



System Requirements

Installation and Configuration

This chapter lists system requirements for running the Belgium country feature package on SDS and VCO platforms operating with system V3.3 through V5.x. These requirements are categorized by hardware, firmware, and software. For any site-specific concerns, contact Cisco as described in the preface.

The Belgium country feature package consists of the following components:

- Digital Tone Generator (DTG) card or DTG-2 card
- Call Progress Analyzer (CPA) or Service Platform (SPC) cards, software-configured for CPA (displayed as SPC-CPA)
- SPC card software-configured for DTMF (displayed as SPC-DTMF)
- Diskette for the CPA and SPC cards containing the download files



Note

Service circuit cards must occupy only one resource group in the Resource Group Summary screen; further, different card types cannot share the same resource group. Use either the SPC or the CPA card (but not both) if your system requires CPA service circuit functionality.

Hardware Requirements

Refer to the *Cisco VCO/4K Tone Plan Release Notes* for the A-law and Mu-law rules and timing rules governing the hardware configurations of cards with jumpers/DIPs, and the software configuration of cards without jumpers/DIPs.

Refer to the *Cisco VCO/4K Card Technical Descriptions* for each service circuit card and for each network card for jumper and DIP switch settings.

Firmware Requirements

Refer to the *Cisco VCO/4K Tone Plan Release Notes* for information regarding system firmware requirements particular to the Belgium country feature package.

Refer to your system release notes for step-by-step instructions to install firmware on either the DTG-2 mezzanine card, or DTG card.

Software Requirements

Refer to the *Cisco VCO/4K Tone Plan Release Notes* for information regarding system software requirements particular to the Belgium country feature package.

System software V5.1 FSR00 PUN21, or higher, is required to operate the Belgium SPC software on the SPC.

Call Progress Analyzer and Service Platform Card Downloads

Your country feature package contains a 3.5-inch diskette containing two directories. These directories contain Call Progress Analyzer (CPA) and Service Platform Card (SPC) download files. The two directories are named PRE-P24 and POST-P24. The following files are included in each directory:

cpa.dwn
cpa.nor
cpa.spc
cpa.sit
cpa.ctg
dtmf.spc

Copy the PRE-P24 directory contents to your system's C:/BOOT directory if you are using system software that is at least V5.0, but not greater than V5.1 FSR00 PUN23. Copy the POST-P24 directory contents to your system's C:/BOOT directory if you are using system software V5.1 FSR00 PUN24, and higher.

In addition, if you are using system software V4.2 FSR00 PUN28 and lower, copy only the cpa.dwn file to the C:/BOOT directory.

Refer to the *Cisco VCO/4K System Administrator's Guide* for step-by-step instructions to copy the above files to your system's C:/BOOT directory.



Note

Always wear a wrist strap when installing software and handling system components.

The files are now loaded onto your hard disk. Complete the installation by loading the files from the hard disk to the cards. The method of loading depends on whether it is for a new installation or for an existing installation. For new installations, refer to the "Loading the Software onto Cards—New Installations" section on page 1-2; for existing installations, refer to the "Loading the Software onto Cards—Existing Installations" section on page 1-3.

Refer to the *Cisco VCO/4K System Administrator's Guide* for step-by-step instructions as you complete this installation procedure.

Loading the Software onto Cards—New Installations

To load files from the hard disk to cards on a new installation, follow these steps:

- Step 1** Access the Card Maintenance screen from the Maintenance Menu screen, and add the CPA (the console displays this choice as Call Progress Analyzer) or the SPC (the console displays this choice as either SPC-CPA or SPC-DTMF) to the database by using the A command, if you have not already done so.
- Step 2** Insert your card, either the CPA or the SPC, into the appropriate slot. The card automatically runs internal diagnostics. One of two results follow, dependent upon which card you have inserted.

**Caution**

Do not unseat or otherwise disturb the card while running internal diagnostics.

- For the CPA, the LEDs display the transition from off (all LEDs unlighted) to on (the red and yellow unlighted and the green lighted).
- For the SPC, the LED matrix display transitions from off (all LEDs unlighted) to on (the LED matrix lights the letters S, P, and C one at a time repeatedly; the lower right LED changes from unlighted to lighted repeatedly).

Step 3 Activate the card using the C command from the Card Maintenance screen. The card takes the download. The service circuit spans are active, as can be seen from the Card Maintenance screen.

**Caution**

Do not unseat or otherwise disturb the card while it is downloading.

Step 4 Verify the received FRM225, FRM226, FRM241, and FRM242 messages in your log file to ensure that the card has taken the download.

For the SPC, verify two additional messages in the log file—“Begin downloading spec file C:/boot/xxx.xxx” and “End downloading spec file C:/boot/xxx.xxx.” The CPA does not have these, or any other, additional log file messages.

Step 5 Create a resource group for the CPA or the SPC service circuits.

You have completed the software installation.

Loading the Software onto Cards—Existing Installations

To load files from the hard disk to cards on an existing installation, follow these steps.

**Caution**

This process disrupts in-progress calls and removes service circuits from operation for a few minutes.

Step 1 Access the Card Maintenance screen from the Maintenance Menu screen, and take either the CPA card or the SPC service circuits out of service (OOS), if you have not already done so.

If you have a CPA, unseat it, wait 15 seconds, then insert the card into its slot. The SPC does not require, or allow, this action.

Step 2 Activate the CPA or the various SPC service circuits using the C command from the Card Maintenance screen.

**Caution**

Do not unseat or otherwise disturb the card while it is downloading.

Step 3 Verify received download messages in your log file in order to ensure that the card has taken the download. The messages you need to verify are dependent upon which card type you are using.

- For the CPA, verify the received FRM225, FRM226, FRM241, and FRM242 messages.
- For the SPC, verify the following two messages—“Begin downloading spec file C:/boot/xxx.xxx” and “End downloading spec file C:/boot/xxx.xxx.”

**Note**

The SPC does not take a redownloading of the spc.dwn file.

You have completed the software installation.

Typical System Software Configurations

This section lists typical system software configurations used with the Belgium country feature package. For more information on how to use and configure the various system software screens and menus, refer to the *Cisco VCO/4K System Administrator's Guide*.

Database Administration

Special considerations pertain to the following Database Administration screens.

Card Summary Menu

The Card Summary menu displays the status and port availability of E1, 4xE1, and ICC cards. To assign operating characteristics to E1 spans, access the Configuration screen for that card from the Card Summary menu.

**Note**

The term “E1 span” designates E1 and 4xE1 cards, or ICC cards with associated ICC-E1-I/O module.

Resource Group Summary Menu

To optimize outgoing call system performance, group E1 span outgoing ports into one or more resource groups.

Inpulse and Outpulse Rule Screen

For information about inpulse and outpulse rule tokens, refer to the *Cisco VCO/4K System Administrator's Guide*.

Answer Supervision Template Screen

Refer to “Tone Detection” section on page 2-2 for information on the answer supervision template function.

Maintenance

Note the following when using the Card Maintenance screen.

Card Maintenance Screen

Use the Card Maintenance screen to add, delete, and change the card/port status for E1 spans. When an E1 span is added to the Card Maintenance screen, its span type is set to CAS/R2 by default.

For E1 spans set to CAS/R2, ports 1 and 17 of the card's 32 ports are reserved. Port 1 (Channel 0) carries the frame alignment pattern, remote alarm indication bit, and national-use bits. Port 17 (Channel 16) carries the multiframe alignment pattern, extra bits, and channel-associated signaling bits.

For 4xE1 and ICC cards, set the span type to CCS/31B from the Card Summary menu in order to use port 17 as a bearer port. Use E1-31B firmware on E1 cards in order to use port 17 as a bearer port.

Diagnostics

Note the following when using the Diagnostics screens.

Card Display Screen

The Card Display screen lists the operating status of E1 spans. Information on the Card Display screen varies according to card type and span type.

Port Display Screen

The Port Display screen lists the processing states, rule processing, links, paths, and digit collection activity of E1 spans.

Test Port Card Screen

The Test Port Card screen tests individual E1 channels. A path is set up between three elements—the selected E1 channel(s), the Service Platform Card-Dual Tone Multifrequency (SPC-DTMF) card or DTMF Receiver Card (DRC), and a Digital Tone Generator (DTG) channel. The system compares the signals sent by the DTG card with the signals received by the SPC-DTMF card or the DRC and reports discrepancies. You can test all channels on an E1 span with one command. You can select the E1 span for port card diagnostic tests. The E1 span enters a local loopback mode during the test and sends out an all 1s (ones) pattern.

Test Service Circuit Screen

The Test Service Circuit screen tests DRC and SPC-DTMF service circuits.

Host Commands and Reports

The host commands and reports are documented in the *Cisco VCO/4K Standard Programming Reference* and the *Cisco VCO/4K Extended Programming Reference*.

