



Release Notes for the Cisco 850 and Cisco 870 Series Routers for Cisco IOS Release 12.3(8)YI

August 8, 2007
Cisco IOS Release 12.3(8)YI3
OL-8342-02 Fourth Release

These release notes describe new features and significant software components for the Cisco 851, 857, 871, 876, 877, and 878 series routers that support Cisco IOS Release 12.3(8)T, up to and including Release 12.3(8)YI3. These release notes are updated as needed to describe new memory requirements, new features, new hardware support, software platform deferrals, microcode or modem code changes, related document changes, and any other important changes. Use these release notes with the [Cross-Platform Release Notes for Cisco IOS Release 12.3 T](#) for Cisco IOS Release 12.3 T located on [Cisco.com](#).

For a list of the software caveats that apply to Release 12.3(8)YI3, refer to the [Caveats](#) section below and to the online [Caveats for Cisco IOS Release 12.3 T](#) document. The caveats document is updated for every 12.3 T maintenance release and is located on [Cisco.com](#).

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System Requirements

This section describes the system requirements for Cisco IOS Release 12.3(8)YI3.

Memory Requirements

[Table 1](#) lists the memory requirements for Cisco IOS Release 12.3(8)YI3.

Table 1 Memory Requirements for the Cisco 850 and 870 Series Routers

Platform	Image Name	Flash Memory	DRAM Memory
Cisco 851	C850-advsecurityk9-mz	20 MB	64 MB
Cisco 857	C850-advsecurityk9-mz	20 MB	64 MB
Cisco 871	C870-advipservicesk9-mz	28 MB	128 MB
	C870-advsecurityk9-mz	24 MB	128 MB
Cisco 876	C870-advipservicesk9-mz	28 MB	128 MB
	C870-adventerprisek9-mz	28 MB	128 MB
	C870-advsecurityk9-mz	24 MB	128 MB
Cisco 877	C870-advipservicesk9-mz	28 MB	128 MB
	C870-advsecurityk9-mz	24 MB	128 MB
Cisco 878	C870-advipservicesk9-mz	28 MB	128 MB
	C870-advsecurityk9-mz	24 MB	128 MB

Hardware Supported

Cisco IOS Release 12.3(8)YI3 supports the following routers:

- Cisco 851 router
- Cisco 857 router
- Cisco 871 router
- Cisco 876 router
- Cisco 877 router
- Cisco 878 router

Determining the Software Version

To determine the version of Cisco IOS software running on your Cisco router, log in to the router and enter the **show version** command:

```
Router> show version
Cisco IOS Software, C870 Software (C870-ADVENTERPRISEK9-M), Version 12.3(8)YI3, RELEASE
SOFTWARE (fc1)
Synched to technology version 12.3(10.3)T2
```

Upgrading to a New Software Release

For general information about upgrading to a new software release, see [Cisco IOS Software Releases 12.3 T Installation and Upgrade Procedures](#) located on Cisco.com.

Feature Set Tables

The Cisco IOS software is packaged in feature sets consisting of software images, depending on the platform. Each feature set contains a specific set of Cisco IOS features. Release 12.3(8)YI3 supports the same feature sets as Release 12.3(8)YI2.



Note PoE is supported on Cisco 870 Series routers only.

[Table 2](#) and [Table 3](#) list the features and feature sets supported in Cisco IOS Release 12.3(8)YI3.



Note In Table 3, YES* indicates c87x-advipservicesk9-mz images and YES** indicates C87x-adventerprisek9-mz images.

Table 2 Feature List for Feature Set for Cisco 850 Series Routers

Feature	In	851	857
Hardware Features			
WAN Interfaces			
ADSL over POTS	12.3(8)YI2	No	YES
One Fast Ethernet	12.3(8)YI2	YES	No
Software Features			
DSL features			
EOC message sets support - G.992.1 Annex A/B as limited by DSLAM's	12.3(8)YI2	No	YES
G.DMT and ANSI T1.413	12.3(8)YI2	No	YES
DSLAM interoperability			
Alcatel ASAM 7300 series	12.3(8)YI2	No	YES
Cisco 62xx with NI-2 and Flexi line cards 4 and 8 port ADSL over POTS	12.3(8)YI2	No	YES
Lucent Stinger with Globespan line cards for ADSL over POTS	12.3(8)YI2	No	YES
ECI HiFocus 120 and 240 DSLAM v4.0 or newer with ADI 918 and ADI930 chipsets	12.3(8)YI2	No	YES
ADSL-2 & ADSL2+ Ready	12.3(8)YI2	No	YES
LAN Interfaces			
Switch PHY to allow auto MDI- MDX	12.3(8)YI2	YES	YES
Optional wireless access point	12.3(8)YI2	YES	YES

Table 2 Feature List for Feature Set for Cisco 850 Series Routers (continued)

Feature	In	851	857
Dial Backup and Out of Band management			
Aux function over console port	12.3(8)YI2	YES	YES
ATM features			
Per VC queuing	12.3(8)YI2	No	YES
Per VC traffic shaping	12.3(8)YI2	No	YES
ATM VBRnrt, UBR, CBR, UBR +	12.3(8)YI2	No	YES
ATM Fault Management OAM (F5) segment CC and segment and end-2-end loopback and ILMI support	12.3(8)YI2	No	YES
10 VC's, PVC	12.3(8)YI2	No	YES
Layer 3 and encapsulation support			
IP routing, IRB	12.3(8)YI2	YES	YES
NAT, PAT with H.323 support	12.3(8)YI2	YES	YES
NAT IPsec Pass through single or multi user	12.3(8)YI2	YES	YES
RFC 2684 routed and bridged	12.3(8)YI2	No	YES
PPPoE	12.3(8)YI2	No	No
PPPoA	12.3(8)YI2	No	YES
TCP MSS intercept and adjustment	12.3(8)YI2	YES	YES
TCP Fragmentation using TCP MSS adjust down to 500 bytes	12.3(8)YI2	YES	YES
IPCP negotiated address, netmask, DNS and WINS	12.3(8)YI2	YES	YES
IPCP subnet delivery for PPP sessions (connecting to DHCP and LAN config)	12.3(8)YI2	YES	YES
RIP v1 and v2	12.3(8)YI2	YES	YES
DPD - Dead Peer Detection	12.3(8)YI2	YES	YES
DHCP client, relay and server	12.3(8)YI2	YES	YES
Policy based routing	12.3(8)YI2	YES	YES
GRE and MGRE	12.3(8)YI2	YES	YES
Access resilience and redundancy			
Out-of-band mgmt. via aux port (console-aux)	12.3(8)YI2	YES	YES
Interface support			
Numbered and unnumbered interfaces	12.3(8)YI2	YES	YES
Static routes	12.3(8)YI2	YES	YES
Management functions			
Remote upgrade ability of IOS	12.3(8)YI2	YES	YES
SA Agent support	12.3(8)YI2	YES	YES

Table 2 Feature List for Feature Set for Cisco 850 Series Routers (continued)

Feature	In	851	857
Named access lists	12.3(8)YI2	YES	YES
HTTP 1.1 server	12.3(8)YI2	YES	YES
DNS proxy and DNS spoofing	12.3(8)YI2	YES	YES
Dyn-DNS	12.3(8)YI2	YES	YES
Telnet client and server	12.3(8)YI2	YES	YES
FTP client	12.3(8)YI2	YES	YES
Ability to manage IOS and SDM upgrade separately	12.3(8)YI2	YES	YES
LED	12.3(8)YI2	YES	YES
SMTP client for alerts	12.3(8)YI2	YES	YES
Reset button to restore factory settings	12.3(8)YI2	YES	YES
Management information bases (MIBs)			
IEEE802.11	12.3(8)YI2	YES	YES
ATM MIB	12.3(8)YI2	No	YES
DSL/ Line MIB	12.3(8)YI2	No	YES
ADSL DMT Line MIB	12.3(8)YI2	No	YES
Chassis MIB	12.3(8)YI2	YES	YES
SNMP MIB 2	12.3(8)YI2	YES	YES
IOS protocols MIB	12.3(8)YI2	YES	YES
Interface MIBs	12.3(8)YI2	YES	YES
Entity MIB, Syslog MIB, Queue MIB, Mempool MIB, Image MIB	12.3(8)YI2	YES	YES
CB-QoS MIB	12.3(8)YI2	YES	YES
DSCP MIB	12.3(8)YI2	YES	YES
VPN MIB	12.3(8)YI2	YES	YES
VLAN MIB	12.3(8)YI2	YES	YES
Installation / Configuration			
SDM support (also mentioned above)	12.3(8)YI2	YES	YES
Config Express	12.3(8)YI2	YES	YES
CiscoWorks and CiscoView, Cisco Resource Manager Essentials (VMS Router MC)	12.3(8)YI2	YES	YES
ISC4.0 (IE2100 +VPNSC) support	12.3(8)YI2	YES	YES
Security and Connectivity and NMS			
AAA With Radius	12.3(8)YI2	YES	YES
AAA With Tacacs+	12.3(8)YI2	YES	YES
Cisco Standard Site to Site VPN	12.3(8)YI2	YES	YES
SSH v2 for secure remote management	12.3(8)YI2	YES	YES

Table 2 Feature List for Feature Set for Cisco 850 Series Routers (continued)

Feature	In	851	857
Firewall Phase I			
Stateful Inspection Firewall (CBAC)	12.3(8)YI2	YES	YES
JAVA Blocking	12.3(8)YI2	YES	YES
Denial of Service Protection	12.3(8)YI2	YES	YES
Real Time Alerts And Audit Train	12.3(8)YI2	YES	YES
Firewall Phase II			
IPSec NAT Transparency (NAT Traversal)	12.3(8)YI2	YES	YES
SIP support through Firewall	12.3(8)YI2	YES	YES
LDAP (for wireless security (LEAP) with Radius server	12.3(8)YI2	YES	YES
Ipv6 passthrough for FW	12.3(8)YI2	YES	YES
Wireless Hardware Features			
802.11g support	12.3(8)YI2	YES	YES
Wireless Software Features			
General			
Behave as infrastructure mode AP	12.3(8)YI2	YES	YES
Software configurable transmit power	12.3(8)YI2	YES	YES
Authentication / Security / Accounting			
802.1x based authentication	12.3(8)YI2	YES	YES
LEAP (Cisco EAP wireless)	12.3(8)YI2	YES	YES
EAP-TLS (to support PEAP)	12.3(8)YI2	YES	YES
Static (40-bit and 128-bit) and dynamic WEP	12.3(8)YI2	YES	YES
TKIP/SSN support	12.3(8)YI2	YES	YES
MAC Authentication	12.3(8)YI2	YES	YES
VLAN support for the WLAN interface	12.3(8)YI2	YES	YES
Local Radius Server	12.3(8)YI2	YES	YES

**Note**

In Table 3, YES* indicates c87x-advipservicesk9-mz images and YES** indicates C87x-adventerprisek9-mz images.

Table 3 Feature List for Feature Set for Cisco 870 Series Routers

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
Hardware Features					
WAN Interfaces					
ADSL over POTS	12.3(8)YI2	No	No	YES	No
ADSL Over ISDN	12.3(8)YI2	No	YES	No	No
One Fast Ethernet	12.3(8)YI2	YES	No	No	No
2 and 4 wire G.SHDSL	12.3(8)YI2	No	No	No	YES
ISDN S/T (S0) port for out of band management as a factory installable option	12.3(8)YI2	No	YES	No	YES
Software Features					
DSL features					
EOC message sets support - G.992.1 Annex A/B as limited by DSLAM's	12.3(8)YI2	No	YES	YES	No
EOC message sets defined in G.991.2 Annex A & Annex B as limited by DSLAM's	12.3(8)YI2	No	No	No	YES
Dying gasp	12.3(8)YI2	No	No	No	YES
G.DMT and ANSI T1.413	12.3(8)YI2	No	YES	YES	No
DSLAM interoperability					
Alcatel ASAM 7300 series for ADSL	12.3(8)YI2	No	YES	YES	No
Cisco 62xx with NI-2 and Flexi line cards 4 and 8 port ADSL over POTS	12.3(8)YI2	No	No	YES	No
Cisco 62xx with NI-2 and Flexi line cards 8 port ADSL over ISDN	12.3(8)YI2	No	YES	No	No
Interop with Nokia DSLAM models	12.3(8)YI2	No	YES	No	No
Lucent Stinger with Globespan line cards for ADSL over POTS	12.3(8)YI2	No	No	YES	No
Lucent Stinger with Globespan line cards for ADSL over ISDN	12.3(8)YI2	No	YES	No	No
ECI HiFocus 120 and 240 DSLAM v4.0 or newer with ADI 918 and ADI930 chipsets	12.3(8)YI2	No	No	YES	No
ECI DSLAM with Infineon chipset for G.SHDSL	12.3(8)YI2	No	No	No	YES
Alcatel 7300 DSLAM for G.SHDSL	12.3(8)YI2	No	No	No	YES
Lucent Stinger for G.SHDSL	12.3(8)YI2	No	No	No	YES
4-wire back-to-back mode using G.991.2 4 wire model;	12.3(8)YI2	No	No	No	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
ADSL-2 & ADSL2+ Ready	12.3(8)YI2	No	YES	YES	No
Siemens DSLAM Xpresslink v.20 and v.21 TI Chipset for ADSL over ISDN - U-R2	12.3(8)YI2	No	YES	No	No
ECI HiFocus 120 and 240 DSLAM v4.0 or newer with ADI930 chipsets	12.3(8)YI2	No	YES	No	No
LAN Interfaces					
10/100 Switch 4 port managed with VLAN 802.1Q	12.3(8)YI2	YES*	YES*	YES*	YES*
802.1Q VLAN support on all Switch Ports and the fast Ethernet port.	12.3(8)YI2	YES	YES	YES	YES
Multiple VLANs	12.3(8)YI2	YES*	YES*	YES*	YES*
Switch queuing mechanism to enable QoS, fair queuing with priority queues.	12.3(8)YI2	YES	YES	YES	YES
Switch PHY to allow auto MDI-MDX	12.3(8)YI2	YES	YES	YES	YES
Optional wireless access point	12.3(8)YI2	YES	YES	YES	YES
Dial Backup and Out of Band management					
Aux function over console port	12.3(8)YI2	YES	YES	YES	YES
ISDN BRI S/T (S0) port - out-of-band management	12.3(8)YI2	No	YES	No	YES
ISDN BRI S/T (S0) port - dial backup.	12.3(8)YI2	No	YES**	No	No
USB 2.0					
2 USB 2.0 ports	12.3(8)YI2	YES	No	No	No
EToken support via USB	12.3(8)YI2	YES	No	No	No
ATM features					
Per VC queuing	12.3(8)YI2	No	YES	YES	YES
Per VC traffic shaping	12.3(8)YI2	No	YES	YES	YES
ATM VBRnrt, UBR, CBR, UBR +	12.3(8)YI2	No	YES	YES	YES
ATM Fault Management OAM (F5) segment CC and segment and end-2-end loopback and ILMI support	12.3(8)YI2	No	YES	YES	YES
10 VC's, PVC	12.3(8)YI2	No	YES	YES	YES
Support for VBR -rt	12.3(8)YI2	No	YES	YES	YES
Fine granularity for PCR and SCR shaping for all traffic classes.	12.3(8)YI2	No	YES	YES	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
Layer 3 and encapsulation support					
IP routing, IRB	12.3(8)YI2	YES	YES	YES	YES
EIGRP	12.3(8)YI2	YES*	YES*	YES*	YES*
NHRP (DMVPN)	12.3(8)YI2	YES*	YES*	YES*	YES*
NAT, PAT with H.323 support	12.3(8)YI2	YES	YES	YES	YES
NAT IPsec Pass through single or multi user	12.3(8)YI2	YES	YES	YES	YES
RFC 2684 routed and bridged	12.3(8)YI2	No	YES	YES	YES
PPPoE	12.3(8)YI2	YES	YES	YES	YES
PPPoA	12.3(8)YI2	No	YES	YES	YES
TCP MSS intercept and adjustment	12.3(8)YI2	YES	YES	YES	YES
TCP Fragmentation using TCP MSS adjust down to 500 bytes	12.3(8)YI2	YES	YES	YES	YES
IPCP negotiated address, netmask, DNS and WINS	12.3(8)YI2	YES	YES	YES	YES
IPCP subnet delivery for PPP sessions (connecting to DHCP and LAN config)	12.3(8)YI2	YES	YES	YES	YES
Easy VPN client and server	12.3(8)YI2	YES	YES	YES	YES
RIP v1 and v2	12.3(8)YI2	YES	YES	YES	YES
OSPF	12.3(8)YI2	YES*	YES	YES	YES
DPD - Dead Peer Detection	12.3(8)YI2	YES	YES	YES	YES
BGP - limited support	12.3(8)YI2	YES*	YES*	YES*	YES*
DHCP client, relay and server	12.3(8)YI2	YES	YES	YES	YES
Policy based routing	12.3(8)YI2	YES	YES	YES	YES
GRE and MGRE	12.3(8)YI2	YES	YES	YES	YES
L2TP support (router as LAC)	12.3(8)YI2	YES	YES	YES	YES
AutoQoS	12.3(8)YI2	No	YES*	YES*	YES*
LFI for voice data over low bandwidth links	12.3(8)YI2	YES*	YES*	YES*	YES*
LLQ for voice queuing and supporting other real-time traffic	12.3(8)YI2	YES	YES	YES	YES
LLQ pre Classification	12.3(8)YI2	YES*	YES*	YES*	YES*
WRED	12.3(8)YI2	YES*	YES*	YES*	YES*
CBTS	12.3(8)YI2	YES	YES	YES	YES
Class-based policing with CLP tagging	12.3(8)YI2	No	YES	YES	YES
Hierarchical QoS (Nested policy maps)	12.3(8)YI2	YES	YES	YES	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
NBAR	12.3(8)YI2	YES*	YES*	YES*	YES*
RSVP	12.3(8)YI2	YES*	YES*	YES*	YES*
CRTP	12.3(8)YI2	YES*	YES*	YES*	YES*
DiffServ	12.3(8)YI2	YES*	YES*	YES*	YES*
Access resilience and redundancy					
Dial backup over aux port (console-aux)	12.3(8)YI2	YES	YES	YES	YES
Out-of-band mgmt. via aux port (console-aux)	12.3(8)YI2	YES	YES	YES	YES
X.25 Over ISDN support for the ISDN line	12.3(8)YI2	No	YES	No	No
IP Traffic export	12.3(8)YI2	YES	YES	YES	YES
Remote management - dial-in over ISDN BRI	12.3(8)YI2	No	YES	No	YES
HSRP	12.3(8)YI2	YES	YES	YES	YES
MHSRP (Multi-group HSRP)	12.3(8)YI2	YES	YES	YES	YES
VRRP	12.3(8)YI2	YES	YES	YES	YES
Interface support					
Numbered and unnumbered interfaces	12.3(8)YI2	YES	YES	YES	YES
Static routes	12.3(8)YI2	YES	YES	YES	YES
Management functions					
Remote upgrade ability of IOS	12.3(8)YI2	YES	YES	YES	YES
SA Agent support	12.3(8)YI2	YES	YES	YES	YES
Named access lists	12.3(8)YI2	YES	YES	YES	YES
HTTP 1.1 server	12.3(8)YI2	YES	YES	YES	YES
DNS proxy and DNS spoofing	12.3(8)YI2	YES	YES	YES	YES
Dyn-DNS	12.3(8)YI2	YES	YES	YES	YES
Telnet client and server	12.3(8)YI2	YES	YES	YES	YES
FTP client	12.3(8)YI2	YES	YES	YES	YES
Ability to manage IOS and SDM upgrade separately	12.3(8)YI2	YES	YES	YES	YES
LED	12.3(8)YI2	YES	YES	YES	YES
SMTP client for alerts	12.3(8)YI2	YES	YES	YES	YES
Reset button to restore factory settings	12.3(8)YI2	YES	YES	YES	YES
Management information bases (MIBs)					
IEEE802.11	12.3(8)YI2	YES	YES	YES	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
ATM MIB	12.3(8)YI2	No	YES	YES	YES
DSL/ Line MIB	12.3(8)YI2	No	YES	YES	YES
ADSL DMT Line MIB	12.3(8)YI2	No	YES	YES	No
Chassis MIB	12.3(8)YI2	YES	YES	YES	YES
SNMP MIB 2	12.3(8)YI2	YES	YES	YES	YES
IOS protocols MIB	12.3(8)YI2	YES	YES	YES	YES
Interface MIBs	12.3(8)YI2	YES	YES	YES	YES
Entity MIB, Syslog MIB, Queue MIB, Mempool MIB, Image MIB	12.3(8)YI2	YES	YES	YES	YES
CB-QoS MIB	12.3(8)YI2	YES	YES	YES	YES
DSCP MIB	12.3(8)YI2	YES	YES	YES	YES
VPN MIB	12.3(8)YI2	YES	YES	YES	YES
VLAN MIB	12.3(8)YI2	YES	YES	YES	YES
Installation / Configuration					
SDM support (also mentioned above)	12.3(8)YI2	YES	YES	YES	YES
Config Express	12.3(8)YI2	YES	YES	YES	YES
CiscoWorks and CiscoView, Cisco Resource Manager Essentials (VMS Router MC)	12.3(8)YI2	YES	YES	YES	YES
ISC4.0 (IE2100 +VPNSC) support	12.3(8)YI2	YES	YES	YES	YES
Security and Connectivity and NMS					
Full syslog support	12.3(8)YI2	YES*	YES*	YES*	YES*
Lock and Key	12.3(8)YI2	YES*	YES*	YES*	YES*
AAA With Radius	12.3(8)YI2	YES	YES	YES	YES
AAA With Tacacs+	12.3(8)YI2	YES	YES	YES	YES
Easy VPN client and server phase 1 and 2	12.3(8)YI2	YES	YES	YES	YES
Cisco Standard Site to Site VPN	12.3(8)YI2	YES	YES	YES	YES
SSH v2 for secure remote management	12.3(8)YI2	YES	YES	YES	YES
WCCP	12.3(8)YI2	YES*	YES*	YES*	YES*
GRE Keep Alive (fast switching)	12.3(8)YI2	YES	YES	YES	YES
CEF	12.3(8)YI2	YES	YES	YES	YES
uRPF	12.3(8)YI2	YES	YES	YES	YES
Firewall Phase I					
Stateful Inspection Firewall (CBAC)	12.3(8)YI2	YES	YES	YES	YES
JAVA Blocking	12.3(8)YI2	YES	YES	YES	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
Denial of Service Protection	12.3(8)YI2	YES	YES	YES	YES
Real Time Alerts And Audit Train	12.3(8)YI2	YES	YES	YES	YES
Firewall Phase II					
Dynamic Port Mapping	12.3(8)YI2	YES	YES	YES	YES
Configurable Audit and Alerts	12.3(8)YI2	YES	YES	YES	YES
SMTP Attack Detection and Prevention	12.3(8)YI2	YES	YES	YES	YES
MS Netshow Support	12.3(8)YI2	YES	YES	YES	YES
Dynamic per user authentication and Authorization	12.3(8)YI2	YES	YES	YES	YES
URL filtering-Websense	12.3(8)YI2	YES*	YES*	YES*	YES*
URL filtering-N2H2	12.3(8)YI2	YES*	YES*	YES*	YES*
IPSec NAT Transparency (NAT Traversal)	12.3(8)YI2	YES	YES	YES	YES
Performance Pre-fragmentation before encryption (look-ahead-fragmentation)	12.3(8)YI2	YES	YES	YES	YES
HTTPS Authentication Proxy	12.3(8)YI2	YES	YES	YES	YES
FTP Authentication Proxy	12.3(8)YI2	YES	YES	YES	YES
Telnet Authentication Proxy	12.3(8)YI2	YES	YES	YES	YES
SIP support through Firewall	12.3(8)YI2	YES	YES	YES	YES
SDM (Security device manager) support	12.3(8)YI2	YES	YES	YES	YES
Dynamic IDS	12.3(8)YI2	YES*	YES*	YES*	YES*
Support software & hardware Token Authentication	12.3(8)YI2	YES	No	No	No
IOS Firewall support for Skinny clients	12.3(8)YI2	YES	YES	YES	YES
DDoS attack	12.3(8)YI2	YES	YES	YES	YES
User level authentication for unity client mode (3002 parity features)	12.3(8)YI2	YES	YES	YES	YES
Anti-Virus (Avert)	12.3(8)YI2	YES*	YES*	YES*	YES*
Email SMTP alert directly from the router	12.3(8)YI2	YES	YES	YES	YES
Group Level BW Management	12.3(8)YI2	YES	YES	YES	YES
IPsec Virtual Tunnel Interface	12.3(8)YI2	YES	YES	YES	YES
LDAP (for wireless security (LEAP) with Radius server	12.3(8)YI2	YES	YES	YES	YES
802.1x support	12.3(8)YI2	YES	YES	YES	YES

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
Anomaly Anti-Virus Detection and Prevention -	12.3(8)YI2	YES*	YES*	YES*	YES*
AES support Hardware	12.3(8)YI2	YES*	YES*	YES*	YES*
AES support Software	12.3(8)YI2	YES	YES	YES	YES
Dial Back-Up through DDR	12.3(8)YI2	YES	YES	YES	YES
IOS FW/IDS IP Fragmentation support	12.3(8)YI2	YES	YES	YES	YES
H323 v2 and v4 through FW	12.3(8)YI2	YES	YES	YES	YES
Bridging Firewall	12.3(8)YI2	YES	YES	YES	YES
Etoken (Removable Credentials)	12.3(8)YI2	YES	No	No	No
Ipv6 passthrough for FW	12.3(8)YI2	YES	YES	YES	YES
Wireless Hardware Features					
802.11g support	12.3(8)YI2	YES	YES	YES	YES
Wireless Software Features					
General					
Behave as infrastructure mode AP	12.3(8)YI2	YES	YES	YES	YES
WIFI Certification	12.3(8)YI2	YES	YES	YES	YES
Software configurable transmit power	12.3(8)YI2	YES	YES	YES	YES
Authentication / Security / Accounting					
802.1x based authentication	12.3(8)YI2	YES	YES	YES	YES
LEAP (Cisco EAP wireless)	12.3(8)YI2	YES	YES	YES	YES
EAP-TLS (to support PEAP)	12.3(8)YI2	YES	YES	YES	YES
Static (40-bit and 128-bit) and dynamic WEP	12.3(8)YI2	YES	YES	YES	YES
TKIP/SSN support	12.3(8)YI2	YES	YES	YES	YES
MAC Authentication	12.3(8)YI2	YES	YES	YES	YES
PEAP with one-time password (OTP)	12.3(8)YI2	YES	YES	YES	YES
VLAN support for the WLAN interface	12.3(8)YI2	YES	YES	YES	YES
Local Radius Server	12.3(8)YI2	YES	YES	YES	YES
IP Multicast					
PIM Sparse mode	12.3(8)YI2	YES*	YES*	YES*	YES*
PIM Sparse Dense mode	12.3(8)YI2	YES*	YES*	YES*	YES*
AUTO-RP	12.3(8)YI2	YES*	YES*	YES*	YES*
Boot Strap Router	12.3(8)YI2	YES*	YES*	YES*	YES*

Table 3 Feature List for Feature Set for Cisco 870 Series Routers (continued)

Feature	In	Cisco 871	Cisco 876	Cisco 877	Cisco 878
IP v6					
IP v6 system requirements					
Transparency	12.3(8)YI2	YES*	YES*	YES*	YES*
Privacy	12.3(8)YI2	YES*	YES*	YES*	YES*
Name Resolution	12.3(8)YI2	YES*	YES*	YES*	YES*
Statistics	12.3(8)YI2	YES*	YES*	YES*	YES*
Translation	12.3(8)YI2	YES*	YES*	YES*	YES*
IP v6 basic protocol requirements					
Basic IPv6 protocol	12.3(8)YI2	YES*	YES*	YES*	YES*
IPv6 addressing architecture	12.3(8)YI2	YES*	YES*	YES*	YES*
Anycast addressing	12.3(8)YI2	YES*	YES*	YES*	YES*
Multiple prefixes	12.3(8)YI2	YES	YES	YES	YES
Neighbor Discovery	12.3(8)YI2	YES*	YES*	YES*	YES*
Stateless Auto-configuration	12.3(8)YI2	YES*	YES*	YES*	YES*
Duplicate Address Detection	12.3(8)YI2	YES*	YES*	YES*	YES*
ICMPv6	12.3(8)YI2	YES*	YES*	YES*	YES*
ICMPv6 rate	12.3(8)YI2	YES*	YES*	YES*	YES*
Path MTU discovery	12.3(8)YI2	YES*	YES*	YES*	YES*
Multiple IID values	12.3(8)YI2	YES*	YES*	YES*	YES*
ICMPv6 redirect	12.3(8)YI2	YES*	YES*	YES*	YES*
ICMPv6 PMTU	12.3(8)YI2	YES*	YES*	YES*	YES*

New and Changed Information

Cisco IOS Release 12.3(8)YI3 supports the features listed in this section.

New Hardware Features in Cisco IOS Release 12.3(8)YI3

The Cisco IOS Release 12.3(8)YI3 supports the same hardware features as Cisco IOS Release 12.3(8)YI2.

New Hardware Features in Cisco IOS Release 12.3(8)YI2

The Cisco 850 Series integrated services routers are fixed-configuration routers that support broadband cable and ADSL over analog telephone line connections in small offices. The Cisco 870 Series of integrated services routers are fixed-configuration routers that support multiple types of DSL technologies, broadband cable, and Metropolitan (Metro) Ethernet connections in small offices.

Cisco IOS Software Release 12.3(8) YI2 supports the following hardware features on the Cisco 850 and 870 series routers:

- High performance for broadband access in small offices
- Four-port 10/100 managed switch with VLAN support
- Secure WLAN 802.11b/g option with use of single, fixed antenna (850) or multiple antennas (870)
- Smart card token (E-Token) for device security using USB 2.0
- Power over Ethernet / Inline Power

New Software Features in Cisco IOS Release 12.3(8)YI3

The Cisco IOS Release 12.3(8)YI3 supports the same software features that are supported in the Cisco IOS Release 12.3(8)YI2.

New Software Features in Cisco IOS Release 12.3(8)YI2

Cisco IOS Software Release 12.3(8) YI2 supports wireless features associated with the integrated 802.11b/g access point on the Cisco 850 and 870 series routers.

Cisco IOS Software Release 12.3(8) YI2 also supports the following advanced security features on the Cisco 850 and 870 series routers:

- Stateful inspection firewall
- IP Security (IPSec) VPNs (Triple Data Encryption Standard [3DES] or
- Advanced Encryption Standard [AES])
- Intrusion prevention system (IPS)
- Antivirus support through Network Admission Control (NAC) and enforcement of secure access policies

Caveats

Caveats describe unexpected behavior or defects in the Cisco IOS software releases. Severity 1 caveats are the most serious caveats, severity 2 caveats are less serious, and severity 3 caveats are the least serious of these three severity levels. Caveats of all three levels are listed below.

Resolved Caveats - Cisco IOS Release 12.3(8)YI3

- CSCsb24007

Multiple voice-related vulnerabilities are identified in Cisco IOS software, one of which is also shared with Cisco Unified Communications Manager. These vulnerabilities pertain to the following protocols or features:

- Session Initiation Protocol (SIP)
- Media Gateway Control Protocol (MGCP)
- Signaling protocols H.323, H.254
- Real-time Transport Protocol (RTP)
- Facsimile reception

Cisco has made free software available to address these vulnerabilities for affected customers. Fixed Cisco IOS software listed in the Software Versions and Fixes section contains fixes for all vulnerabilities mentioned in this advisory.

There are no workarounds available to mitigate the effects of any of the vulnerabilities apart from disabling the protocol or feature itself.

This advisory is posted at

<http://www.cisco.com/warp/public/707/cisco-sa-20070808-IOS-voice.shtml>

- CSCeh60551

Symptom: Certain malformed client certificates may cause an AP running 12.3.2.JA2 or 12.3.4.JA to crash when EAP-TLS is used.

Workaround: Issue a new client certificate.

- CSCei61732

Cisco IOS may permit arbitrary code execution after exploitation of a heap-based buffer overflow vulnerability. Cisco has included additional integrity checks in its software, as further described below, that are intended to reduce the likelihood of arbitrary code execution.

Cisco has made free software available that includes the additional integrity checks for affected customers.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20051102-timers.shtml>.

- CSCsa54608

The Cisco IOS Firewall Authentication Proxy for FTP and/or Telnet Sessions feature in specific versions of Cisco IOS software is vulnerable to a remotely-exploitable buffer overflow condition.

Devices that do not support, or are not configured for Firewall Authentication Proxy for FTP and/or Telnet Services are not affected.

Devices configured with only Authentication Proxy for HTTP and/or HTTPS are not affected.

Only devices running certain versions of Cisco IOS are affected.

Cisco has made free software available to address this vulnerability. There are workarounds available to mitigate the effects of the vulnerability.

This advisory will be posted at

http://www.cisco.com/warp/public/707/cisco-sa-20050907-auth_proxy.shtml

- CSCei19059
tracebacks for dot11 card while querying the ENTITY-MIB.
- CSCei22782
Symptoms: Power value advertised is in mW instead of dBm.
Conditions: Beacon and probe packet that publish power values.
Workaround: Use legacy, instead of 802.11d.
- CSCeg51272
Symptoms: Router reloads while executing the show ip nbar protocol-discovery command.
Conditions: NBAR protocol-discovery is enabled on the Virtual-Template interface.
Workaround: There is no workaround.

- CSCeh23780
Symptoms: Router fails to boot.
Conditions: This symptom occurs when you change the Cisco IOS image from an image that does not include the fix for caveat CSCsa50959, to an image that does include the fix for caveat CSCsa50959.
Workaround: There is no workaround.
- CSCeh92096
Bridge MIB not Populated.
- CSCei16040
VendorType and ParentRelPos of ENTITY-MIB displays incorrect values.
- CSCei16679
Symptoms: Clients behind AP cannot ping clients behind repeater/WGB.
Conditions: With fragmentation threshold set on both airlink and repeater to 256, cln1 and cln2 cannot be pinged when the packet size is above the fragmentation threshold, but it can be pinged when the packet is not fragmented.
Workaround: There is no workaround.
- CSCsa82225
Symptoms: It takes over five minutes for the adsl line to be trained. If you perform the 'no shutdown' command at the adsl/atm interface, wait for the line to come up and then remove the cable, it will take approximately 15 minutes for the %LINEPROTO-5-UPDOWN message to be printed on the console.
Condition: This occurs when the CLI 'dsl enable-training-log' under 'int atm 0' is active.
Workaround: Enter 'no dsl enable-training-log.'
- CSCsb43655
Symptoms: Incoming packets (larger than 1400 bytes) are counted as "input errors" for the ATM interface. The ATM error debug reports "ATM0: AAL5 rx errors (status = 0C100000)" which suggests a CNG is experienced during cells traversing. During testing, a consistent pattern of lost packets was not found.
Conditions: A router configured as PPPoE client or pure RFC1483 bridging.
Workaround: There is no workaround.
- CSCeg15044
Symptoms: Although there are free tty lines, you cannot make a Telnet connection and a "No Free TTYs error" message is generated.
Conditions: This symptom is observed when there are simultaneous Telnet requests.
Workaround: There is no workaround.

- CSCeg12134

Symptoms: When sending multicast traffic over an IPsec tunnel, a memory leak occurs.

Conditions: This symptom is observed on a Cisco router running Cisco IOS Release 12.3T when both IP CEF and hardware encryption are configured.

Workaround: Switch to software encryption for a while, and then switch back to hardware encryption.

Alternate Workaround: Disable IP CEF.
- CSCeg68557

Symptoms: When there is a failure between two IPsec peers, DPD can detect that the communication fails. When there are multiple phase 2 SAs and DPD failures, phase 1 SAs are deleted, but only one phase 2 SA is deleted.

Conditions: This symptom is observed on a Cisco router that is configured for IPsec ISAKMP when there are multiple ACEs in a dynamic crypto ACL, causing multiple phase 2 SAs to be generated.

Workaround: Enter the **clear crypto sa** command.
- CSCef10564

Radio system messages show up with no radio present on reload.
- CSCeh35823

Symptoms: When a router detects "invalid identity" failures while decrypting IPsec packets, a memory leak occurs for the packet memory that is associated with these failed packets.

Conditions: This symptom is observed only when an "invalid identity" error occurs, which is an uncommon error that indicates that the originating router does not send packets according to what was originally negotiated. However, if there is another error that causes a "bad" decryption, the packet could be invalid and may also cause the symptom to occur.

Workaround: There is no workaround.
- CSCeh46867

Unmatched SSID probe request response causes TX stuck.
- CSCeh61857

Symptoms: Unable to configure anything under non-dot11 subinterface, including IP address.

Workaround: None before code change.
- CSCei27330

Symptoms: A router that is configured for Dynamic Multipoint VPN (DMVPN) may frequently generate the following error message:

```
%SYS-2-BADSHARE: Bad refcount in datagram_done
```

Conditions: This symptom is observed on routers that function as a DMVPN spoke.

Workaround: There is no workaround.
- CSCin96534

Symptoms: Routers crash while enabling dot1x

Conditions: The crash is seen only when enabling dot1x on onboard FE interface, not on the switchports.

Workaround: There is no workaround.

- CSCsb13034
IPv6 multicast traffics do not get fast-switched.
- CSCsb19208
Symptoms: CISCO-DSL-CPE-MIB: some values are not initialized, including cdcAssetVendorType.
Conditions: 180x router with CISCO-DSL-CPE-MIB support.
Workaround: There is no workaround.
- CSCee68153
show wlccp ap mob forwarding, show dot asso missing from show tech.
- CSCei30235
EAP User-name field length is restricted to 64 bytes.
- CSCsb70282
1812 router should close 2887 wlccp port.
- CSCsb56224
Symptoms: Buffering problem on aux line on the Cisco 871 and Cisco 851 series routers. The last character of AT commands from the router AUX line (line 1) is displayed only after first "RETURN" character. After the second "RETURN" character, the AT command is executed by the analog modem. This behaviour is causing problems with chat scripts and sending AT commands to the analog modem (impossible to dialout using chat scripts). It is possible to send AT commands to the modem using reverse telnet (AUX port), but after each command, hit the Enter key twice. Entering command characters (like AT), the letter A is echoed after pressing T, the letter T is echoed after next character and so on.
Conditions: This problem is observed in the Cisco 871 series and Cisco 851 series router.
Workaround: There is no workaround.
- CSCsa48125
Symptoms: Outgoing calls fail on ISDN Non-Facility Associated Signaling (NFAS) group members that do not have a D-channel.
Conditions: The symptom is observed when outgoing calls are made via NFAS group members that have the **nfas_d none** keyword configured.
Workaround: There is no workaround.

Open Caveats - Cisco IOS Release 12.3(8)YI2

- CSCeg04695
Previously associated clients intermittently cannot reassociate upon reload
- CSCeh82849
Not all wireless clients are shown under dot11 network-map
- CSCeh85556
LEAP intermittent failure when dot1x reauth-period config;reboot req

- CSCeh90412
WPA-PSK intermittently fails.
- CSCei06052
Applying “IP unnumbered vlan1” on dot11 sub-interface doesn't work.

Resolved Caveats - Cisco IOS Release 12.3(8)YI2

- CSCef69209
Traceback generated on SNMP query of CISCO-IETF-DOT11-QOS-EXT-MIB
- CSCsa85925
NAS-Port-Type needs to be consistent with WNBUS AP
- CSCeh86927
FW broken on dot11 with VLAN
- CSCin90771
Airlink IF-MIB - ifInUcastPkts Counter32 value decreasing
- CSCeh83208
- CSCeh80851
- CSCeh80843
- CSCeh76767
- CSCeh73210
When bootup with no startup configuration, the line “station-role root” is missing from Dot11Radio0 interface.
- CSCeh72067
- CSCeh51374
- CSCeg03958
- CSCsa40962
- CSCeh80746

Open Caveats - Cisco IOS Release 12.3(8)YI1

- CSCef14879
rtsp_smi test intermittently fails; some rtsp-data may be missing.
- CSCeg79282
Policy may not classify packets with subprotocols.
- CSCeh72067
Static wep fails if transmit-keys between router and client are different.
- CSCeg04695
Previously associated clients are sometimes not reassociated upon router reload.

- CSCeh69802
Tx side of 802.11g radio fluctuates during stress testing.
- CSCeh80843
Unsupported wireless encryption mode “aes-ccm” displays error message, but results in a partial “encryption mode ciphers” configuration that can disassociate clients.
- CSCeh74272
show dot11 association sometimes shows incorrect IP address.
- CSCeh80851
IPv6 commands under dot11 interface to be removed.

Resolved Caveats - Cisco IOS Release 12.3(8)YI1

- CSCef63944
Alignment/spurious errors occur while testing IPsec-realtime DNS.
- CSCeg39083
Traceback messages are generated with the dial string rotation feature.
- CSCeh0633
WPA-PSK and WPA 802.1x authentication, such as network-eap or open eap, can be configured simultaneously on the same SSID.

Workaround: While the GUI prevents this invalid configuration, CLI users need to make sure that both WPA-PSK and WPA 802.1x authentication are not configured on the same SSID.

Additional References

The following sections describe the documentation available for the Cisco 851, 857, 871, 876, 877, and 878 series routers. Typically, these documents consist of hardware and software installation guides, Cisco IOS configuration and command references, system error messages, feature modules, and other documents. Documentation is available as printed manuals or electronic documents, except for feature modules, which are available online on Cisco.com in pdf or html form.

Use these release notes with the documents listed in the following sections:

- [Release-Specific Documents, page 22](#)
- [Platform-Specific Documents, page 23](#)

Release-Specific Documents

The following documents are specific to Release 12.3 and apply to Cisco IOS Release 12.3(8)YI. They are located on [Cisco.com](#):

- [Cross-Platform Release Notes for Cisco IOS Release 12.4\(11\)T](#)
- [Field Notices: http://www.cisco.com/warp/public/tech_tips/index/fn.html](http://www.cisco.com/warp/public/tech_tips/index/fn.html).
- [Caveats for Cisco IOS Release 12.4 and Caveats for Cisco IOS Release 12.4\(11\)T](#)

Platform-Specific Documents

Hardware installation guides, configuration and command reference guides, and additional documents specific to the Cisco 851, 857, 871, 876, 877, and 878 series routers that are available on [Cisco.com](http://www.cisco.com) at the following location:

http://www.cisco.com/en/US/products/hw/routers/tsd_products_support_category_home.html

Feature Modules

Feature modules describe new features supported by Cisco IOS Release 12.3 and Cisco IOS Release 12.3(8)YI3, and are updates to the Cisco IOS documentation set. A feature module consists of a brief overview of the feature, benefits, configuration tasks, and a command reference. As updates, the feature modules are available online only.

Cisco Feature Navigator

Cisco Feature Navigator is a web-based tool that enables you to quickly determine which Cisco IOS software images support a particular set of features and which features are supported in a particular Cisco IOS image. Cisco Feature Navigator is available 24 hours a day, 7 days a week.

To use Cisco Feature Navigator, you must have a JavaScript-enabled web browser such as Netscape 3.0 or later, or Internet Explorer 4.0 or later. Internet Explorer 4.0 always has JavaScript enabled. To enable JavaScript for Netscape 3.x or Netscape 4.x, follow the instructions provided with the web browser. For JavaScript support and enabling instructions for other browsers, check with the browser vendor.

Cisco Feature Navigator is updated when major Cisco IOS software releases and technology releases occur. You can access Feature Navigator at the following URL:

<http://www.cisco.com/go/cfn>

Cisco IOS Software Documentation Set

The Cisco IOS software documentation set consists of the Cisco IOS configuration guides, Cisco IOS command references, and several other supporting documents.

Documentation Modules

Each module in the Cisco IOS documentation set consists of one or more configuration guides and one or more corresponding command references. Chapters in a configuration guide describe protocols, configuration tasks, and Cisco IOS software functionality, and contain comprehensive configuration examples. Chapters in a command reference provide complete command syntax information. Use each configuration guide with its corresponding command reference. *Cisco IOS Software Documentation* is available in html or pdf form.

Select your release and click the command references, configuration guides, or any other Cisco IOS documentation you need

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feed-back, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Use this document in conjunction with the documents listed in the “Additional References” section.

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