Doc. No. 78-3320-01

Release Notes for Cisco 750 Series Routers Software Release 3.1(5)

April 8, 1996

This document provides additional information about Cisco 750 software up to and including Software Release 3.1(5). Refer to the *Cisco 750 Series Command Reference* publication for complete software documentation for Software Release 3.1(1). This document also includes some corrections and modifications to the *Cisco 750 Series Command Reference* publication.

System Support

Cisco 750 Software Release 3.1(5) is supported on the Cisco 750 series routers.

Software Release 3.1(5) Enhancements

Software Release 3.1(5) contains the following software enhancements over Software Release 3.0:

- Point-To-Point (PPP) callback
- Support for system and profile names that can be up to 20 alphanumeric characters
- Support for telephone numbers that can be up to 32 digits
- Support for passwords and secrets that can be up to 25 alphanumeric characters
- Ping support, with the **ping** command
- Support for Cisco ConnectPro, a graphical user interface (GUI) configuration utility for PCs running Windows 3.1, DOS 5.0 or greater, Windows 95, or Windows NT

Upgrading to Software Release 3.1(5)

Take the following steps, to upgrade to Software Release 3.1(5):

Step 1 Save the present configuration settings in the Cisco 750 series router to a file before you install the new software. (See the **upload** command in the *Cisco 750 Series Software Command Reference* publication for instructions.)

Step 2 Load the new software into the Cisco 750 series router. (See the **software load** command in the *Cisco 750 Series Software Command Reference* publication for instructions.)

Step 3 Send the file of saved configuration parameters to the serial port using terminal emulation software. (The terminal emulation software must be set to output the data at a rate that the router can interpret.) (See the next section, "Saving and Restoring Configuration and Loading New Software.")

Saving and Restoring Configuration and Loading New Software

The following steps are an example of setting the data rate using Terminal for Windows, a popular terminal emulation software program.

Step 1 When the terminal emulation program is running, enter the following command but do not press Return when you have entered it.

UPL

Step 2 Select Receive Text File from the Transfer menu.

Step 3 In the Receive Text dialog box, select the directory to which you want to save the file. Remember to specify a file name.

Step 4 Click on **OK**.

Step 5 When you return to the terminal emulation program, press **Return**. (All parameters will be captured to the file specified in Step 3.)

Step 6 Click **Stop**.

Step 7 Read and follow the **software load** command instructions.

Step 8 When the new software has been loaded, you can load the saved configuration to the router.

Step 9 From the terminal emulation program, select Text Transfer from the Setting menu.

Step 10 In the Text Transfer dialog box, set flow control to Line at a Time and set Delay Between Lines to 0.5 to 1 second.

Step 11 Click on **OK.** (Note that you should enter seconds for this value when you are downloading software.)

Step 12 Select Send Text File from the Transfer menu.

Step 13 Select the file that you saved in Step 3.

Step 14 Click on **OK**. (Parameters will now transfer to your router.)

Step 15 If any errors occur during this transfer process, enter the **set default** command, increase the delay between lines, and return to Step 7.

Software Release 3.1(5) Modifications

This section describes Software Release 3.1(5), which includes the following corrections from Software Release 3.1(1) software release. Each software correction includes the Cisco DDTS tracking number.

1 When a call was rejected by the Cisco 753 router (with the switch type set to 5ESS) because the receiver was off the hook, or another call in progress, a busy message was not returned to the switch in response to the setup. Software Release 3.1(5) now sends the correct release-complete message to the switch (with cause user busy). (CSCdi52902)

2 In software releases, earlier than 3.1(5), if the receiver was left off the hook on a telephone connected to a Cisco 753 router after the switch disconnected the call, the Cisco 753 router would not reject incoming calls. Software Release 3.1(5) now rejects these calls by sending a release-complete message to the switch (with cause user busy). (CSCdi52753)

3 When using the PPP callback feature, the router may make the callback and connect the ISDN call but not succeed in opening the connection as indicated by the lack of an Add Channel To Connection log calls message. When this occurs, the speed of the call in **show status** was listed as auto and data was actually being transmitted at 56 kbps. If the router receiving the callback answers at 64 kbps then no data was transmitted. Software Release 3.1(5) now lists the speed as 56 kbps or 64 kbps. (CSCdi52434)

4 The CB-900 TPH (Australia) version did not correctly include the assigned channel ID in the connect message to the switch. The connection was rejected by the switch (with the message "Mandatory IE Missing"). Software Release 3.1(5) now assigns the proper channel. (CSCdi52392)

5 Caller ID was not captured in an incoming setup message if the sending complete IE was included by the switch. Software Release 3.1(5) now includes the proper caller ID. (CSCdi52348)

6 The full product name did not display in the version string. Software Release 3.1(5) now includes the full product name in the version string. (CSCdi52333)

7 The command line interface (CLI) would accept the command **set ppp authen outgoing** as a valid command when it was invalid (you need to specify NONE, CHAP, PAP, or a combination of the three). Software Release 3.1(5) corrects this problem. (CSCdi52226)

8 If only the LAN profile had an IP address (and the Internal and WAN profiles did not), SNMP trap messages were not sent out. Software Release 3.1(5) now includes the SNMP trap messages for the LAN profile. (CSCdi52083)

9 Occasionally, the cause value was being taken from the wrong part of an ISDN message resulting in an incorrect cause value being reported by the **log calls** command. Software Release 3.1(5) corrects this problem. (CSCdi51934)

10 When making outgoing calls with encapsulation set to PPP, the **show connections** command did not display the connected telephone numbers. Software Release 3.1(5) corrects this problem. (CSCdi51800)

11 If the **set ppp neg** count was 0 and multidestination is set to off, then a link was opened without negotiating PPP. Software Release 3.1(5) corrects this problem. (CSCdi50938)

12 Only the IP address of the Internal profile was returned to the ipAddrTable. If the IP address of the Internal profile was not set, an incorrect IP address was returned. Software Release 3.1(5) corrects this problem. (CSCdi50923)

13 Information in the **show status** command did not align under the headings. Software Release 3.1(5) corrects this problem. (CSCdi50805)

14 Appletalk file transfers would stop when large files were being transferred. Software Release 3.1(5) corrects this problem. (CSCdi50432)

15 If a configuration request was received by PPP in the open state, an internal memory buffer was lost. PPP negotiation failed on the new call and a **show status** would indicate link 0 and connection 0. Software Release 3.1(5) corrects this problem. (CSCdi50398)

16 If PS-1 detect option was set to on and the line was pulled out and reinserted after one second, the ISDN line would not activate. Software Release 3.1(5) corrects this problem(CSCdi50299)

17 In the **set ip route** command, if the destination was entered without specifying the number of network bits in the address, a default of 32 (host route) was used. Software Release 3.1(5) now uses the default value corresponding with the class (A, B, or C). (CSCdi50288)

18 Callbacks failed if there were two different ringback numbers. With the Combinet Packet Protocol (CPP), there was no callback initiated for the second channel. With PPP, callback was continuously initiating a callback to the second channel, but using the ringback number for the first channel (which is then rejected because the first channel is already in use or busy). Software Release 3.1(5) corrects this problem. (CSCdi50252)

19 The **set ipx route destination** command was not included in the help text. Software Release 3.1(5) now includes this command in its help text. (CSCdi50248)

20 When the IP RIP version was changed from BOTH to VER1, outgoing RIP packets were dropped because they were being sent to 0.0.0.0. Software Release 3.1(5) now uses the proper subnet broadcast address. (CSCdi50240)

21 When 65,535 packets were sent to a router running Cisco IOS software from a Cisco 750, the router running Cisco IOS software stopped accepting data from the Cisco 750. Software Release 3.1(5) corrects this problem. (CSCdi50238)

22 If IP address 0.0.0.0 was used during IP Unnumbered negotiation, this caused a problem with routers running Cisco IOS software and IP Unnumbered negotiation. Software Release 3.1(5) corrects this problem. (CSCdi50220)

23 PPP callback entered into a loop (each router continuously makes callbacks) when both routers had PPP reply and request set to on. Software Release 3.1(5) corrects this problem. (CSCdi50218)

24 Multilink failures did not generate an error message. Software Release 3.1(5) now generates multilink failure messages. (CSCdi50182)

25 Static IPX routes and services were not sent to ConnectPro by the router software. Software Release 3. (5) now sends static IPX routes and services. (CSCdi50086)

26 Normally, the **show ip route** command displays the IP routing table, and indicates in the Source column whether the route was received through RIP in a static route, or whether the route was a direct route to a connected network. In Software Release 3.1(4.2), direct routes were displayed as RIP. Software Release 3.1(5) now displays the routes correctly. (CSCdi49836)

27 The Cisco 750 router sent a protocol rejection for spanning tree updates. PPP specification states that if a device is not participating in spanning tree, it should silently discard spanning tree updates received, not send a protocol-reject message. Software Release 3.1(5) now silently discards received spanning tree updates and does not send a protocol-reject message. (CSCdi49716)

28 The **reset packets** command for a WAN connection did not clear the count of corrupted packets. Software Release 3.1(5) now clears the count of corrupted packets. (CSCdi49425)

29 When a **set defaults** command was issued with a PPP connection in a call connected state (active), the system paused indefinitely in the middle of setting the defaults. Software Release 3.1(5) corrects this problem. (CSCdi49238)

30 When using CHAP authentication, if a second CHAP-SUCC packet was received the system might pause indefinitely. Software Release 3.1(5) now corrects this problem. (CSCdi49129)

31 Occasionally, when entering the **upload** command in a Telnet session, the session might pause indefinitely. Software Release 3.1(5) corrects this problem. (CSCdi49015)

32 When a link was already connected to a profile and a **call** command was issued (expecting the first link number from the profile instead of the second link number), if the remote system had different numbers for the two channels this may cause the call to fail. Software Release 3.1(5) corrects this problem. (CSCdi48641)

33 For CPP calls using callback, the profile ID was incorrectly set. Software Release 3.1(5) corrects sets the profile ID. (CSCdi48557)

34 Depending on the options negotiated by the remote Telnet client, passwords might echo when the router was managed remotely through a Telnet session. Software Release 3.1(5) corrects this problem. (CSCdi48384)

35 When using the **upload** command over a Telnet session or remote login, the output was corrupted. Software Release 3.1(5) provides increase buffering to correct this problem. (CSCdi48363)

36 If a **set profile id** command was entered in a user profile that was already active, a further deactivation and reactivation of the profile or a reboot was required for the profile ID change to take effect. Software Release 3.1(5) corrects this problem. (CSCdi48360)

37 Packets from a Cisco 750 series router over an unnumbered interface were sent with a source address of 0.0.0.0. (This would include ping packets, SNMP, ping responses, and Telnet). Software Release 3.1(5) corrects this problem. (CSCdi48126)

38 The **set profile id 000000000000** command, which was output by the **upload** command for profiles that do not have a profile ID set, was rejected as being a duplicate Ethernet address. Software Release 3.1(5) corrects this problem. (CSCdi47926)

39 Routers occasionally experienced problems during callback. Software Release 3.1(5) corrects this problem. (CSCdi47833)

40 The system could pause indefinitely or fail to send data packets, or calls may connect but the connection may not open. Software Release 3.1(5) corrects this problem.

41 The **upload** command would upload the IP static routes before the IP addresses of the router. This would cause an error message when you tried to reload the static routes on the router. Software Release 3.1(5) corrects this problem. (CSCdi46828)

42 The **logout** command did not properly terminate a remote Telnet session. Software Release 3.1(5) corrects this problem. (CSCdi46825)

43 The number of interfaces returned by SNMP did not reflect the number of user profiles configured on the router. Software Release 3.1(5) now corrects this problem. (CSCdi46822)

44 Occasionally, there was incorrect routing information, such as next-hop address, subnet mask and routing protocol, returned by SNMP. Software Release 3.1(5) corrects this problem. (CSCdi46797)

45 When a default route (destination 0.0.0.0/0) was on an unnumbered interface (IP address 0.0.0.0), the route was not included in the **upload** command output and was listed in the debug output as direct (a route that exists because of an interface), rather than static. Software Release 3.1(5) corrects this problem. (CSCdi44160)

46 If a large number of profiles had been configured on the router, and SNMP linkup traps were enabled, on startup, the large number of SNMP traps required by the SNMP trap host could prevent all the user profiles from becoming activated. Software Release 3.1(5) corrects this problem. (CSCdi43939)

47 SNMP trap messages were not queued; any SNMP trap after the first three were dropped. Software Release 3.1(5) corrects this problem. (CSCdi43936)

48 If SNMP traps were turned on without a valid IP address being set, the IP stack could run out of memory, halting the IP routing and TCP/IP functions in the router. Software Release 3.1(5) corrects this problem. (CSCdi43933)

49 Filter patterns ignored anything after the first byte of insignificant characters. Software Release 3.1(5) corrects this problem. (CSCdi43929)

50 Pattern names could not include numeric characters. Software Release 3.1(5) accepts numeric characters in pattern names. (CSCdi43928)

51 The **show ip filter** display was occasionally incomplete. Software Release 3.1(5) corrects this problem. (CSCdi43850)

52 The **set ip netmask** and **set subnet** commands would accept illegal values for the mask (such as 255.255.255.255 and 0.0.0.1). Software Release 3.1(5) corrects this problem. (CSCdi43420)

53 Cisco 750 series routers cease to place calls to an Ascend MAX router during callback. This occurs after numerous hours and hundreds of calls. Software Release 3.1(5) corrects this problem. (CSCdi52875)

Software Release 3.1(5) Caveats

This section describes unexpected behavior by Cisco 750 Software Release 3.1(5). When possible, each software caveat includes the Cisco DDTS tracking number.

1 Software Release 3.1(5) does not support the checksum verification option offered with NetWare 4.x. If you are using NetWare 4.x, configure NetWare to ignore the checksum verification option. (CSCdi43901)

2 The LAN LED on Cisco 750 series routers will turn off if the routers do not receive any packets. The timeout period for Cisco 750 series routers is one to two minutes.

3 When using TACACS with the CiscoPro Connection Manager product, you must type in the password within two minutes to prevent a line integrity violation from occurring.

4 If Connection Manager registers the router while a ConnectPro session is running, you should reboot the router to log in to ConnectPro, again.

5 In Software Release 3.1(5), snapshot IP and IPX parameters are not supported. (CSCdi46589)

6 When you download configuration information using the console port, you must slow down the download process to avoid an overrun of configuration information (a one second delay is recommended). Failure to include an appropriate delay may result in the user interface pausing indefinitely, perhaps requiring manual power-cycling of the router to recover. (CSCdi49689)

7 PPP callback fails to connect consistently and possibly takes several retries before connection. This is caused by delays in the network clearing calls end to end. You can resolve this problem by setting PPP callback request to Always. (CSCdi53068)

8 For PPP, the Cisco 750 series routers require that positive identification be obtained before adding the second link to a multilink connection. This can be EPD or Authentication. When a channel is connected, all other calls must have EPD or Authentication. This applies to incoming and outgoing calls. Note that routers running Cisco IOS software do not support EPD and must be authenticated. A log message indicates when a link has been rejected due to this requirement. (CSCdi53111)

9 Netware 4.x servers in the same domain over the ISDN WAN link will keep the B channel up continuously because of NDS traffic. Attempting to filter out the NDS traffic will result in loss of communication between the remote server and the services from the domain. (CSCdi44240)

10 IP configuration require a reboot for parameters to take affect. (CSCdi53178)

11 If a router has an IPX routing connection and encapsulation is changed from PPP to CPP (or from CPP to PPP), IPX routing may cease. To clear this problem, deactivate the connected profiles on both the local and remote routers, and then reactivate the profile. (CSCdi51147)

12 If PPP attempts to make two callbacks simultaneously using authentication information to retrieve the numbers, the second call may fail if the link two number is different from the link one number. This happens when the original call was made using the **call** command to make two simultaneous calls. To avoid this problem allow the first link to call back prior to making the second channel call. Alternatively, you may clear the called number field in the router making the callback and set the ringback number on the router making the original call. (CSCdi51953)

13 In some cases, a dual tone multifrequency (DTMF) command will indicate success on the phone LED of Cisco 750 series routers even when the command has failed. (CSCdi42944)

14 If a call is made to a destination that has two different telephone numbers and the first link is disconnected by entering a **disconnect** command, the next **call** command will use the telephone number of the second link. This call will subsequently be rejected because the telephone number is already in use by the second link. This problem does not occur if calls are set to demand. (CSCdi52212)

Documentation Corrections and Modifications to the Product Documentation

This section describes corrections and modifications to the *Cisco 750 Series Command Reference* publication for Software Release 3.1(5).

- In some cases, a dual tone multifrequency (DTMF) command will indicate success on the phone LED on the router even when the command has failed.
- The **set bump** command is not supported in Software Release 3.1(5).
- The braces ({ }) are not included in the command syntax in Software Release 3.1(5).
- The **set baud** command can include baud rates of 300 and 4800.
- The syntax for the **help** command is as follows:

  HElp [<**cmd**>] [<**modifier**>]

- The syntax for the **set dtmf directory** *number* command is as follows:

  **03 1|2 [<number>* [<subaddress>]]#

  The 1|2 refers to the Service Provider Identifier (SPID) numbers, not the channel numbers.

- The **set dtmf number** command is included in Software Release 3.1(5). The syntax is as follows:

  **04 1|2 [<number>* [<subaddress>]]#

  This command specifies the telephone number(s) that each link will call, either with on-demand calling or with the **call** command (unless you specify a number within the **call** command) Use this command to set a telephone number before you use the on-demand calling feature (enabled with the **set auto** command).

- The **show ethernet** command is included in Software Release 3.1(5). The syntax is as follows:

  SHow **ET**her

  This command reports the performance of the Ethernet interface. The report provides information on different kinds of errors and interface traffic. The numbers in this report have accumulated since the router was last powered up.

- The **show type** command is included in Software Release 3.1(5). The syntax is as follows:

  SHow **TY**pe

  This command displays type filters. Ethernet packets contain a two-byte type field that describes the protocol type of the packet.

- PPP compression is not supported in Software Release 3.1(5). The **set compression** command has been modified to **set cpp compression**.

The following commands are included in this software release:

- **Set Bridging** command

  The syntax is as follows: **SEt BRidging=ON|OFf**

  Description: determines what to do with packets which cannot be routed.

  ON the packet will be bridged based on MAC address and any other filters currently active

  OFF packets will be dropped

- **Set Callback ID** command

  The syntax is as follows: **SEt CALLBACKid ON|OFf**

  Description: sets the callback security checking mode

  ON the unit will accept an initial call from a remote device

  OFF no calls will be accepted

- **Set Callback** command

  The syntax is as follows: **SEt CAllback ON|OFf**

  Description: sets the unit's callback mode. This command applies only to CPP calls. To set the callback mode for PPP calls, use the

  Set PPP Callback command.

  ON the unit will accept an initial call from a remote device, disconnect's the call, then calls back the remote device.

  OFF no callbacks are made

- **Set Caller ID** command

  The syntax is as follows: **SEt CALLrid ON|OFf**

  Description: controls the unit's CALLER ID security checking

  ON when an initial call is made from a remote device, the calling unit's Caller ID number is checked against the list of number set with the command **Set Caller ID Receive Number**.

  OFF no caller ID checking is performed

- **Set Caller ID Receive Number** command

  The syntax is as follows: **SEt CALLIdreceive=<number>**

  Description: enters the phone numbers from which the unit will receive calls when the **Set Caller ID** command is set to ON.

- **Set Compression** command

  The syntax is as follows: **SEt CPP COmpression =STac| OFf**

  Description: turns unit compression on and off.

  STAC turns compression on

  OFF turns compression off

- **Set Negotiation Abort** command

  The syntax is as follows: **SEt CPp NEgotiation Abort <DIsconnect|Preset>**

  Description: sets the action the unit will take if the negotiation process fails

  Disconnect the unit will disconnect if negotiation fails

  Preset the unit will remain connected (using the protocol that has been set with the **Set Protocol** command

- **Set Negotiation Count** command

  The syntax is as follows: **SEt [CPp|PPp] NEgotiation COunt <attempts>**

  Description: sets the number of times the unit will attempt negotiation

- **Set Negotiation Integrity** command

  The syntax is as follows: **SEt [CPp|PPp] INtegrity <seconds> |OFf**

  Description: sets the time between ISDN line integrity packets for the unit

- **Set Negotiation Retry** command

  The syntax is as follows: **SEt [CPp|PPp] Retry <milliseconds>**

  Description: sets the interval between negotiation attempts.

Cisco Connection Online

Cisco Connection Online (CCO), formerly Cisco Information Online (CIO), is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional content 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, 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, Internet e-mail, and fax download options, and 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 access CCO in the following ways:

- WWW: `http://www.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 baud rates up to 14.4 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`.

This document is to be used in conjunction with the *Cisco 750 Series Command Reference* publication.

962R