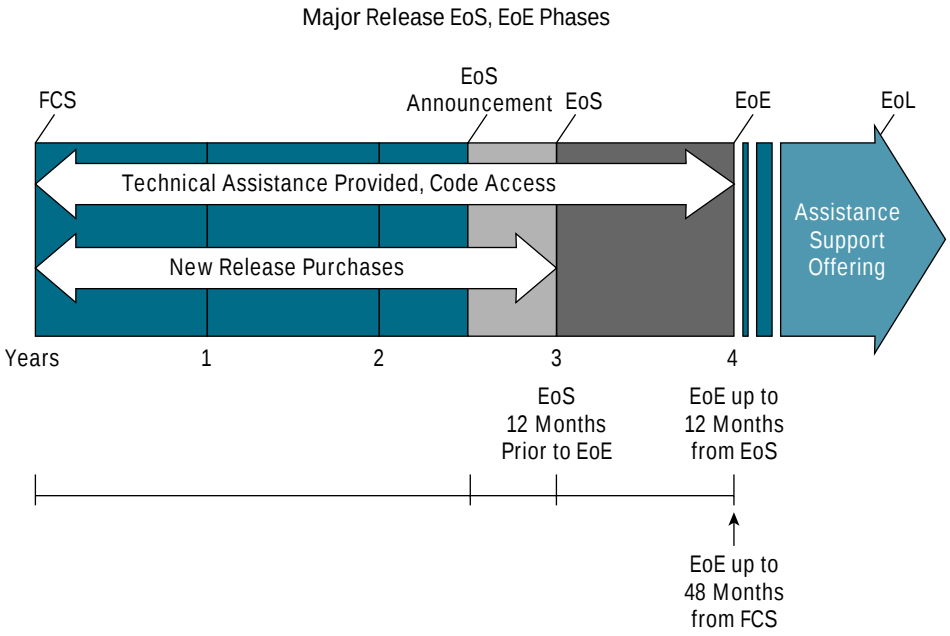
A. The Cisco IOS Software Release Policy is a structured plan that addresses the Cisco IOS Software Lifecycle from First Commercial Shipment (FCS) through End of Life (EoL). The Release Policy addresses lifecycle guidelines and migration planning.

Q. What are the milestones of the Cisco IOS Software Release Lifecycle?

- *First Commercial Shipment (FCS)*—Release is first available to customers on Cisco.com
- *General Deployment (GD)*—Major release that is appropriate for general, unconstrained use in customer networks
- *End of Sale (EoS)*—Customer can no longer order release from Cisco manufacturing, but maintenance releases are available to download from Software Center

- *End of Engineering (EoE)*—No new software fixes are provided by Cisco IOS Engineering and no new functionality is added. Release is still supported by Cisco TAC
- *Archive*—Images are removed from the Software Center and customers cannot download the release
- *End of Life (EoL)*—Release is no longer supported by Cisco TAC and Cisco TAC will only open cases on the release to recommend an upgrade

Figure 2
Cisco IOS Software Major Release EoS, EoE, EoL Timeline



For additional information about milestones, please visit Product Bulletin No. 2214, Cisco IOS Software Product Lifecycle Dates & Milestone:

http://www.cisco.com/en/US/products/sw/iosswrel/ps5187/prod_bulletin09186a00801a1349.html

CISCO INTEGRATED SERVICES ROUTERS

Q. Why are the Cisco Integrated Services Routers supported in two separate instances of Release 12.3T?

A. Cisco is committed to ongoing quality improvements. As part of this commitment, Cisco is introducing the Cisco Integrated Services Routers in instances of Release 12.3T that best leverage the strengths of each router, while ensuring maximum stability.

Q. Where can I find additional information and collateral about Cisco Integrated Services Routers?

A. http://www.cisco.com/go/isr/

PACKAGING

Q. What is Cisco IOS Packaging?

A. Cisco IOS Packaging is an initiative that simplifies the image selection process by consolidating the number of packages and using consistent package names across platforms.

The first phase of Cisco IOS Packaging is specifically designed for Cisco 1700, 2600XM, and 3700 Series Access Routers, and on the Cisco 2691 Router. It is fully implemented in Cisco IOS Software Releases 12.3 and 12.3T.

Q. What are the objectives of Cisco IOS Packaging?

- *Simplification:* simplified software selection process and reduction in feature set confusion
- *Consolidation:* streamlined the number of feature sets from as many as forty-four to eight
- *Consistency:* consistent naming across platforms and tools
- *Improve* the perceived value of Cisco IOS Software

Q. What are the eight new packages?

- *IP Base:* entry level package
- *IP Voice:* adds IP Telephony, VoIP, VoFR to IP Base
- *SP Services:* adds NetFlow, SSH, ATM, VoATM, MPLS to IP Voice
- *Advanced Security:* adds Cisco IOS FW, IDS, SSH, IPsec VPN, 3DES to IP Base
- *Enterprise Base:* adds multi-protocols and IBM support to IP Base
- *Enterprise Services:* adds full IBM support, Service Provider Services to Enterprise Base
- *Advanced IP Services:* adds IPv6, Advanced Security to SP Services
- *Advanced Enterprise Services:* full Cisco IOS Software

Q. What is the new naming convention and what do the names mean?

A. The new package names emphasize the inheritance characteristics of the new packaging framework. They also provide a high-level feature content description of the new packages, which further simplifies the image selection process.

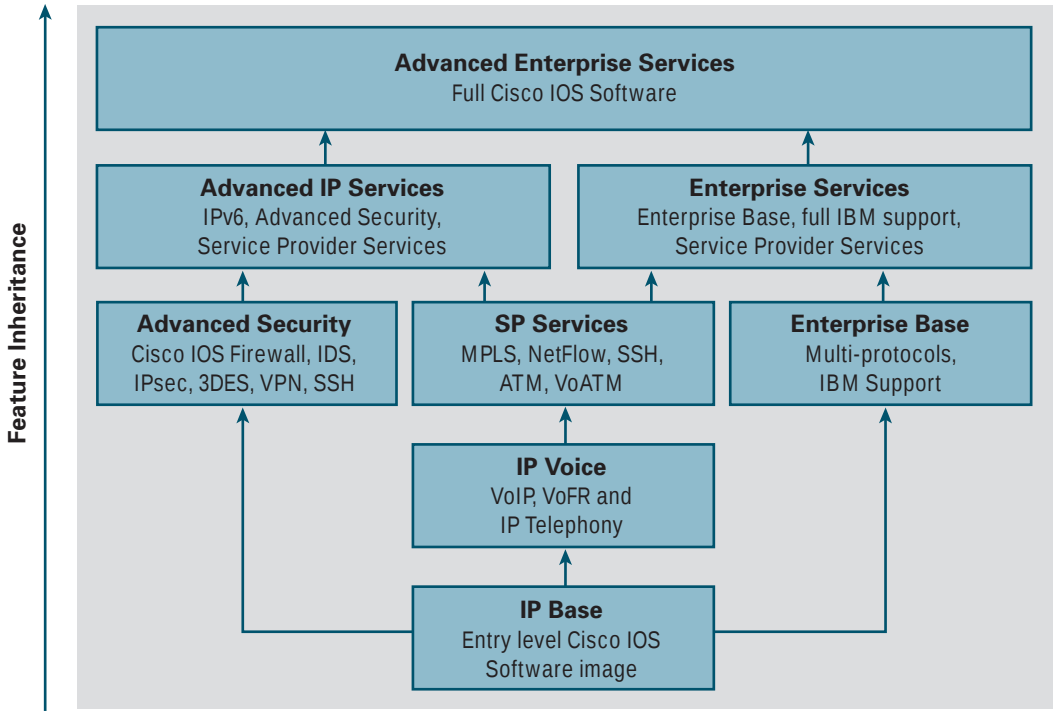
The following categories summarize the new package naming:

- *Base:* entry level package (i.e.: IP Base, Enterprise Base)
- *Services:* adds MPLS, NetFlow, IP Telephony Services, VoIP, VoFR, and ATM (i.e.: SP Services or Enterprise Services)
- *Advanced:* adds VPN, Cisco IOS Firewall, 3DES encryption, Cisco IOS IPsec and Intrusion Detection Systems (i.e.: Advanced Security and Advanced IP Services)
- *Enterprise:* adds multi-protocols: IBM, IPX, Appletalk (i.e.: Enterprise Base, Enterprise Services)

Q. What is the inheritance principle and how does it benefit customers?

A. The new packaging is fundamentally based on an inheritance model. Each comprehensive package inherits all the features and services available in the package below it (see Figure 3).

Figure 3
Feature Inheritance Pyramid



Q. How do I choose the best package for my network?

A. For help with package selection, please refer to the Product Bulletin No. 2160, Cisco IOS Packaging:

http://www.cisco.com/en/US/products/sw/iosswrel/ps5460/prod_bulletin09186a00801af451.html

Q. Where can I get additional information on packaging?

A. http://www.cisco.com/go/packaging/

Additional Information

Q. What are release notes?

A. Release notes are detailed descriptions of the Release 12.3T features and platform support available

Release 12.3T release notes are available at:

http://cisco.com/en/US/products/sw/iosswrel/ps5207/prod_technical_documentation.html

Q. Where can I find additional information and collateral about Release 12.3T?

A. http://www.cisco.com/go/release123t/

http://www.cisco.com/go/library/

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