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Release Notes for Cisco AS5800 Series Universal Access Servers for Cisco IOS Release 12.0 XJ

November 13, 2000

These release notes for Cisco AS5800 universal access servers support Cisco IOS Release 12.0 XJ, up to and including Release 12.0(4)XJ6. These release notes are updated as needed to describe new features, memory requirements, hardware support, software platform deferrals, and changes to the microcode or modem code and related documents.

For a list of the software caveats that apply to Release 12.0(4)XJ6, see the “Caveats” section on page 13 and *Caveats for Cisco IOS Release 12.0T*. The caveats document is updated for every maintenance release and is located on Cisco Connection Online (CCO) and the Documentation CD-ROM.

Use these release notes with *Cross-Platform Release Notes for Cisco IOS Release 12.0* on CCO and the Documentation CD-ROM.

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Introduction

This section contains information about the Cisco AS5800 universal access servers and Early Deployment (ED) Releases for the Cisco AS5800.

Cisco AS5800

The Cisco AS5800 is a high-density, Integrated Services Digital Network (ISDN) and modem Wide Area Network (WAN) aggregation system that provides digital and analog call termination. It is intended to be used as a service provider dial point-of-presence (POP) or centralized enterprise dial gateway. The Cisco AS5800 consists of a dial shelf, a router shelf, and (optionally) a system controller:

- The Cisco DS5814 dial shelf has 14 slots and can support 1 or 2 dial shelf controller card and up to 12 feature cards (subject to a limit of 1 to 4 trunk cards and up to 10 modem cards) to provide full analog modem and ISDN coverage. The dial shelf supports up to 1440 simultaneous analog and/or digital calls. Analog calls are terminated by a feature card that is loaded with integrated modems. ISDN calls are terminated onboard the trunk card on High-Level Data Link Control (HDLC) controllers. The E1 trunk and the T1 trunk card include channel service units (CSUs) and has either 12 E 1 ports or 12 T1 ports that can operate as Primary Rate Interface (PRI) interfaces or channelized interfaces in any combination.
- The Cisco RS7206 router shelf contains a network processing engine, an I/O controller, and the egress interfaces, such as High-Speed Serial Interface (HSSI), Fast Ethernet (FE), Fiber Distributed Data Interface (FDDI), and Asynchronous Transfer Mode (ATM), and supports either 280W AC-input or 280W DC-input redundant power. The router shelf also contains a dial shelf interconnect port adapter with a single RJ-45 receptacle that is used to connect the router shelf to the Cisco 5814 dial shelf. The interconnect port adapter connects directly to the dial shelf controller card on the dial shelf via a single, full-duplex cable. The cable used for this connection is a Cisco-proprietary cable, customized with jack screws to secure the connection. You must use this specially designed cable that ships with your interconnect port adapter.
- The Cisco SC3640 system controller includes the Cisco 3640 router running Cisco IOS software. The system controller can be installed at a remote facility so users can access multiple systems through an SNMP interface. System administrators can download software configurations to any Cisco AS5800 universal access server using Simple Network Management Protocol (SNMP) or Telnet. The system controller monitors the AS5800 to provide performance data collection, accounting data collection, and logging. Data is transferred to the user in bulk format using SNMP and TFTP.

The Cisco 5814 dial shelf and host Cisco 7206 router shelf communicate over a dial shelf interconnect cable (DSIC). This nonblocking interconnect supports 10 Mbps, full-duplex data transfer. Data is converted into packets by the feature cards, transmitted to a hub on the dial shelf controller (DSC) card, and from there sent to the router shelf. Conversely, packets from the router shelf are sent to the DSC card, where they are transmitted over the backplane to the modem and trunk cards.

The AC-input power shelf is an optional component of the Cisco AS5800 universal access servers and is used to convert AC-input power into DC-output power for the DC-powered Cisco 5814 dial shelf. The AC-input power shelf contains two AC-input power supplies.

The Cisco AS5800 universal access servers accept AC-input power via a separate, self-contained AC-input power shelf, which converts AC-input power into DC-output for use by the DC-powered dial shelf. The AC-input power shelf is rack-mounted and has a safety cover that shields the electrical connections in the power shelf rear.

The AC-input to DC-output connection supplies -48V DC-output power to the dial shelf power entry modules (PEMs). The PEMs receive the -48 volts and transmit power to the filter module. Power flows through the filter module to the backplane where it is distributed to the dial shelf controller card(s) and feature cards.

The AC-input power shelf includes two 2,000-watt, AC-input power supplies that plug into a common power backplane in the AC-input power shelf. A single AC-input power supply is capable of powering a fully configured Cisco 5814 dial shelf. The second power supply provides full redundancy.

For more information on the Cisco AS5800, refer to the *Cisco AS5800 Universal Access Server Software Installation and Configuration Guide* (DOC-5800-SICG) or the *Cisco AS5800 Universal Access Server Software Installation and Configuration Guide* (DOC-5800-HICG) that shipped with your system.

For information on new features and Cisco IOS commands supported by Release 12.0 XJ, see the “New and Changed Information” section on page 11 and “Related Documentation” section on page 15.

Early Deployment Releases

These release notes describe only Release 12.0 XJ for Cisco AS5800 universal access servers and do not describe features that are available in Release 12.0 or other Release 12.0 Early Deployment (ED) releases. Release 12.0(4)XJ6 is an Early Deployment (ED) release based on Release 12.0 and announces fixes to software caveats and support for new Cisco hardware.

For information about features in Release 12.0, see *Cross-Platform Release Notes for Cisco IOS Release 12.0* on CCO and the Documentation CD-ROM.

For information about features in other platforms, see *Release Notes for Cisco IOS Release 12.0* on CCO and the Documentation CD-ROM.

Table 1 Early Deployment Releases for the Cisco AS5800 Universal Access Servers

ED Release	Maintenance Release	Additional Software Features	Additional Hardware Features	Availability
Release 11.3 AA	(9)	<ul style="list-style-type: none"> VPDN Per User Configuration 	None	Now
Release 12.0 T	(5)	<ul style="list-style-type: none"> Cisco IOS SNMPv3 Cisco Process MIB Policy Routing Infrastructure Update 	None	Scheduled for Summer 1999

System Requirements

This section describes the system requirements for Release 12.0(4)XJ6:

- Memory Recommendations, page 4
- Hardware Supported, page 4
- Determining the Version of Your Software Release, page 5
- Upgrading to a New Software Release, page 5

System Requirements

- Modem Code Software, page 5
- Feature Set Tables, page 6

Memory Recommendations

Table 2 describes the memory recommendations for the Cisco AS5800 platform feature sets supported by Cisco IOS Release 12.0(4)XJ6.

Table 2 Memory Recommendations for the Cisco AS5800 Series Universal Access Server

System Components	Feature Set	Image Name	Software Image	Required Flash Memory	Required DRAM Memory	Runs From
Cisco AS5800	IP Standard Feature Set	IP Plus	c5800-p4-mz	16 MB	<ul style="list-style-type: none">• 128 MB for RS7206• 256 MB for RS7206 VXR	RAM
Dial Shelf: Cisco 5814		IP Plus	dsc-c5800-mz	8 MB	32 MB	RAM
Cisco AS5800	Service Provider Standard Feature Set	Service Provider IPsec 56	c5800-p456i-mz	16 MB	<ul style="list-style-type: none">• 128 MB for RS7206• 256 MB for RS7206 VXR	RAM

Hardware Supported

Cisco IOS Release 12.0 XJ supports the Cisco AS5800 universal access servers:

Platforms

- Cisco AS5814
- Cisco RS7206
- Cisco RS7206 VXR

Interfaces

- 12 port E1-trunk card
- 12 port T1-trunk card
- 12 port T 3-trunk card

Modem Cards

- 144-modem MICA card

Optional AC-input Power Shelf

Two AC-input power supplies

For detailed descriptions of the new hardware features, see the “New and Changed Information” section on page 11.

Determining the Version of Your Software Release

To determine the version of Cisco IOS software running on your Cisco AS5800, log in to the Cisco AS5800 and enter the **show version** EXEC command:

```
router>show version
Cisco Internetwork Operating System Software
IOS (tm) AS5800 Software c5800-p4-mz, Version 12.0(4)XJ6, RELEASE SOFTWARE
```

Upgrading to a New Software Release

For information on upgrading to a new software release, see the product bulletin *Cisco IOS Software Release 12.0 T Upgrade Paths and Packaging Simplification (#819: 1/99)* on CCO at:

Service & Support: Product Bulletins: Software

Under **Cisco IOS 12.0**, click **Cisco IOS Software Release 12.0 T Upgrade (#819: 1/99)**.

Modem Code Software

Modem code is either stored in Flash memory or bundled in the Cisco IOS software image. Bundling eliminates the need to store separate modem code images. When the Cisco AS5800 is powered on, the system software unpacks the modem code and loads the proper code on the modem cards.

The **show modem mapping** command lists all versions of modem code running on the modem modules, residing in system Flash, and bundled with Cisco IOS software. Enter the **show modem mapping** command to help you decide if you need to update your modem code files.

Note You could have received a later version of modem code than the one bundled with the Cisco IOS software. The modem code in Flash memory is mapped to the modems. Unless you fully understand how Cisco IOS software uses modem code, it is important to keep the factory configuration.

The modem code release notes are on CCO and the Documentation CD-ROM:

You can reach the release notes on CCO at:

Service & Support: Documentation Home Page: Access Servers and Access Routers: Firmware and Portware Information

You can reach the release notes on the Documentation CD-ROM at:

Cisco Product Documentation: Access Servers and Access Routers: Firmware and Portware Information

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 12.0(4)XJ6 supports the same feature sets as Release 12.0(4)T, but Release 12.0(4)XJ6 can include new features supported by the Cisco AS5800 universal access servers.

Table 3 Feature Sets Available for the Cisco AS5800 Series Universal Access Servers

Feature Set	Software Image	Feature Set Matrix Term	Image Name
IP Standard Feature Set	c5800-p4-mz	Basic ¹	IP Plus
	dsc-c5800-mz	Basic	IP Plus
Service Provider Standard Feature Set	c5800-p456i-mz	Basic, IPSec 56 ²	Service Provider IPSec
	dsc-c5800-mz	Basic	IP Plus

¹ This feature is offered in the Basic feature set.

² This feature is offered in the encryption feature sets that consist of 56-bit (IPSec 56) data encryption feature sets.



Caution Cisco IOS images with strong encryption (including, but not limited to, 56-bit data encryption feature sets) are subject to United States government export controls and limited distribution. Images to be installed outside the United States require an export license. Customer orders may be denied or subject to delay because of United States government regulations. Contact your sales representative or distributor for more information, or send an e-mail to export@cisco.com.

Table 4 lists the features and feature sets supported by the Cisco AS5800 universal access servers in Cisco IOS Release 12.0(4)XJ6 and uses the following conventions:

- Yes—The feature is supported in the software image.
- No—The feature is not supported in the software image.
- In—The number in the “In” column indicates the Cisco IOS release in which the feature was introduced. For example, (1) means a feature was introduced in 12.0(1)T. If a cell in this column is empty, the feature was included in the initial base release.

Note This feature set table only contains a selected list of features. This table is not cumulative—nor does it list all the features in each image.

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPSec 56
IBM Support			
APPN High-Performance Routing		No	No
APPN MIB Enhancements		No	No
APPN over Ethernet LAN Emulation		No	No
APPN Scalability Enhancements		No	No

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers (continued)

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPsec 56
Bisync Enhancements: — Bisync 3780 Support — BSC Extended Addressing — Block Serial Tunneling (BSTUN) over Frame Relay		No	No
Cisco MultiPath Channel (CMPC)		No	No
DLSw+ Enhancements: — Backup Peer Extensions for Encapsulation Types — DLSw+ Border Peer Caching — DLSw+ MIB Enhancements — DLSw+ SNA Type of Service — LLC2-to-SDLC Conversion between PU4 Devices — NetBIOS Dial-on-Demand Routing — UDP Unicast Enhancement		No	No
FRAS Enhancements: — FRAS Boundary Network Node Enhancement — FRAS Dial Backup over DLSw+ — FRAS DLCI Backup — FRAS Host — FRAS MIB — SRB over Frame Relay		No	No
RIF Passthru in DLSw+		No	No
SRB over FDDI on Cisco 4000-M, 4500-M, and 4700-M Routers		No	No
TN3270 LU Nailing		No	No
TN3270 Server Enhancements		No	No
Token Ring LANE		No	No
Tunneling of Asynchronous Security Protocols		No	No
Internet			
DRP Server Agent		No	No
DRP Server Agent Enhancements		No	No
L2TP	(1)	Yes	No
Signaling System 7 (SS7)	(4)	Yes	Yes
IP Routing			

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers (continued)

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPSec 56
Easy IP (Phase 1)		Yes	Yes
Easy IP (Phase 2) DHCP Server	(1)	Yes	No
Hot Standby Router Protocol (HSRP) over ISL in Virtual LAN Configurations		No	No
IP Enhanced IGRP Route Authentication	(1)	Yes	Yes
OSPF LSA Group Pacing	(1)	Yes	Yes
OSPF Point-to-Multipoint Networks with Neighbors	(1)	Yes	Yes
Per User DNS	-	No	No
PIM Version 2	(1)	Yes	Yes
TCP Enhancements: — TCP Selective Acknowledgment — TCP Timestamp	(1)	Yes	Yes
LAN Support			
AppleTalk Access List Enhancements		No	No
DECnet Accounting		No	No
IPX Named Access Lists		No	No
IPX SAP-after-RIP		No	No
NLSP Enhancements		No	No
NLSP Multicast Support		No	No
Management			
Cisco Call History MIB Command Line Interface	(1)	Yes	Yes
Cisco IOS File System	(1)	Yes	Yes
Cisco IOS Internationalization	(1)	Yes	Yes
Conditionally Triggered Debugging	(1)	Yes	Yes
Entity MIB, Phase 1	(1)	Yes	Yes
External Portware Download		No	No
Show Caller Command		No	No
Show Modem Command		No	No
SNMP v2C	(1)	Yes	Yes
SNMP v3	(3)	Yes	Yes
SNMP Inform Requests		No	No
Virtual Profiles	(1)	Yes	Yes
VPDN MIB	(1)	No	No
VPDN MIB and Syslog Facility		No	No

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers (continued)

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPSec 56
Multimedia			
IP Multicast Load Splitting across Equal-Cost Paths	(1)	Yes	Yes
IP Multicast over ATM Point-to-Multipoint Virtual Circuits	(1)	Yes	Yes
IP Multicast over Token Ring LANs	(1)	Yes	Yes
Stub IP Multicast Routing	(1)	Yes	Yes
Quality of Service			
CLI String Search	(1)	Yes	No
RTP Header Compression		No	No
Security			
AAA Scalability		No	No
Authenticating ACL		No	No
Automated Double Authentication		No	No
Certificate Authority Interoperability		No	No
Double Authentication	(1)	Yes	Yes
Encrypted Kerberized Telnet		No	No
HTTP Security	(1)	Yes	Yes
Internet Key Exchange Security Protocol		No	No
IPSec Network Security		No	No
MS-CHAP Support		No	No
Named Method Lists for AAA Authentication and Accounting		No	No
Per-User Configuration	(1)	Yes	Yes
Reflexive Access Lists	(1)	Yes	Yes
TCP Intercept		No	No
Vendor-Proprietary RADIUS Attributes	(1)	Yes	Yes
Vendor-Proprietary RADIUS-Additional Attributes		No	No
Switching			
AppleTalk Routing over ISL and IEEE 802.10 in Virtual LANs		No	No
CLNS and DECnet Fast Switching over PPP		No	No

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers (continued)

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPSec 56
DECnet/Vines/XNS over ISL: — Banyan VINES Routing over ISL Virtual LANs — DECnet Routing over ISL Virtual LANs — XNS Routing over ISL Virtual LANs		No	No
Fast-Switched Policy Routing	(1)	Yes	Yes
IPX Routing over ISL Virtual LANs		No	No
VIP Distributed Switching Support for IP Encapsulated in ISL		No	No
Terminal Services			
Telnet Extensions for Dialout		No	No
Virtual Templates for Protocol Translation		No	No
WAN Optimization			
ATM MIB Enhancements		No	No
PAD Enhancements		No	No
PAD Subaddressing	(1)	Yes	Yes
WAN Services			
Always On/Dynamic ISDN (AO/DI)		No	No
Bandwidth Allocation Control Protocol	(1)	Yes	Yes
Channelized T3	(4)	Yes	Yes
Dialer Watch	(1)	Yes	Yes
Dynamic Multiple Encapsulation for Dial-in over ISDN	(4)	Yes	Yes
E1 R2	(3)	Yes	Yes
E1 R1 Support for Taiwan only	(3)	Yes	Yes
Enhanced Local Management Interface (ELMI)		No	No
Frame Relay Enhancements	(1)	Yes	Yes
Frame Relay MIB Extensions	(1)	Yes	Yes
Frame Relay Router ForeSight	(1)	Yes	Yes
GRE VPN		No	No
ISDN Advice of Charge	(1)	Yes	Yes
ISDN Caller ID Callback	(1)	Yes	Yes
ISDN NFAS	(1)	Yes	Yes
Layer 2 Forwarding—Fast Switching	(1)	Yes	Yes

Table 4 Feature List by Feature Set for the Cisco AS5800 Series Universal Access Servers (continued)

Features	Software Images by Feature Set		
	In	IP Plus	Service Provider IPSec 56
Leased-Line ISDN at 128 kbps		No	No
Microsoft Point-to-Point Compression (MPPC)		No	No
MS Callback	(1)	Yes	Yes
Modem Management Enhancements	(1)	Yes	Yes
Multiple ISDN Switch Types		No	No
National ISDN Switch Types for BRI and PRI Interfaces (NI2)		No	No
PPP over ATM		No	No
Stackable Home Gateway		No	No
Switched 56K Digital Connections		No	No
Telnet Extensions for Dialout		No	No
X.25 Enhancements	(1)	Yes	Yes
X.25 on ISDN	(1)	Yes	Yes
Miscellaneous			
CT3 Channelized T3 Trunk Card	(4)	Yes	Yes
Generic System File Layer (OS_IFSS)	(1)	Yes	No
Parse Bookmarks	(1)	Yes	No
Policy Routing Infrastructure Update		No	No
Process MIB		No	No
Cisco IOS Support for IP Connection to SS7 Signalling Controller	(4)	Yes	Yes

New and Changed Information

The following sections list the new hardware and software features supported by the Cisco AS5800 universal access servers for Release 12.0 XJ:

No New Features in Release 12.0(4)XJ6

There are no new features supported by the Cisco AS5800 universal access servers in Cisco IOS Release 12.0(4)XJ6.

MIBs

Current MIBs

If you have an account with CCO, you can find the current list of MIBs supported by Cisco. To reach the Cisco Network Management Toolkit, **Login** to CCO and click **Software Center: Network Mgmt Products: Cisco Network Management Toolkit: Cisco MIB**.

Deprecated and Replacement MIBs

Old Cisco Management Information Bases (MIBs) will be replaced in a future release. OLD-CISCO-* MIBs are currently migrated into more scalable MIBs—without affecting existing Cisco IOS products or NMS applications. You can update from deprecated MIBs to the replacement MIBs as shown in Table 5.

Table 5 **Deprecated and Replacement MIBs**

Deprecated MIB	Replacement
OLD-CISCO-CHASSIS-MIB	ENTITY-MIB
OLD-CISCO-CPUK-MIB	In development
OLD-CISCO-ENV-MIB	CISCO-ENVMON-MIB
OLD-CISCO-FLASH-MIB	CISCO-FLASH-MIB
OLD-CISCO-INTERFACES-MIB	IF-MIB CISCO-QUEUE-MIB
OLD-CISCO-IP-MIB	
OLD-CISCO-MEMORY-MIB	CISCO-MEMORY-POOL-MIB
OLD-CISCO-SYS-MIB	(Compilation of other OLD* MIBs)
OLD-CISCO-SYSTEM-MIB	CISCO-CONFIG-COPY-MIB
OLD-CISCO-TCP-MIB	CISCO-TCP-MIB
OLD-CISCO-TS-MIB	

Important Notes

The following section contains important notes about Cisco IOS Release 12.0(4)XJ6 that can apply to the Cisco AS5800.

Caveat CSCdr91706 and IOS HTTP Vulnerability

A defect in multiple releases of Cisco IOS software will cause a Cisco router or switch to halt and reload if the IOS HTTP service is enabled, browsing to `http://router-ip/anytext?/` is attempted, and the enable password is supplied when requested. This defect can be exploited to produce a denial of service (DoS) attack.

The vulnerability, identified as Cisco bug ID CSCdr91706, affects virtually all mainstream Cisco routers and switches running Cisco IOS software releases 12.0 through 12.1, inclusive. This is not the same defect as CSCdr36952.

The vulnerability has been corrected and Cisco is making fixed releases available for free to replace all affected IOS releases. Customers are urged to upgrade to releases that are not vulnerable to this defect as shown in detail below.

This vulnerability can only be exploited if the enable password is known or not set.

You are strongly encouraged to read the complete advisory, which is available at <http://www.cisco.com/warp/public/707/ioshttpserverquery-pub.shtml>.

Caveats

Caveats describe unexpected behavior in Cisco IOS software releases. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious. Severity 3 caveats are moderate caveats, and only select severity 3 caveats are included in the caveats document.

This section only contains open and resolved caveats for the current Cisco IOS maintenance release.

All caveats in Release 12.0 and Release 12.0 T are also in Release 12.0 XJ.

For information on caveats in Cisco IOS Release 12.0, see *Caveats for Cisco IOS Release 12.0*.

For information on caveats in Cisco IOS Release 12.0 T, see *Caveats for Cisco IOS Release 12.0 T*, which lists severity 1 and 2 caveats and select severity 3 caveats and is located on CCO and the Documentation CD-ROM.

Note If you have an account with CCO, you can use Bug Navigator II to find caveats of any severity for any release. You can reach Bug Navigator II on CCO at **Service & Support: Online Technical Support: Software Bug Toolkit**, or at <http://www.cisco.com/support/bugtools>.

Open Caveats—Release 12.0(4)XJ6

This section describes possibly unexpected behavior by Release 12.0(4)XJ6 and describes only severity 1 and 2 caveats:

Basic System Services

- CSCdk26221

The following cli command does not function : **snmp-server packetsize**.

The maximum snmp packetsize for 12.0(3)T is fixed at 484. There is no known workaround.

Miscellaneous

- CSCdm44249

Reusing the same CE address on two CEs connected to the same PE, in different VRFs, does not work properly in the case where the link between the PE and CE is ethernet.

Wide-Area Networking

- CSCdm41950
Entering commands “shut” and “no shut” quickly on an AS5800 E1 controller while digital ISDN traffic is running will cause other D-channels to go down also. It does not occur on T1 or T3 controller, and does not occur with modem ISDN. This problem may cause unwanted errors for customers who run test script to evaluate our product. A workaround is to wait 30 to 45 seconds between shut and no shut.
- CSCdm48075
By default, LANE FSSRP is now completely off on all subinterfaces and all LANE components. To turn this feature on, the interface config command: **lane fssrp** should be used. Once entered, this command recycles all LANE components on that interface and hence its subinterfaces.

Resolved Caveats—Release 12.0(4)XJ6

All the caveats listed in this section are resolved in release 12.0(4)XJ5.

Miscellaneous

- CSCdm16672
When the dial shelf is reloaded on an AS5800 that is configured to download non-bundled portware calls are accepted at startup time which subsequently get dropped. The problem occurs as follows:
 1. A dial shelf is reloaded. The modem feature boards are configured to auto-boot.
 2. IOS downloads the default bundled portware to all modems.
 3. All modems show ready and available.
 4. IOS resets the first modem card to prepare to download the non-bundled portware.
 5. A call comes in and is connected to an available modem on the next modem card since the first is out of service.
 6. The first modem card downloads the non-bundled, non-default portware to all of the modems on that card and becomes available to take calls.
 7. All the modems in the second card are reset to prepare to download the non-bundled portware. Any calls that were active on that modem are disconnected at this time.
- CSCdm26683
5800 with 32M runs out of memory with WFQ turned on on all interfaces in the box.
- CSCdm31189
After an extended stress test, memory allocation errors began to occur when using the store-and-forward fax offramp. There is no known workaround at this time.
- CSCdm36607
L2TP tunnels between 5300s and the 7200 are dropping several times every hour.

- CSCdm37111
When the gateway receives large files from the external mail client, the smtp connection timer must be stopped to avoid timeout. The timer is now stopped correctly.
- CSCdm38328
The fax store-and-forward off-ramp router smtp server does not clean-up some sessions resulting in memory loss.
The problem is unmasked by the fix for CSCdm37111. Before this fix the problem existed but would not manifest itself in any severe way.
- CSCdm39951
On an AS5800 running 12.0(4.3)T, the dialup modem peers are unable to transmit full-sized (1500-byte) PPP packets to their destination. “show modem op” shows that the PPP packets are being successfully received by the MICA modems without error (parameters 33 and 35.) However, “show interface” on the corresponding async interfaces, shows that NO IP packets are being received - either good or errored.
If the peer transmits a 1499 byte packet (ping -l 1457 from a PC), then they are transmitted successfully.
Workaround: reconfigure the PPP peer to use an MTU below 1500B—perhaps 576B. On a Windows PC, this can be done via registry settings. See the following Web site:
<http://www.cisco.com/warp/public/105/38.shtml>
- CSCdm42370
A NAS configured with multiple dialer profiles cannot send a packet back to the initiating client when the bind of the dialer profile is done at authentication.
- CSCdm42782
Crash in onramp after about 24 hours of stress traffic. Seems related to the fact that destination mail server was not responding.

Wide-Area Networking

- CSCdk28459
If distinct dialer maps to different destinations share the same remote name, traffic will fail to pass on the 2nd and subsequent sessions.
This ability is implemented in 12.0T as a hidden command. dialer mult-map-same-name allows 2 users to dial in to the dialer with the same ppp user_name. It’s behavior with other dialer features is currently unpredictable and should be used with caution.

Related Documentation

The following sections describe the documentation available for the Cisco AS5800 universal access servers. 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 CCO and the Documentation CD-ROM.

Use these release notes with these documents:

- Release-Specific Documents, page 16
- Platform-Specific Documents, page 17
- Feature Modules, page 17
- Cisco IOS Software Documentation Set, page 18

Release-Specific Documents

The following documents are specific to Release 12.0 and are located on CCO and the Documentation CD-ROM:

- *Cross-Platform Release Notes for Cisco IOS Release 12.0*

On CCO at:

Service & Support: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Release Notes: Cross-Platform Release Notes

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Release Notes: Cross-Platform Release Notes

- Product bulletins, field notices, and other release-specific documents on CCO at:

Service & Support: Technical Documents

- *Caveats for Cisco IOS Release 12.0* and *Caveats for Cisco IOS Release 12.0T*

As a supplement to the caveats listed in “Caveats” in these release notes, see *Caveats for Cisco IOS Release 12.0* and *Caveats for Cisco IOS Release 12.0 T*, which contains caveats applicable to all platforms for all maintenance releases of Release 12.0.

On CCO at:

Service & Support: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Caveats

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Caveats

Note If you have an account with CCO, you can use Bug Navigator II to find caveats of any severity for any release. You can reach Bug Navigator II on CCO at **Service & Support: Online Technical Support: Software Bug Toolkit**, or at <http://www.cisco.com/support/bugtools>.

Platform-Specific Documents

These documents are available for the Cisco AS5800 universal access servers on CCO and the Documentation CD-ROM:

Table 6 Cisco AS5800 Universal Access Server—Related Documents

Cisco Product	Document Title
Cisco AS5800 universal access server	<ul style="list-style-type: none"> • <i>Cisco AS5800 Universal Access Server Hardware Installation and Configuration Guide</i> • <i>Cisco AS5800 Universal Access Server Regulatory Compliance and Safety Information</i> • Configuration notes, updates, feature modules, and release notes
Cisco 7206 router shelf	<ul style="list-style-type: none"> • <i>Cisco 7206 Installation and Configuration Guide</i> • <i>Regulatory Compliance and Safety Information for the Cisco 7206</i> • Configuration notes, updates, feature modules, and release notes
Cisco 3640 system controller	<ul style="list-style-type: none"> • <i>Cisco 3640 Router Installation and Configuration Guide</i> • <i>Cisco 3640 System Controller Installation and Configuration Guide</i> • <i>Regulatory Compliance and Safety Information for the Cisco 3640</i> • Configuration notes, updates, feature modules, and release notes
Cisco IOS software	<ul style="list-style-type: none"> • Configuration guides • Command references • Feature modules, configuration notes, updates, and release notes
Cisco marketing tools	<ul style="list-style-type: none"> • <i>Cisco Information Packet</i> • Cisco Product Catalog • Cisco Product Bulletin 738

On CCO at:

Service & Support: Documentation Home Page: Access Servers and Access Routers: Access Servers: Cisco AS5800

On the Documentation CD-ROM at:

Cisco Product Documentation: Access Servers and Access Routers: Access Servers: Cisco AS5800

Feature Modules

Feature modules describe new features supported by Release 12.0 XJ 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. Feature module information is incorporated in the next printing of the Cisco IOS documentation set.

On CCO at:

Service & Support: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: New Feature Documentation

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: New Feature Documentation

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, which are shipped with your order in electronic form on the Documentation CD-ROM—unless you specifically ordered the printed versions.

Documentation Modules

Each module in the Cisco IOS documentation set consists of two books: a configuration guide and a corresponding command reference. Chapters in a configuration guide describe protocols, configuration tasks, 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.

On CCO and the Documentation CD-ROM, two master hot-linked documents provide information for the Cisco IOS software documentation set.

You can reach these documents on CCO at:

Service & Support: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Configuration Guides and Command References

You can reach these documents on the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Configuration Guides and Command References

Release 12.0 Documentation Set

Table 7 describes the contents of the Cisco IOS Release 12.0 software documentation set, which is available in electronic form and in printed form upon request.

Note You can find the most current Cisco IOS documentation on CCO and the Documentation CD-ROM. These electronic documents may contain updates and modifications made after the hard-copy documents were printed.

You can reach the Cisco IOS documentation set on CCO at:

Service & Support: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0

You can reach the Cisco IOS documentation set on the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0

Table 7 Cisco IOS Software Release 12.0 Documentation Set

Books	Chapter Topics
<ul style="list-style-type: none"> • <i>Configuration Fundamentals Configuration Guide</i> • <i>Configuration Fundamentals Command Reference</i> 	Configuration Fundamentals Overview Cisco IOS User Interfaces File Management System Management
<ul style="list-style-type: none"> • <i>Bridging and IBM Networking Configuration Guide</i> • <i>Bridging and IBM Networking Command Reference</i> 	Transparent Bridging Source-Route Bridging Token Ring Inter-Switch Link Remote Source-Route Bridging DLSw+ STUN and BSTUN LLC2 and SDLC IBM Network Media Translation DSPU and SNA Service Point SNA Frame Relay Access Support APPN Cisco Database Connection NCIA Client/Server Topologies Cisco Mainframe Channel Connection Airline Product Set
<ul style="list-style-type: none"> • <i>Dial Solutions Configuration Guide</i> • <i>Dial Solutions Command Reference</i> 	X.25 over ISDN Appletalk Remote Access Asynchronous Callback, DDR, PPP, SLIP Bandwidth Allocation Control Protocol ISDN Basic Rate Service ISDN Caller ID Callback PPP Callback for DDR Channelized E1 & T1 Dial Backup for Dialer Profiles Dial Backup Using Dialer Watch Dial Backup for Serial Lines Peer-to-Peer DDR with Dialer Profiles DialOut Dial-In Terminal Services Dial-on-Demand Routing (DDR) Dial Backup Dial-Out Modem Pooling Large-Scale Dial Solutions Cost-Control Solutions Virtual Private Dialup Networks Dial Business Solutions and Examples
<ul style="list-style-type: none"> • <i>Cisco IOS Interface Configuration Guide</i> • <i>Cisco IOS Interface Command Reference</i> 	Interface Configuration Overview LAN Interfaces Logical Interfaces Serial Interfaces
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 1</i> • <i>Network Protocols Command Reference, Part 1</i> 	IP Overview IP Addressing and Services IP Routing Protocols
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 2</i> • <i>Network Protocols Command Reference, Part 2</i> 	AppleTalk Novell IPX

Table 7 Cisco IOS Software Release 12.0 Documentation Set (continued)

Books	Chapter Topics
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 3</i> • <i>Network Protocols Command Reference, Part 3</i> 	Network Protocols Overview Apollo Domain Banyan VINES DECnet ISO CLNS XNS
<ul style="list-style-type: none"> • <i>Security Configuration Guide</i> • <i>Security Command Reference</i> 	AAA Security Services Security Server Protocols Traffic Filtering and Firewalls IP Security and Encryption Passwords and Privileges Neighbor Router Authentication IP Security Options
<ul style="list-style-type: none"> • <i>Cisco IOS Switching Services Configuration Guide</i> • <i>Cisco IOS Switching Services Command Reference</i> 	Switching Services Switching Paths for IP Networks Virtual LAN (VLAN) Switching and Routing
<ul style="list-style-type: none"> • <i>Wide-Area Networking Configuration Guide</i> • <i>Wide-Area Networking Command Reference</i> 	Wide-Area Network Overview ATM Frame Relay SMDS X.25 and LAPB
<ul style="list-style-type: none"> • <i>Voice, Video, and Home Applications Configuration Guide</i> • <i>Voice, Video, and Home Applications Command Reference</i> 	Voice over IP Voice over Frame Relay Voice over ATM Voice over HDLC Frame Relay-ATM Internetworking Synchronized Clocks Video Support Universal Broadband Features
<ul style="list-style-type: none"> • <i>Quality of Service Solutions Configuration Guide</i> • <i>Quality of Service Solutions Command Reference</i> 	Policy-Based Routing QoS Policy Propagation via BGP Committed Access Rate Weighted Fair Queueing Custom Queueing Priority Queueing Weighted Random Early Detection Scheduling Signaling RSVP Packet Drop Frame Relay Traffic Shaping Link Fragmentation RTP Header Compression
<ul style="list-style-type: none"> • <i>Cisco IOS Software Command Summary</i> • <i>Dial Solutions Quick Configuration Guide</i> • <i>System Error Messages</i> • <i>Debug Command Reference</i> 	

Note *Cisco Management Information Base (MIB) User Quick Reference* is no longer published. For the latest list of MIBs supported by Cisco, see *Cisco Network Management Toolkit* on Cisco Connection Online. From CCO, click on the following path: **Service & Support: Software Center: Network Mgmt Products: Cisco Network Management Toolkit: Cisco MIB**.

Service and Support

For service and support for a product purchased from a reseller, contact the reseller, who offers a wide variety of Cisco service and support programs described in “Service and Support” of *Cisco Information Packet* shipped with your product.

Note If you purchased your product from a reseller, you can access CCO as a guest. CCO is Cisco Systems’ primary real-time support channel. Your reseller offers programs that include direct access to CCO services.

For service and support for a product purchased directly from Cisco, use CCO.

Software Configuration Tips on the Cisco Technical Assistance Center Home Page

If you have a CCO login account, you can access the following URL, which contains links and tips on configuring your Cisco products:

http://www.cisco.com/kobayashi/technotes/serv_tips.shtml

This URL is subject to change without notice. If it changes, point your Web browser to CCO and click on this path: **Products & Technologies: Products: Technical Tips**.

The following sections are provided from the Technical Tips page:

- Access Dial Cookbook—Contains common configurations or recipes for configuring various access routes and dial technologies.
- Field Notices—Notifies you of any critical issues regarding Cisco products and includes problem descriptions, safety or security issues, and hardware defects.
- Frequently Asked Questions—Describes the most frequently asked technical questions about Cisco hardware and software.
- Hardware—Provides technical tips related to specific hardware platforms.
- Hot Tips—Describes popular tips and hints gathered from the Cisco Technical Assistance Center (TAC). Most of these documents are available from the TAC Fax-on-demand service. To reach Fax-on-demand and receive documents at your fax machine from the United States, call 888-50-CISCO (888-502-4726). From other areas, call 650-596-4408.
- Internetworking Features—Lists tips on using and deploying Cisco IOS software features and services.
- Sample Configurations—Provides actual configuration examples that are complete with topology and annotations.

- Software Products—Contains Cisco IOS Software Bulletins, Cisco TCP/IP Suite 100, General Cisco IOS, Internet/Intranet Applications and Software, Network Management, Network Protection Software Tips, and WAN Switching Products and Software.
- Special Collections—Lists other helpful documents, including Case Studies, References & Request for Comments (RFCs), and Security Advisories.

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can reach CCO in the following ways:

- WWW: <http://www.cisco.com>
- Telnet: [cco.cisco.com](telnet://cco.cisco.com)
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which package that ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>. Translated documentation can be accessed at http://www.cisco.com/public/countries_languages.shtml.

If you are reading Cisco product documentation on the World Wide Web, you can submit comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco. We appreciate your comments.

This document is to be used in conjunction with the documents listed in the "Related Documentation" section on page 15.

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