



# Release Notes for Cisco AS5800 Universal Access Servers for Cisco IOS Release 12.2 XS

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Cisco IOS Release 12.2(1) XS2

OL-1572-01 Rev. E0

These release notes for the Cisco AS5800 universal access servers describe the enhancements provided in Cisco IOS Release 12.2(1) XS2. These release notes are updated as needed.

For a list of the software caveats that apply to Cisco IOS Release 12.2(1) XS2, see the [“Caveats for Cisco IOS Release 12.2\(1\) XS” section on page 11](#) and *Caveats for Cisco IOS Release 12.2*. The caveats document is updated for every maintenance release and is located on Cisco.com and the Documentation CD-ROM.

Use these release notes with *Cross-Platform Release Notes for Cisco IOS Release 12.2* located on Cisco.com and the Documentation CD-ROM.

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# Introduction

The Cisco AS5800 access server is a high-density, Integrated Services Digital Network (ISDN), and modem Wide Area Network (WAN) aggregation systems that provide digital and analog call termination. They are 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 and one or two router shelves:

- The Cisco DS5814 (dial shelf) has 14 slots and can support 1 or 2 dial shelf controller cards and up to 12 feature cards to provide full analog modem, and ISDN coverage. 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, T1 trunk, and the CT3 trunk cards include channel service units (CSUs) and have either 12 E1 ports, 12 T1 ports, or 28 T1 ports (within the CT3 trunk) that can operate as Primary Rate Interfaces (PRIs), inter-machine trunks (IMTs), or channelized interfaces in any combination. The specific trunk card limitations are described in [Table 2, Part 1](#).



**Note** T1 and E1 cards are not supported in the same box.

- The Cisco RS7206VXR (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), Gigabit Ethernet (GE), and Asynchronous Transfer Mode (ATM), and supports either 280W AC-input or 280W DC-input redundant power. The router shelf also may contain one or two dial shelf interconnect port adapters each with a single RJ-45 receptacle, which 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 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. Each router shelf can only be connected to one dial shelf controller card. If the dial shelf configured in split mode, it must be connected to two separate router shelves.



**Note** The router shelf is only supported for routing data to and from the dial shelf. The router should not be used with multiple port adapter interfaces to route LAN traffic between multiple networks.

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 AC-input to DC-output connection supplies –48V DC-output power to the dial shelf power entry modules (PEMs). The PEMs receive the –48V 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 W, 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 information on new features and Cisco IOS commands supported by Cisco IOS Release 12.2(1) XS2, see the [“New and Changed Information” section on page 9](#) and the [“Related Documentation” section on page 15](#).

# System Requirements

This section describes the system requirements for Cisco IOS Release 12.2 and includes the following sections:

- [Memory Requirements, page 3](#)
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## Memory Requirements

**Table 1** Memory Requirements for the Cisco AS5800 Universal Access Servers

System Components	Feature Set	Image Name	Software Image	Flash Memory Required	DRAM Memory Required	Runs From
Cisco AS5800	IP Standard	IP Plus	c5800-p4-mz	16 MB	<ul style="list-style-type: none"> <li>• 128 MB for NPE-200</li> <li>• 256 MB for NPE-300</li> </ul>	RAM
Dial Shelf: Cisco 5814		IP Plus	dsc-c5800-mz	8 MB	<ul style="list-style-type: none"> <li>• 32 MB<sup>1</sup></li> </ul>	RAM
Cisco AS5800	Service Provider Standard	Service Provider IPsec 56	c5800-k8p4-mz	16 MB	<ul style="list-style-type: none"> <li>• 128 MB for NPE-200</li> <li>• 256 MB for NPE-300</li> </ul>	RAM

1. Cisco IOS Release 12.2(1) XS2 may be used with the older RS7206 (NPE-based) router shelf as long as the shelf has 128 M of DRAM installed.

## Supported Hardware

Cisco IOS Release 12.2 supports the Cisco AS5800 universal access servers:

- Cisco DS5814
- Cisco RS7206
- Cisco RS7206 VXR

For detailed descriptions of the new hardware features, see the [“New and Changed Information”](#) section on [page 9](#).

**Table 2, Part 1 Supported Hardware for the Cisco AS5800 Universal Access Servers**

Interfaces, Cards, Options, and Support	Description
<b>Interfaces</b>	12-port T1 or E1 termination card
	1- port channelized T3 (CT3) termination card
<b>Modem Cards</b>	72-port modem card (HMM) <sup>1</sup>
	144-port modem card (DMM) <sup>2</sup>
	324-port modem card (UPC)
<b>Dial Shelf</b>	DS5814 Dial Shelf
	Dial Shelf Controller (DSC) card
<b>Optional AC-input Power Shelves</b>	Two AC-input power supplies
<b>Router Shelf Support</b>	RS7206VXR (NPE-300 based) Router Shelf
	RS7206 (NPE-200 based) Router Shelf
	With any Cisco AS5800 software image, the maximum hardware configuration with an RS7206 is one CT3 or two T1/E1 trunk cards and three UPCs, five DMMs, or 10 HMMs for a maximum of 28, 24 T1 / 24 E1 controllers and 720 modems.
	If a larger configuration is desired, a second RS7206 router shelf can be configured in split-shelf mode, or a single RS7206 VXR may be used to support up to 1344 modem sessions. Configurations above 1344 modem sessions require two RS7206VXR router shelves in split-shelf mode.

1. 72-port modem card requires 32M DRAM.

2. 144-port modem card requires 64M DRAM.

**Table 2, Part 2 Supported Hardware for the Cisco AS5800 Universal Access Servers**

Router Shelf	Port Adapter	Description
<b>RS7206 Router Shelf</b>	PA-100VG	Single-Port 100 VG Port Adapter
	PA-12E/2FE	Dual-Wide Ethernet-switch Port Adapter
	PA-1C-E	1-Port ESCON Channel Port Adapter
	PA-2CE1/PRI-120	2-Port Channelized E1/PRI Port Adapter, 120 ohm
	PA-2CE1/PRI-75	2-Port Channelized E1/PRI Port Adapter, 75 ohm
	PA-2CT1/PRI	2-Port Channelized T1/PRI Port Adapter
	PA-2E3	2-Port E3 Serial Port Adapter with E3 DSU
	PA-2FEISL-FX	2-Port Fast Ethernet/ISL 100BaseTx Port Adapter
	PA-2FEISL-TX	2-Port Fast Ethernet/ISL 100BaseFx Port Adapter
	PA-2H	Port Adapter, 2-Port HSSI
	PA-4B-U	4-Port BRI Port Adapter, U Interface
	PA-4E	Port Adapter, 4-Port Ethernet, 10BT
	PA-4R	Port Adapter, 4-Port Token Ring (Older Hermon Based)
	PA-4R-DTR	Port Adapter, 4-Port Token Ring (Hawkeye Based)
	PA-4R-FDX	Port Adapter, 4 Port Token Ring 4/16Mbps, Full Duplex

**Table 2, Part 2**      **Supported Hardware for the Cisco AS5800 Universal Access Servers (continued)**

Router Shelf	Port Adapter	Description
<b>RS7206 Router Shelf (Continued)</b>	PA-4T+	Port Adapter, 4-Port Serial,5IN1
	PA-5EFL	Port Adapter, 5-Port Ethernet,10FL
	PA-8B-S/T	8-Port BRI Port Adapter, S/T Interface
	PA-8E	Port Adapter, 8-Port Ethernet,10BT
	PA-8T-232	Port Adapter, 8-Port Serial,232
	PA-8T-V35	Port Adapter, 8-Port Serial,V.35
	PA-8T-X21	Port Adapter, 8-Port Serial,X.21
	PA-A1-OC3MM	1-Port ATM OC3 Multi-Mode Port Adapter
	PA-A1-OC3SM	1-Port ATM OC3 Single Mode Intermediate Reach Port Adapter
	PA-A2-4E1XC-E3ATM	CES Port Adapter E3/E1 120 ohms
	PA-A2-4E1XC-OC3SM	CES OC3 Port Adapter 4E1 Ports 120 ohms
	PA-A2-4T1C-OC3SM	ATM CES Port Adapter, 4T1 CES Ports and 1 OC3 ATM SM Port
	PA-A2-4T1C-T3ATM	ATM CES Port Adapter, 4T1 CES Ports and 1 T3 ATM Port
	PA-A3-E3	1-Port ATM Enhanced E3 Port Adapter
	PA-A3-OC3MM	1-Port ATM Enhanced OC3c/STM1 Multi-Mode
	PA-A3-OC3SMI	1-Port ATM Enhanced OC3c/STM1 Single Mode
	PA-A3-OC3SML	1-Port ATM Enhanced OC3c/STM1 Single Mode
	PA-A3-T3	1-Port ATM Enhanced DS3 Port Adapter
	PA-CT3/4T1	Channelized DS3 Port Adapter with 4 T1
	PA-E3	1-Port E3 Serial Port Adapter with E3 DSU
	PA-F/FD-MM	Port Adapter,1-Port FDDI Full Duplex Multi-Mode
	PA-F/FD-SM	Port Adapter,1-Port FDDI Full Duplex Single-Mode
	PA-FE-FX	Port Adapter,1-Port FE, 100FX
	PA-FE-TX	Port Adapter,1-Port FE,100TX
	PA-F-MM	Port Adapter,1-Port FDDI Multi-Mode
	PA-F-SM	Port Adapter,1-Port FDDI Single Mode
	PA-H	Port Adapter,1-Port HSSI
	PA-POS-OC3MM	1-Port Packet/SONET OC3c/STM1 Multi-Mode Port Adapter
	PA-POS-OC3SMI	1-Port Packet/SONET OC3c/STM1 Single Mode (IR) Port Adapter
	PA-POS-OC3SML	1-Port Packet/SONET OC3c/STM1 Single Mode (LR) Port Adapter
	PA-T3	1-Port T3 Serial Port Adapter with T3 DSUs
	PA-T3+	1-Port T3 Serial Port Adapter Enhanced
	SA-COMP/1	Service Adapter, Compression (64 VCs Stac)
	SA-COMP/4	Service Adapter, Compression (256 VCs Stac)

**Table 2, Part 2**      **Supported Hardware for the Cisco AS5800 Universal Access Servers (continued)**

Router Shelf	Port Adapter	Description
RS7206VXR Router Shelf	PA-100VG	Single Port 100VG Port Adapter
	PA-12E/2FE	Dual-Wide Ethernet-Switch Port Adapter
	PA-1C-E	1-Port ESCON Channel Port Adapter
	PA-2E3	2-Port E3 Serial Port Adapter with E3 DSU
	PA-2FEISL-FX	2-Port Fast Ethernet/ISL 100BaseTx Port Adapter
	PA-2FEISL-TX	2-Port Fast Ethernet/ISL 100BaseFx Port Adapter
	PA-2H	Port Adapter, 2-Port HSSI
	PA-4B-U	4-Port BRI Port Adapter, U Interface
	PA-4E	Port Adapter, 4-Port Ethernet,10BT
	PA-4R-DTR	Port Adapter, 4-Port Token Ring (Hawkeye Based)
	PA-4T+	Port Adapter, 4-Port Serial,5in1
	PA-5EFL	Port Adapter, 5-Port Ethernet,10FL
	PA-8B-S/T	8-Port BRI Port Adapter, S/T Interface
	PA-8E	Port Adapter, 8-Port Ethernet,10BT
	PA-8T-232	Port Adapter, 8-Port Serial,232
	PA-8T-V35	Port Adapter, 8-Port Serial,V.35
	PA-8T-X21	Port Adapter, 8-Port Serial,X.21
	PA-A1-OC3MM	1-Port ATM OC3 Multi-Mode Port Adapter
	PA-A1-OC3SM	1-Port ATM OC3 Single Mode Intermediate Reach Port Adapter
	PA-A2-4E1XC-E3ATM	CES Port Adapter E3/E1 120 ohms
	PA-A2-4E1XC-OC3SM	CES OC3 Port Adapter 4E1 Ports 120 ohms
	PA-A2-4T1C-OC3SM	ATM CES Port Adapter, 4T1 CES Ports and 1 OC3 ATM SM Port
	PA-A2-4T1C-T3ATM	ATM CES Port Adapter, 4T1 CES Ports and 1 T3 ATM Port
	PA-A3-E3	1-Port ATM Enhanced E3 Port Adapter
	PA-A3-OC3MM	1-Port ATM Enhanced OC3c/STM1 Multi-Mode
	PA-A3-OC3SMI	1-Port ATM Enhanced OC3c/STM1 Single Mode
	PA-A3-OC3SML	1-Port ATM Enhanced OC3c/STM1 Single Mode
	PA-A3-T3	1-Port ATM Enhanced DS3 Port Adapter
	PA-E3	1-Port E3 Serial Port Adapter with E3 DSU
	PA-FE-FX	Port Adapter, 1-Port FE, 100FX
	PA-FE-TX	Port Adapter, 1-Port FE,100TX
	PA-GE	One-Port Gigabit Ethernet PA for 7200VXR
	PA-H	Port Adapter, 1-Port HSSI
	PA-MC-8E1/120	8-Port Multichannel E1 Port Adapter
	PA-POS-OC3MM	1-Port Packet/SONET OC3c/STM1 Multi-Mode Port Adapter
	PA-POS-OC3SMI	1-Port Packet/SONET OC3c/STM1 Single Mode (IR) Port Adapter
	PA-POS-OC3SML	1-Port Packet/SONET OC3c/STM1 Single Mode (LR) Port Adapter

**Table 2, Part 2**      **Supported Hardware for the Cisco AS5800 Universal Access Servers (continued)**

Router Shelf	Port Adapter	Description
<b>RS7206VXR Router Shelf (Continued)</b>	PA-T3	1-Port T3 Serial Port Adapter with T3 DSUs
	PA-T3+	1-Port T3 Serial Port Adapter Enhanced

## Determining the Software Version

For general information about upgrading to a new software release, refer to *Upgrading the Cisco IOS Software Release in Cisco Routers and Modems* located at:

[http://www.cisco.com/warp/public/130/upgrade\\_index.shtml](http://www.cisco.com/warp/public/130/upgrade_index.shtml)

For specific information about upgrading AS5800 IOS software, modem and firmware upgrades, and split dial shelf, refer to the “Provisioning” chapter in the *Cisco AS5800 Operations, Administration, Maintenance, and Provisioning Guide (OAM&P)* at:

[http://www.cisco.com/univercd/cc/td/doc/product/access/acs\\_serv/as5800/sw\\_conf/58\\_oamp/prov.htm](http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/as5800/sw_conf/58_oamp/prov.htm)

## Upgrading to a New Software Release

For general information about upgrading to a new software release, refer to *Upgrading the Cisco IOS Software Release in Cisco Routers and Modems* located at:

[http://www.cisco.com/warp/public/130/upgrade\\_index.shtml](http://www.cisco.com/warp/public/130/upgrade_index.shtml)

## Microcode and Modem Code Software

Microcode software images are bundled with the system software image—with the exception of the Channel Interface Processor (CIP) microcode (all system software images). Bundling eliminates the need to store separate microcode images. When the router starts, the system software unpacks the microcode software bundle and loads the proper software on all the interface processor boards.

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 Cisco.com and the Documentation CD-ROM.

On Cisco.com at:

**Technical Documents: Access Servers and Access Routers: Access Servers: Cisco AS5800: Configuration Documents for Cisco AS5800: Port Firmware**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Access Servers and Access Routers: Access Servers: Cisco AS5800: Configuration Documents for Cisco AS5800: Port Firmware**

To obtain the latest Cisco IOS software release compatible with Cisco MICA portware, refer to the *Cisco AS5x00 MICA 6-Port and 12-Port Modem Module Portware/Cisco IOS Software Compatibility Matrixes* at

[http://www.cisco.com/univercd/cc/td/doc/product/access/acs\\_serv/5300/sw\\_conf/sw\\_ports/compmat/mca12prt.htm](http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/5300/sw_conf/sw_ports/compmat/mca12prt.htm).

## 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.

Cisco IOS Release 12.2(1) XS2 supports the same feature sets as Cisco IOS Release 12.2(1), but Cisco IOS Release 12.2(1) XS2 can include new features supported by the Cisco AS5800 universal access servers.



### Caution

Cisco IOS images with strong encryption (including, but not limited to, 168-bit Triple Data Encryption Standard [3DES] data encryption feature sets) are subject to United States government export controls and have limited distribution. Strong encryption images to be installed outside the United States are likely to require an export license. Customer orders may be denied or subject to delay because of United States government regulations. When applicable, purchaser and user must obtain local import and use authorizations for all encryption strengths. Please contact your sales representative or distributor for more information, or send an e-mail to [export@cisco.com](mailto:export@cisco.com).

[Table 3](#) lists the features and feature sets supported by the Cisco AS5800 universal access servers in Cisco IOS Release 12.2(1) XS2 and uses the following conventions:

- Yes—The feature is supported in the software image.
- No—The feature is not supported in the software image.



### Note

This table might not be cumulative or list all the features in each image. If you have a Cisco.com login account, you can find image and release information regarding features prior to Cisco IOS Release 12.2(1) by using the Feature Navigator tool at <http://www.cisco.com/go/fn>.

**Table 3 Feature List by Feature Set for the Cisco AS5800**

Features	Software Images by Feature Set	
	IP Plus	IPSec 56
<b>Dial</b>		
AAA Session MIB	Yes	Yes
Deutsche Telekom Phase I	Yes	Yes
Dial Modifiers	Yes	Yes
Dialer DNIS-Group Range	Yes	Yes
L2TP Tunnel Management Enhancements	Yes	Yes
Monitoring Resource Availability on Cisco AS5300 Universal Access Servers	Yes	Yes
Monitoring Resource Availability on Cisco AS5x00 Universal Access Servers	Yes	Yes
Network Side ISDN PRI Signaling, Trunking, and Switching	Yes	Yes
Preauthentication with ISDN PRI and Channel-Associated Signaling	Yes	Yes
TCP Clear Performance Optimization	Yes	Yes



**Table 3**     *Feature List by Feature Set for the Cisco AS5800 (continued)*

Features	Software Images by Feature Set	
	IP Plus	IPSec 56
<b>File or System Management</b>		
AutoInstall Using DHCP for LAN Interfaces	Yes	Yes
Circuit Interface Identification MIB	Yes	Yes
Event MIB	Yes	Yes
Individual SNMP Trap Support	Yes	Yes
Interface Index Persistence	Yes	Yes
Parser Cache	Yes	Yes
<b>IP</b>		
NAT—Support for NetMeeting Directory (Internet Locator Service—ILS)	Yes	Yes
<b>Security</b>		
AAA Server Group Deadtimer	Yes	Yes
AAA Server Group Enhancements	Yes	Yes
Cisco AAA Server MIB and Additional Enhancements for the Cisco AS5300 and Cisco AS5800	Yes	Yes
Preauthentication with ISDN PRI	Yes	Yes
Radius Tunnel Attribute Extensions	Yes	Yes
Sticky IP	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 Cisco IOS Release 12.2(1) XS2.

### New Hardware and Software Features in Cisco IOS Release 12.2(1) XS2

There are no new hardware and software features supported by the Cisco AS5800 universal access servers for Cisco IOS Release 12.2(1) XS2.

### New Hardware and Software Features in Cisco IOS Release 12.2(1) XS1

There are no new hardware and software features supported by the Cisco AS5800 universal access servers for Cisco IOS Release 12.2(1) XS1.

## New Hardware and Software Features in Cisco IOS Release 12.2(1) XS

There are no new hardware and software features supported by the Cisco AS5800 universal access servers for Cisco IOS Release 12.2(1) XS.

## MIBs

### Current MIBs

To download MIB modules, go to the Cisco MIB website on Cisco.com at <http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>.

The Cisco AS5800 universal access servers support the following MIBs:

- AAA-SESSION-MIB
- AAA-SERVER-MIB
- ATM-MIB
- CALL-TRACKER-MIB
- CISCO-ATM2-MIB
- CISCO-ATM-IF-PHYS-MIB
- CISCO-ATM-SIG-DIAG-MIB
- CISCO-BULK-FILE-MIB
- CISCO-C8500-REDUNDANCY-MIB
- CISCO-CALL-HISTORY-MIB.my
- CISCO-CIRCUIT-INTERFACE-MIB
- CISCO-DIAL-CONTROL-MIB
- CISCO-DSP-MGMT-MIB
- CISCO-ENTITY-MIB
- CISCO-ENTITY-FRU-CONTROL-MIB
- CISCO-ENVMON-MIB.my
- CISCO-FRAME-RELAY-MIB
- CISCO-ISDN-MIB
- CISCO-MEMORY-POOL-MIB.my
- CISCO-MODEM-MGMT-MIB
- CISCO-PING-MIB
- CISCO-POP-MGMT-MIB
- CISCO-QUEUE-MIB.my
- CISCO-SMI.my
- CISCO-TC
- CISCO TOKEN RING MIB

- CISCO-SYSLOG-MIB
- CISCO-VPDN-MGMT-MIB
- DIAL-CONTROL-MIB
- ENTITY-MIB
- EXPRESSION-MIB
- FDDI-SMT73-MIB
- FSIP-MIB
- IF-MIB.mib
- OLD-CISCO-CPU-MIB
- OLD-CISCO-CHASSIS-MIB
- OLD-CISCO-IP-MIB
- OLD-CISCO-MEMORY-MIB
- PROCESS-MIB
- RFC-1212.mib
- RFC-1215.mib
- RFC1155-SMI.mib
- RFC1213-MIB.mib
- RFC1354-MIB.mib
- RFC1406-MIB
- RFC1407-MIB
- RFC1398-MIB
- RTT Mon MIB
- SONET-MIB

## Caveats for Cisco IOS Release 12.2(1) XS

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

All caveats in Cisco IOS Release 12.2 and Cisco IOS Release 12.2(1) are also in Cisco IOS Release 12.2(1) XS2.

For information on caveats in Cisco IOS Release 12.2, see *Caveats for Cisco IOS Release 12.2*, which lists severity 1 and 2 caveats and select severity 3 caveats and is located on Cisco.com and the Documentation CD-ROM.

Caveat numbers and brief descriptions for Cisco IOS Release 12.2(1) XS2 are listed in Table 4. Release note enclosure that are not visible from Bug ToolKit at this time are included in the tables. For details about a particular caveat, go to Bug Toolkit at:

<http://www.cisco.com/kobayashi/bugs/bugs.html>

To access this location, you must have an account on Cisco.com. For information about how to obtain an account, go to the [“Feature Navigator” section on page 17](#).

**Note**

If you have an account with Cisco.com, you can use Bug Navigator II to find caveats of any severity for any release. To reach Bug Navigator II, **log in** to Cisco.com and click **Service and Support: Technical Assistance Center: Select & Download Software: Jump to a software resource: Software Bug Toolkit/Bug Watcher**. Another option is to go to <http://www.cisco.com/support/bugtools/>.

## Open Caveats—Cisco IOS Release 12.2(1) XS2

There are no open caveats specific to Cisco IOS Release 12.2(1) XS2 that require documentation in the release notes.

## Resolved Caveats—Cisco IOS Release 12.2(1) XS2

All the caveats listed in [Table 4](#) are resolved in Cisco IOS Release 12.2(1) XS2. This table lists only severity 1 and 2 caveats and select severity 3 caveats.

**Table 4**      *Resolved Caveats for Cisco IOS Release 12.2(1) XS2*

Caveat ID Number	Description
CSCdw65903	An error can occur with management protocol processing. Please use the following URL for further information: <a href="http://www.cisco.com/cgi-bin/bugtool/onebug.pl?bugid=CSCdw65903">http://www.cisco.com/cgi-bin/bugtool/onebug.pl?bugid=CSCdw65903</a>

## Open Caveats—Cisco IOS Release 12.2(1) XS1

All the caveats listed in [Table 5](#) are open in Cisco IOS Release 12.2(1) XS1. This table lists only severity 1 and 2 caveats and select severity 3 caveats.

**Table 5**      *Open Caveats for Cisco IOS Release 12.2(1) XS1*

Caveat ID Number	Description
CSCdu69405	After bootup SS7 signalling is up but B channels are not ready
CSCdu69747	SS7 link fluctuates and calls are dropped unnder stress on 5800

**Table 5**    *Open Caveats for Cisco IOS Release 12.2(1) XS1*

<b>Caveat ID Number</b>	<b>Description</b>
CSCdv48950	<p>Very poor (unuseably) upload performance from dialup client modems</p> <p>Symptom: Attempting to upload (port to Egress direction) information larger than a few kilobytes fails or runs extremely slowly.</p> <p>Conditions: This problem occurs on Cisco AS5850 Access Servers running Cisco IOS Release 12.2(02)XB. The upload will start ok with a "normal" packet rate, but the packet rate will very quickly drop to near zero in both directions of the TCPsession. The packet rate can be observed by issuing</p> <p style="text-align: center;"><b>show interfaces async x/y</b></p> <p>where x is the slot number and y is the port (modem) number of the modem the problem is occuring on.</p> <p>Workaround: There is no known workaround.</p> <p>Note: This issue is not seen on the AS5400 and AS5350 platforms.</p>
CSCdv51292	<p>Symptom: Attempting to upload (port to Egress direction) information larger than a few kilobytes fails or runs extremely slowly. Examples of applications affected are ftp and Microsoft Netbios File sharing.</p> <p>Conditions: This problem occurs on Cisco AS5800 or AS5850 Access Servers running:</p> <ul style="list-style-type: none"> <li>• Cisco IOS Release 12.2(01)XS (which has SPE portware version 0.6.108 bundled)</li> <li>• Cisco IOS Release 12.2(02)XB (which has SPE portware 0.7.5.0 bundled)</li> </ul> <p>The upload will start ok with a "normal" packet rate, but the packet rate will very quickly drop to near zero in both directions of the TCP session. The packet rate can be observed by issuing the following command for the Cisco AS5800:</p> <p style="text-align: center;"><b>show interfaces async &lt;shelf&gt;/&lt;slot&gt;/&lt;port&gt;</b></p> <p>For the Cisco AS5850:</p> <p style="text-align: center;"><b>show interfaces async &lt;slot&gt;/&lt;port&gt;</b></p> <p>The SPE portware version can be found by issuing the following command:</p> <p style="text-align: center;"><b>show spe version</b></p> <p>Workaround: There is no known workaround for Cisco IOS Release 12.2(02)XB.</p> <p>For Cisco IOS Release 12.2(01)XS, a workaround is to use SPE portware version 0.6.93.0. This can be loaded into the SPE's with the following configuration command:</p> <pre>(config)#spe &lt;shelf&gt;/&lt;slot&gt;/&lt;spe&gt; &lt;shelf&gt;/&lt;slot&gt;/&lt;spe&gt; (config-spe)#firmware location flash:&lt;filename&gt; (config-spe)#end</pre> <p>where the 0.6.93.0 version of the SPE portware has been copied into flash with the name &lt;filename&gt;.</p>

## Resolved Caveats—Cisco IOS Release 12.2(1) XS1

All the caveats listed in [Table 6](#) are resolved in Cisco IOS Release 12.2(1) XS1. This table lists only severity 1 and 2 caveats and select severity 3 caveats.

**Table 6** *Resolved Caveats for Cisco IOS Release 12.2(1)XS1*

Caveat ID Number	Description
CSCdp66118	Traceback and crash with v.120,X.75,modem,bacp calls
CSCds52880	Spurious memory access made at csm_event_from_isdn reading 0x4
CSCds72317	Alignment errors in ip_hc_context_status
CSCdt82323	Bus error at entry_in_pw_dld_queue
CSCdu01392	Image crashes at datagram_done called from lapb_reset
CSCdu09342	ISDN network-side continuously sends RESTART after user-side reloads
CSCdu10012	TWU7: VPDN tunnels do not came up for Analog calls
CSCdu16158	Idle-timeout on Virtual Profiles breaks some configs
CSCdu33245	During stress test router crash
CSCdu48944	ISDN ERROR aleart on as5800 while traffic going
CSCdu64551	SF Crash - Check_heaps found invalid block in IO mem
CSCdu88651	Memory corruption crash
CSCdv06104	Spurious access and crash in mlp_fastsend_les
CSCdv12625	LAPB-TA frames larger than 1526 bytes are being dropped
CSCdv20100	Buffers memory leak
CSCdv25288	Alignment Error at isdn_call_disconnect
CSCdv35725	Output packets corrupted with CEF, Virtual-Profiles and ISDN
CSCdv42884	CSCdu64551 fix does not work for Marvel platform

## Open Caveats—Cisco IOS Release 12.2(1) XS

All the caveats listed in [Table 7](#) are open in Cisco IOS Release 12.2(1) XS. This table lists only severity 1 and 2 caveats and select severity 3 caveats.

**Table 7** *Open Caveats for Cisco IOS Release 12.2(1) XS*

Caveat ID Number	Description
CSCdv12625	LAPB-TA frames larger than 1526 bytes are being dropped

## Resolved Caveats—Cisco IOS Release 12.2(1) XS

All the caveats listed in [Table 6](#) are resolved in Cisco IOS Release 12.2(1) XS. This table lists only severity 1 and 2 caveats and select severity 3 caveats.

**Table 8**     *Resolved Caveats for Cisco IOS Release 12.2(1) XS*

<b>Caveat ID Number</b>	<b>Description</b>
CSCdu64551	SF Crash - Check_heaps found invalid block in IO
CSCdt25737	Unable to start session on L2TP tunnel that is coming down
CSCdt20687	CSM rejects call to free timeslot
CSCdu73738	Data will not flow with V.120 with flow control set
CSCdu40675	Buffer header leak on as5800
CSCdu69988	Some modems stuck in vdev status(0x00002000)
CSCdu48362	RS Rebooted by watchdog hard reset
CSCdt64496	First LCP packet is dropped by NAS during PPP neg
CSCdt59455	vtty-async virtual-template doesnt work with no peer default ip addr
CSCdu48362	RS Rebooted by watchdog hard reset
CSCdu22255	Crash at acct_periodic_update_data()
CSCdu19484	Invalid memory free action by OSPF causes router crash
CSCdt09214	Spurious memory access at vp_ipfib_fixup+0x20
CSCdt46139	%ALIGN-1-FATAL: Corrupted program counter with virtual-profiles
CSCdt68534	bus error at PC 0x0, address 0x0 - serial_process_receive_packet
CSCds55069	V120 vty sessions are hanging
CSCdt40568	SAPI = 16, without X25 configured
CSCdu69988	Some modems stuck in vdev status(0x00002000)
CSCdu44831	Line card restarts during portware download
CSCds79849	CPUHOG while clearing counters w/large number of PPP sessions

## 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 guides 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 and the Documentation CD-ROM.

Use these release notes with these documents:

- [Release-Specific Documents, page 16](#)
- [Platform-Specific Documents, page 16](#)
- [Feature Modules, page 17](#)
- [Feature Navigator, page 17](#)
- [Cisco IOS Software Documentation Set, page 17](#)

## Release-Specific Documents

The following documents are specific to Cisco IOS Release 12.2 and are located on Cisco.com and the Documentation CD-ROM:

- *Cross-Platform Release Notes for Cisco IOS Release 12.2*

On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.2: Release Notes: Cross-Platform Release Notes**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.2: Release Notes: Cross-Platform Release Notes**

- Product bulletins, field notices, and other release-specific documents on Cisco.com at:

**Technical Documents**

- The [“Caveats for Cisco IOS Release 12.2\(1\) XS” section on page 11](#)

As a supplement to the caveats listed in [Caveats for Cisco IOS Release 12.2\(1\) XS](#) in these release notes, see *Caveats for Cisco IOS Release 12.2*, which contain caveats applicable to all platforms for all maintenance releases of Cisco IOS Release 12.2.

On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.2: Release Notes: Caveats**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.2: Caveats**



### Note

If you have an account with Cisco.com, you can use Bug Navigator II to find caveats of any severity for any release. To reach Bug Navigator II, log in to Cisco.com and click **Service & Support: Technical Assistance Center: Select & Download Software: Jump to a software resource: Software Bug Toolkit/Bug Watcher**. Another option is to go to <http://www.cisco.com/support/bugtools/bugtool.shtml>.

## Platform-Specific Documents

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

- *Read Me First—Cisco AS5800 Universal Access Server*
- Hardware Installation Documents for Cisco AS5800
- Configuration Documents for Cisco AS5800
- *Cisco AS5800 Universal Access Server Regulatory Compliance and Safety Information*

On Cisco.com at:

**Technical Documents: 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 Cisco IOS Release 12.2(1) XS2 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 Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.2: New Feature Documentation**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.2: New Feature Documentation**

## Feature Navigator

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.

Feature Navigator is available 24 hours a day, 7 days a week. To access Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, e-mail the Contact Database Administration group at [cdbadmin@cisco.com](mailto:cdbadmin@cisco.com). If you do not have an account on Cisco.com, go to <http://www.cisco.com/register> and follow the directions to establish an account.

To use 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.

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/fn>

## 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. The Cisco IOS software documentation set is 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 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.

On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.2: Configuration Guides and Command References**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.2: Configuration Guides and Command References**

## Cisco IOS Release 12.2 Documentation Set Contents

[Table 9](#) lists the contents of the Cisco IOS Release 12.2 software documentation set, which is available in electronic form and in printed form if ordered.



### Note

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

On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.2**

On the Documentation CD-ROM at:

**Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.2**

**Table 9 Cisco IOS Release 12.2 Documentation Set**

<b>Books</b>	<b>Major Topics</b>
<ul style="list-style-type: none"> <li><i>Cisco IOS Configuration Fundamentals Configuration Guide</i></li> <li><i>Cisco IOS Configuration Fundamentals Command Reference</i></li> </ul>	Cisco IOS User Interfaces File Management System Management
<ul style="list-style-type: none"> <li><i>Cisco IOS Bridging and IBM Networking Configuration Guide</i></li> <li><i>Cisco IOS Bridging and IBM Networking Command Reference, Volume 1 of 2</i></li> <li><i>Cisco IOS Bridging and IBM Networking Command Reference, Volume 2 of 2</i></li> </ul>	Transparent Bridging SRB Token Ring Inter-Switch Link Token Ring Route Switch Module RSRB DLSW+ Serial Tunnel and Block Serial Tunnel LLC2 and SDLC IBM Network Media Translation SNA Frame Relay Access NCIA Client/Server Airline Product Set DSPU and SNA Service Point SNA Switching Services Cisco Transaction Connection Cisco Mainframe Channel Connection CLAW and TCP/IP Offload CSNA, CMPC, and CMPC+ TN3270 Server
<ul style="list-style-type: none"> <li><i>Cisco IOS Dial Technologies Configuration Guide: Dial Access</i></li> <li><i>Cisco IOS Dial Technologies Configuration Guide: Large-Scale Dial Applications</i></li> <li><i>Cisco IOS Dial Technologies Command Reference, Volume 1 of 2</i></li> <li><i>Cisco IOS Dial Technologies Command Reference, Volume 2 of 2</i></li> </ul>	Dial Access Modem and Dial Shelf Configuration and Management ISDN Configuration Signaling Configuration Point-to-Point Protocols Dial-on-Demand Routing Dial Backup Dial Related Addressing Service Network Access Solutions Large-Scale Dial Solutions Cost-Control Solutions Internetworking Dial Access Scenarios
<ul style="list-style-type: none"> <li><i>Cisco IOS Interface Configuration Guide</i></li> <li><i>Cisco IOS Interface Command Reference</i></li> </ul>	LAN Interfaces Serial Interfaces Logical Interfaces
<ul style="list-style-type: none"> <li><i>Cisco IOS IP Configuration Guide</i></li> <li><i>Cisco IOS IP Command Reference, Volume 1 of 3: Addressing and Services</i></li> <li><i>Cisco IOS IP Command Reference, Volume 2 of 3: Routing Protocols</i></li> <li><i>Cisco IOS IP Command Reference, Volume 3 of 3: Multicast</i></li> </ul>	IP Addressing IP Services IP Routing Protocols IP Multicast
<ul style="list-style-type: none"> <li><i>Cisco IOS AppleTalk and Novell IPX Configuration Guide</i></li> <li><i>Cisco IOS AppleTalk and Novell IPX Command Reference</i></li> </ul>	AppleTalk Novell IPX

**Table 9 Cisco IOS Release 12.2 Documentation Set (continued)**

<b>Books</b>	<b>Major Topics</b>
<ul style="list-style-type: none"> <li><i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Configuration Guide</i></li> <li><i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Command Reference</i></li> </ul>	Apollo Domain Banyan VINES DECnet ISO CLNS XNS
<ul style="list-style-type: none"> <li><i>Cisco IOS Voice, Video, and Fax Configuration Guide</i></li> <li><i>Cisco IOS Voice, Video, and Fax Command Reference</i></li> </ul>	Voice over IP Call Control Signaling Voice over Frame Relay Voice over ATM Telephony Applications Trunk Management Fax, Video, and Modem Support
<ul style="list-style-type: none"> <li><i>Cisco IOS Quality of Service Solutions Configuration Guide</i></li> <li><i>Cisco IOS Quality of Service Solutions Command Reference</i></li> </ul>	Packet Classification Congestion Management Congestion Avoidance Policing and Shaping Signaling Link Efficiency Mechanisms
<ul style="list-style-type: none"> <li><i>Cisco IOS Security Configuration Guide</i></li> <li><i>Cisco IOS Security Command Reference</i></li> </ul>	AAA Security Services Security Server Protocols Traffic Filtering and Firewalls IP Security and Encryption Passwords and Privileges Neighbor Router Authentication IP Security Options Supported AV Pairs
<ul style="list-style-type: none"> <li><i>Cisco IOS Switching Services Configuration Guide</i></li> <li><i>Cisco IOS Switching Services Command Reference</i></li> </ul>	Cisco IOS Switching Paths NetFlow Switching Multiprotocol Label Switching Multilayer Switching Multicast Distributed Switching Virtual LANs LAN Emulation
<ul style="list-style-type: none"> <li><i>Cisco IOS Wide-Area Networking Configuration Guide</i></li> <li><i>Cisco IOS Wide-Area Networking Command Reference</i></li> </ul>	ATM Frame Relay SMDS X.25 and LAPB
<ul style="list-style-type: none"> <li><i>Cisco IOS Mobile Wireless Configuration Guide</i></li> <li><i>Cisco IOS Mobile Wireless Command Reference</i></li> </ul>	General Packet Radio Service

**Table 9** Cisco IOS Release 12.2 Documentation Set (continued)

Books	Major Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Terminal Services Configuration Guide</i></li> <li>• <i>Cisco IOS Terminal Services Command Reference</i></li> </ul>	ARA LAT NASI Telnet TN3270 XRemote X.28 PAD Protocol Translation
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Configuration Guide Master Index</i></li> <li>• <i>Cisco IOS Command Reference Master Index</i></li> <li>• <i>Cisco IOS Debug Command Reference</i></li> <li>• <i>Cisco IOS Software System Error Messages</i></li> <li>• <i>New Features in 12.2-Based Limited Lifetime Releases</i></li> <li>• <i>New Features in Release 12.2 T</i></li> <li>• <i>Release Notes</i> (Release note and caveat documentation for 12.2-based releases and various platforms)</li> </ul>	

## Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

### World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

### Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

## Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products Marketplace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

## Documentation Feedback

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

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

## Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

### Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

<http://www.cisco.com/tac>

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

<http://www.cisco.com/register/>

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

<http://www.cisco.com/tac/caseopen>

### Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

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This document is to be used in conjunction with the documents listed in the [“Related Documentation”](#) section on page 15.

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