Release Notes for Cisco VCO/4K System Software Release 5.1(1)

December 1999

These release notes describe new features and caveats in system software release 5.1(1) for the Cisco VCO/4K switch. Use these release notes in conjunction with the *Cisco VCO/4K Software Installation Guide* and the *Cisco VCO/4K System Administrator's Guide*.

Note VCO/4K system software has a new software release numbering scheme. The last release to use the former numbering scheme was V5.1 FSR00 PUN25. From this point on, the numbering scheme is 5.n(n), whereas (n) is the FSR number. PUNs will now be distributed as patch releases only.

Contents

These release notes contain the following sections:

CISCO SYSTEMS

New and Changed Information

This following features are new or have changed for Cisco VCO/4K system software, hardware, or firmware.

- Service Message Enhancement for NI-2
- SNMP support for ICC ISDN
- ICC Programmable Trunk Configuration Screen Modifications

Service Message Enhancement for NI-2

Service message support for NI-2 is provided with VCO/4K system software 5.1(1) for the ICC. A new switch type, NI2_SERV, has been added to the VCO/4K system software to support the signaling procedures to control the availability of B-channels. NI2_SERV provides the following enhancements to the VCO/4K system.

- B-channel initialization.
- SERVICE and SERVICE_ACK message support.
- Implements a relationship with restart procedures.

The service message enhancement implements the B-channel availability control as outlined in section 11.7 of the Bellcore standard, *1999 Version of National ISDN Primary Rate Interface (PRI) Customer Premises Equipment Generic Guidelines (SR-4619)*.

Interface Modification

To utilize the service message enhancement for NI-2, from the ICC ISDN Span Configuration screen (see Figure 1), select the new NI2_SERV parameter in the Switch Type field.

Figure 1   ICC ISDN Span Configuration Screen

```
              I C C   I S D N   S P A N   C O N F I G U R A T I O N


 SPAN LOCATION: R,L,S 1 1 15-1-1     TYPE  :  ICC-T1 PRI/NI2
                                     STATUS:  Out of Service
DISPLAY PROTOCOL PARAMETERS _
ACCESS TYPE: USER      TRX CLOCK: SCLK   CA IP RULE: 0   SLIP MAINT LIMIT: 255
SWITCH TYPE : NI2_SERV REF CLOCK: LOOP   NCA IP RULE: 0  OOF  MAINT LIMIT: 17
SPAN LENGTH: 0-133     SPAN TYPE: ESF    A/Mu LAW:   Mu


          PORT     NAME      GROUP     GRP NAME     COS
          ----    --------   -----    ---------    -----
           1                  __      _____      2
           2                  __      _____      2
           3                  __      _____      2
           4                  __      _____      2
           5                  __      _____      2
           6                  __      _____      2
           7                  __      _____      2
           8                  __      _____      2
```

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Service Message Enhancement Restrictions and Limitations

The following restrictions apply to the VCO/4K service message enhancement for NI-2.

- The NI2_SERV configuration supports only the USER side.

- Transmission of the RESTART message is not supported.

- The VCO/4K end (with the Access Type field configured as USER and the Switch Type field configured as NI2_SERV) expects the network to bring the B-channels into service. The switch type can be configured for NI2_SERV only when the far end (NETWORK side) supports the "B-channel availability control" procedures as outlined in the Bellcore standard, *1999 Version of National ISDN Primary Rate Interface (PRI) Customer Premises Equipment Generic Guidelines (SR-4619).*

- You cannot connect a VCO/4K ISDN span, configured with a switch type of NI2_SERV, to a Cisco router ISDN interface.

SNMP Support for ICC ISDN

SNMP support for ICC ISDN has been added to VCO/4K 5.1(1).

ICC Programmable Trunk Configuration Screen Modifications

Two new values have been added to the SIG. TYPE field in the ICC Programmable Trunk Configuration screen.

- E&M01

  Select E&M01 from the SIG. TYPE field for ICC-T1/E&M detection of wink_A/B = 1/0 support. A new protocol file, icc01.upg, has been added to support this signaling type. (Refer to CSCdm11701 for detailed information.)

- E&M02

  Select E&M02 from the SIG. TYPE field for Inverted E&M (China pulse on idle) support. A new protocol file, icc02.upg, has been added to support this signaling type.

System Requirements

This section provides a list of system requirements for running VCO/4K system software. These requirements are divided into hardware, firmware, and software. Contact Cisco Systems TAC (Technical Assistance Center) for any site-specific information.

Hardware Requirements

To operate system software V5.1, your Cisco VCO/4K switch must be equipped with the following minimum components.

- System Controller
    - VME-147 System Controller Card (must have updated boot PROMs) or Combined Controller (16MB 68030-based CPU)

      Refer to the *CPU Upgrade Procedure* (63104050100) if you need to replace a 25MHz/8MB CPU with a 33MHz/16MB CPU.
    - CPU Transition Module (CPU-TM) or storage/control I/O module
    - SWI Version A0AR
- Storage Subsystem
    - SCSI interface hard drive, 42MB or larger
    - 3.5" SCSI interface floppy drive
- Control Circuit Cards
    - NBC-3 card, rev C0GR or E0AR

      Two NBC-3 cards are required for redundant systems.
    - Alarm Arbiter Card (AAC), rev COUR (or later) is required for C-bus operation
- Service Circuit Cards
    - DTG-2 or DTG (Digital Tone Generator)
- Network Circuit Cards
    - ICC, rev C09P
    - 16-span ICC E1 I/O module, rev A15P
    - 4- and 8-span ICC E1 I/O module, rev A16P
    - 16-span ICC T1 I/O module, rev A16P
    - 4- and 8-span ICC T1 I/O module, rev A17P

Firmware Requirements

Table 1 lists the system firmware requirements. Refer to the technical descriptions in Volumes 3 and 4 of your Cisco VCO/4K hardware documentation set for firmware locations for each card.

For country specific firmware requirements (which affect DTG-2 or DTG, CPA, and MFCR2 cards), refer to the *VCO/4K Master Configuration Guide Release Notes.*

Note The firmware label applied by Cisco Systems may list only the last four digits of the checksum. The checksum for the NBC-3 LP125 is not listed because the programming for this item is part of the NBC-3 download file.

Table 1   Firmware Requirements

Card	Firmware	Checksum	Versions	Location	Changed Since V5.1 FSR00 PUN25
8LTC	8LTC	0000E09F	1.43	U2	N
BRC	BRC	00002412	2.01	U2	N
CPA	CPA	0000A7A2	1.03	U2	N
CPU	Boot EVEN	006E691D	5.00	U1	N
	Boot ODD	00866CBF	5.00	U15	
	MVME147-023 ODD	5741B41F	2.44	U30	
	MVME147-023 EVEN	5741B42F	2.44	U22	
D+I	D+I	00003158	2.02	U9	N
DID-2	DID-2	000010C3	1.41	U2	N
DRC-8	DRC	00009625	5.23	U2	N
DRC-24/48	DRC-2	00004241	3.08	U2	N
DVC	DVC	000095BE	2.07	U2	N
E+M	E+M	0000D381	2.06	U2	N
E1-CAS	E1-CAS/MERC	0000F1C6	2.13	U23	N
	E1-CAS/R2	00002654	2.01	U23	
	E1-31B	0000EF58	3.03	U23	
	E1-CAS/R2 (No CRC4)	000EDF08	3.43	U23	
	CAS PROC	00001E78	1.04	U85	
	32 CHAN SETUP	0000CDDE	1.00	U113	
	GAIN/LAW PROM	000011D2	1.02	U45/53	

Table 1   *Firmware Requirements (continued)*

Card	Firmware	Checksum	Versions	Location	Changed Since V5.1 FSR00 PUN25
ICC I/O Module	Com Bus	00299FE4	8.01	U48	N
	J3	00275397	8.01	U76	
	CS	002A9F8A	8.01	U12	
	5x7, Rev B	000B5C9A	8.01	U11	
	PCM Interface	00257696	8.02	U41	
IPRC-8	IPRC 8-PORT	00220D75	1.03	U2	N
IPRC-64	IPRC 64-PORT	00220DC1	1.03	U2	N
IPRC-128	IPRC 128-PORT	00220E0A	1.03	U2	N
MRC	MRC	0000EE80	3.08	U2	N
MVDC-T1	Local Bus	000D373B	LP100A	U35	N
	Com Bus	00186169	LP101A	U19	
	Interrupt	000AE787	LP102	U75	
	PCM Interface	001748E3	LP103A	U107	
	Framer	0005FE2C	LP104	U76	
	Gain/Law	0005A153	LP105B	U49	
	T1 Clock	000BE051	LP106	U80	
	Gain/Law	00776220	—	U50	
	Boot PROM	0066DF90	1.08	U10	
NBC-3 Card Rev C	LP122 SWI	00194974	LP122C	U66	N
	LP123 Counter	0018E096	LP123E	U13	
	LP124 Chip Select	000D7B43	LP124C	U12	
	LP125 Com Bus FPGA	—	LP125C	U43	
	LP126 Com Bus EPLD	0005CED8	LP126B	U47	
	LP127 Mezzanine Add.	0006C919	LP127A	U105	
	Boot PROM	00F597BE	1.02	U4	
NBC-3 Card Rev E	LP141 SWI	0019204D	LP141A	U31	N
	LP140 Counter	0015E220	LP140H	U73	
	LP139 Chip Select	000D4209	LP139A	U30	
	LP125 Com Bus FPGA	—	LP125C	U53	
	Boot PROM	00F597BE	1.02	U1	
SLIC-2	SLIC-2	000010B9	1.41	U2	N

Table 1   Firmware Requirements (continued)

Card	Firmware	Checksum	Versions	Location	Changed Since V5.1 FSR00 PUN25
SSC	Com Bus Control	00186169	LP101A	U24	N
	PCM Interface	00185A34	LP130B	U76	
	Quad 9 to 1	0017878C	LP129A	U71/U70	
	Redundancy Control	0017F249	LP128A	U100	
	Subrate Matrix Control	000BB573	LP131	U31	
	Boot PROM	00400736	1.02	U10	
T1	T1	00002BA5	1.26	U2	N
	T1 Aux Proc	00007125	1.00	U45	N
UTC-2 Rev A	UTC	0000F91E	6.00	U2	N
UTC-2 Rev B	UTC	0000ECF0	6.54	U2	N
4XT1	4XT1 68340 VIRT CM	28FAF0	1.09	U10	N
	4XT1 68302 ODD	00277AE4	1.14	U47, 93, 150, 185	N
	4XT1 68302 EVEN	00242750	1.14	U48, 94, 151, 186	N
	GAIN/LAW CCITT G.711	000FCD68	1.03	U25, 28, 67, 78, 120, 131, 158, 170	N
	PATH SETUP ROM	0000CDDE	1.00	U35, 86, 116,178	N
E1-PRI (NTDASS2, DPNSS)	E1-PRI FW Odd	00105999	1.03	U38	N
	E1-PRI FW Even	000DA6C3	1.03	U39	N
	E1-PRI 32 Chan Setup	0000CDDE	1.00	U113	N
	PCM Gain/Law	000011D2	1.02	U45/53	N
E1-PRI 120Ω (NET5)	Net5 ODD	1075A4	1.04	U38	N
	Net5 EVEN	DB375	1.04	U39	N
PRI	PRI FW Odd	00107EA5	1.02	U38	N
	PRI FW Even	000DB30B	1.02	U39	N
	32 Chan Setup	0000CDDE	1.00	U29	N
	PCM GAIN/LAW	000011D2	1.02	U45/53	N
PRI/N	ODD	00115CB1	1.09	U38	N
	EVEN	000DEE1D	1.09	U39	N
	32 Chan Setup	0000CDDE	1.00	U29	N
	PCM Gain/Law	000011D2	1.02	U45/53	N

Table 1   Firmware Requirements (continued)

Card	Firmware	Checksum	Versions	Location	Changed Since V5.1 FSR00 PUN25
4XE1	4XE1 68340 VIRT CM	28FAF0	1.09	U10	N
	4XE1 68302 ODD	00263E25	1.04	U47, 93, 150, 185	N
	4XE1 68302 EVEN	002313DD	1.04	U48, 94, 151, 186	N
	GAIN/LAW CCITT G.711	000FCD68	1.03	U25, 28, 67, 78, 120, 131, 158, 170	N
	PATH SETUP ROM	0000CDDE	1.00	U35, 86, 116,178	N
DCC[1] (North American Tone Plan)	DCC	0000A575	2.02	U2	N
	LIN/PCM 0 DB	0000B9A2	1,00	U43	N
	LIN/PCM -3 DB	0000AB04	1.00	U44	N
	PCM/LIN Odd	0000AFA2	1.00	U33	N
	PCM/LIN Even	0000B736	1.00	U34	N
DTG/DTG-2[1] (North American Tone Plan)	DTG-FW[2]	000077AD	1.23	U2	N
		00007C30	1.25	U2	
	Tone ODD	00000078	2.04	U54	
	Tone EVEN	00004217	2.04	U53	
	MAP PROM LP87	0000628A	1.1	U36	
	MAP PROM LP88	00004B9E	1.1	U37	

1. For firmware supporting countries other than North America, refer to the *VCO/4K Master Configuration Guide Release Notes*.

2. Version 1.23 or 1.25 is required. Version 1.25 supplies an additional tone for customers in Canada.

Software Requirements

Table 2 lists valid software checksums and versions for the VCO/4K system software and optional software products.

Use the Software/Firmware Configuration utility to identify the version and checksum of each software file installed on the system (refer to the *Cisco VCO/4K System Administrator's Guide* for more information). System software files are distributed across the installation floppy diskettes. Each optional software product is contained on a single floppy diskette.

Table 2   Software Requirements

VCO/4K System Software	Filename	Checksum	File Version[1]	Changed Since V5.1 FSR00 PUN25
Executable Files	GLOBALS.EXE	0154C5A2	—	Y
	HOSTMGR.EXE	04C520B6	—	Y
	SYSWD.EXE	01D1666A	—	Y
	REDMGR.EXE	00F61510	—	Y
	PERMGR.EXE	00000000	—	Y
	NETMGR.EXE	02F2E7D2	—	Y
	SNMP.EXE	027C2E48	—	Y
	INSTALL.EXE	0229716A	—	Y
Download Files	MVDCT1.DWN	00F2D33A	1.08	N
	NBC.DWN	01095D95	1.09	Y
	DNI.DWN	006F4101	1.02	N
	SSC.DWN	006C84CB	1.00	N
	CPA.DWN	003079F3	8.09	N
	DVC.DWN	005ADA02	1.08	N
	DTMF.DWN	00053D1A	2.02	N
	IPRC.DWN	0022E1EA	1.04	N
	4xT1.DWN	00349052	1.49	N
	4xE1.DWN	0037F884	1.43	N
	SPC.DWN	06191008	5.05	Y
	ICC.DWN	0633A817	5.08	Y
Protocol Files[2]	ICCCASR2.UPG	0000071D		N
	ICCCCS31.UPG	00000128		N
	ICCCLEAR.UPG	00000128		N
	ICCEM.UPG	00000666		N
	ICC01.UPG	00000666		Y (New)
	ICC02.UPG	0000077a		Y (New)

Table 2   Software Requirements (continued)

VCO/4K System Software	Filename	Checksum	File Version[1]	Changed Since V5.1 FSR00 PUN25
Operating System Files	VRTX OS	—	1.08	N
	IFX	—	1.11	N
	TNX	—	1.45	N
Optional Software[3]				
Ethernet	ETHERMGR.EXE	00007B0C	4.02	N
TeleRouter	TELERTE.EXE	00007ADA	4.00	N
ISDN Optional Software[3]				
ISDN-NFAS (includes 3 files)	NFAS.EXE	00007B0C	6.44	**Y**
	PRI.DWN	008F68BC	6.44	**Y**
	PRIN.DWN	0092B31A	6.44	**Y**
ISDN-PRI (includes 2 files)	PRI.DWN	008F68BC	6.44	**Y**
	PRIN.DWN	0092B31A	6.44	**Y**
NI-2 (includes 3 files)	NI2.EXE	00007B0C	6.44	**Y**
	PRI.DWN	008F68BC	6.44	**Y**
	PRIN.DWN	0092B31A	6.44	**Y**
NTTPRI	NTTPRI.DWN	008DF385	1.09	N
NTDASS2	NTDASS2.DWN	009F44C9	3.08	N
DPNSS	DPNSS.DWN	00AB15B6	3.12	N
NET5	NET5.DWN	008774E7	1.29	N

1. The software no longer lists the individual executable file (.EXE) version numbers in the Software/Firmware Configuration screen. A "—" character in the File Version column signifies that the file version matches the system software release, for example, V5.1. If a version number appears in the File Version column for an .EXE file, it is strictly for reference purposes; it does not appear in the Software/Firmware Configuration screen.

2. A protocol file (.UPG) is defined by the file size, in bytes. Go to Maintenance > Disk Utilities > Show Directory, and then type: c:/boot/ for a list of the file sizes.

3. The optional software file version numbers are listed as they appear on the optional software diskette label.

Limitations and Restrictions

Table 3 lists the design constraints which have been identified in VCO/4K system software, and related software. Unless noted, these limitations and restrictions apply to all Cisco VCO/4K releases up to and including 5.1(1). Cisco Systems currently has no plans to address the following known design constraints.

Table 3   Known Design Constraints up to and Including 5.1(1)

DDTs Issue	Description
	Do not pull the active side NBC-3 on an operating production switch. If you pull an active NBC-3, it can impact traffic and the system will generate errors. If you suspect a problem with an NBC-3 card and you wish to remove it, first switch sides to make it the standby side.
	The ICC requires reboot after download. After a download to the ICC, the card resets itself in order for the new download to take effect.
	The system does not allow the operational mode to be set back to standard once it has been set to extended. This is due to larger values which could be set in extended mode and are not valid in standard mode.
	The mode is stored in one of the database files. If you must return to standard mode during testing, do so by reverting to the saved database files which were copied before you set the extended mode.
CSCdm18135	If a resource group contains SPC-CONF, the system hunts by means of the Rotary method only (regardless of whether you select Rotary or Cyclic in the Hunt Type field from the Resource Group Summary screen).
CSCdm29344	The single-span CPA card does not allow for assigning a REP token to the SIT *and* ISUP tone signaling events simultaneously in an answer supervision template.
	The SIT (special information tone) and ISUP (integrated services digital network user part) tones have similar frequencies. If you include both of these signaling events in an answer supervision template, and you assign a REP token to both, the system always detects the SIT tone rather than the ISUP tone. Therefore, when you create an answer supervision template, assign the REP token to only one of these signaling events.
	Since the ISUP tone is used for out-of-band signaling and the SIT tone is used for in-band signaling, the two tones can be separately enabled in the answer supervision template without affecting any application connected to the network.

Important Notes

- Live Upgrade is not supported
- ICC-T1 mixed protocols
- ICC-T1 ISDN span as primary timing source

Live Upgrade is Not Supported

Live Upgrade is not supported. Refer to Chapter 1 in the *Cisco VCO/4K Software Installation Guide* to upgrade your system using the manual procedures described in the following steps.

Upgrade From V5.0.0.26 or Higher

Step 1 On the standby side of the system, select the Incremental Install of Basic System Software option.

Step 2 On the standby side, install all optional software diskettes by selecting the Install Another Software Option option.

Step 3 Select the Terminate Installation option to reboot the standby side.

Step 4 Confirm that the system completes file synchronization. (The main menu should show Generic VER.REV FSR PUN: 5.1 001.)

Step 5 Perform a system switchover to make the other side the standby side.

> **Note** If your system is configured with SPCs, all SPC services engines may fail upon switchover (CSCdm22671). If the SPC services engines fail, remove the SPCs from service, and then place the SPCs back in service.

Step 6 Repeat steps 1 to 4 on the current standby side.

Step 7 Busy out all ports on all network interface and service circuit cards whose .dwn file have changed in V5.1(1). To minimize service interruptions, busy out one card at a time. (Refer to the "Software Requirements" section on page 9 for download file changes.)

> **Note** Do not change the state of the DTG, DTG-2, or NBC cards.

Step 8 Remove from service, and then place back in service, all network interface and service circuit cards that you busied out in Step 7.

Upgrade from V5.0.0.25 or Lower

Refer to Chapter 1 in the *Cisco VCO/4K Software Installation Guide* for installation instructions.

ICC-T1 Mixed Protocols

The ICC-T1 can be configured with many combinations of ISDN and non-ISDN protocols. It is the policy of Cisco Systems to test all combinations. However, due to the vast number of combinations, Cisco Systems has verified only a subset of combinations. Table 4 lists the mixed protocols tested by Cisco Systems. Additional combinations will be tested in the future.

When you configure your system with any of these combinations, you must first configure group 1, span 1, and then configure the remaining seven spans in group 1 and group 2.

Table 4   ICC-T1 Mixed Protocols Tested by Cisco Systems

Group 1, Span 1	Group 1, Spans 2, 3, and 4	Group 2 (4 spans)	Group 3 (4 spans)	Group 4 (4 spans)
ICC-T1 ESF/B8ZS E&M	ICC-T1 SF/AMI E&M	ICC-T1 SF/AMI E&M	Not configured	Not configured
ICC-T1 ESF/B8ZS E&M	ICC-T1 ESF/B8ZS CLEAR	ICC-T1 ESF/B8ZS CLEAR	Not configured	Not configured
ICC-T1 ESF/B8ZS CLEAR	ICC-ISDN ESF/B8ZS NTI	ICC-ISDN ESF/B8ZS NTI	Not configured	Not configured
ICC-T1 ESF/B8ZS CLEAR	ICC-T1 SF/AMI E&M	ICC-T1 SF/AMI E&M	Not configured	Not configured
ICC-ISDN ESF/B8ZS NTI	ICC-T1 ESF/B8ZS CLEAR	ICC-T1 ESF/B8ZS CLEAR	Not configured	Not configured
ICC-ISDN ESF/B8ZS NTI	ICC-T1 SF/AMI E&M	ICC-T1 SF/AMI E&M	Not configured	Not configured

ICC-T1 ISDN Span as Primary Timing Source

When an ICC-T1 ISDN span is configured as the primary timing source, the incoming clock on the ICC-T1 fails to synchronize if you are upgrading from an existing database to a new database in VCO/4K system software release 5.1(1).

To utilize your existing ICC-T1 ISDN (NI2, 4ESS, 5ESS, NTI, NTT) span as the primary timing source, follow these steps when you upgrade to 5.1(1): (You do not need to perform the following procedure if you are adding a new T1 span as the primary timing source to the database.)

Note When you upgrade your software to 5.1(1), Cisco Systems recommends that you perform this procedure on all ICC T1 ISDN spans configured as the primary or secondary timing source.

Step 1 Take the existing ICC T1 ISDN span, configured as the primary timing source, out of service (OOS).

Step 2 From the ICC ISDN Span Configuration screen, perform the following steps.

    a. Change the REF CLOCK field parameter from **LOOP** to **1544**.

    b. Press **Enter**.

    c. Change the REF CLOCK field parameter from **1544** to **LOOP**.

    d. Press **Enter**.

Step 3 Place the existing ICC T1 ISDN span (from Step 1) back in service.

Caveats

This section contains open and resolved software caveats for this release of the Cisco VCO/4K. Caveats describe unexpected behavior or defects in Cisco VCO/4K system software or related hardware.

Resolved Caveats

Table 5 lists the caveats issued against release VCO/4K system software, and related optional software applications, that have been resolved in system software release 5.1(1).

Table 5   Resolved Caveats for Release 5.1(1)

DDTS Issue	Description
CSCdm22671	The SPC fails after multiple switchovers.
CSCdm60639	SNMP: `iccNfasGrpIndex` is inconsistent for E1 type.
CSCdm69618	The SNMP agent does not properly handle ICC/ISDN configurations.
CSCdm73017	If an ICC-T1 is configured as ESF B8ZS, the system sends the wrong wink: It raised only the AB bits instead of the ABCD bits.
CSCdm76550	ISDN NFAS: If you configure one span of an ICC as a primary D-channel in an NFAS group, with a switch type of 4ESS, and then loop this to a span configured as USER-SYM with a switch type of 4ESS, both sides remain OOS-FE.
CSCdm81169	ISDN NTT: When the network side of an ICC-T1 is configured as PRI-NTT, messages are not received after CALL PROC (in response to outgoing SETUP), and timer T310 (network) expires.
CSCdm90533	If you delete one span from the database on an ICC, the ICC span at that location (R-L-S-G-S) still writes on the timeslots that were assigned to it before it was deleted. If you add another ICC span, the system software assigns it the same timeslots as the span that was deleted, so that there are now two ICC spans transmitting on the same timeslots.

Table 5   Resolved Caveats for Release 5.1(1) (continued)

DDTS Issue	Description
CSCdm92555	On the ICC-T1, if you select a value of CLEAR in the Signaling Type field, the system does not set the T1 ports or T1 span to non-robbed bit (clear).
CSCdp06169	The $90 command, used to deactivate and activate NI-2 ports, causes ports to get stuck in the OOS_NE state.
CSCdp09007	You cannot set the law to SYS on ICC-PRI or ICC-NET5.
CSCdp09245	A system switchover may lead to a Call Chain Corruption Dump on the new active side.
CSCdp10025	SNMP: `spcPortIndex` and `IccPortEntry` return invalid values.
CSCdp20515	Incorrect digits are being reported when using an SPC.
CSCdp25551	SNMP: If `firmwareDevice` is changed from a valid device, for example, from **c** to **none**, `firmwareExeTable` and `firmwareDwnldTable` return garbled text.
CSCdp26671	SNMP: Enums are missing for `progSigType` in the vco.mib.
CSCdp30792	ISDN: When an ICC-T1 ISDN span is configured as the primary timing source, the incoming clock on the ICC-T1 fails to synchronize. **Note** Refer to the "Important Notes" section on page 12, for a one-time procedure on how to configure your ICC-T1 ISDN span as the primary timing source when you upgrade to VCO/4K 5.1(1).
CSCdp35476	ICC-ISDN NTI and 5ESS do not restore D-channel.
CSCdp36813	SPC-CPA does not detect ringback after a switchover.
CSCsf52483	• A "None" value appears in the `progSigType` description but not in the syntax. • The `brcStatus` description does not match the syntax. • The `iprcChecksumSw` and `iprcChecksumTimer` description mentions "fields".
CSCsf52490	SNMP: The traps need a better description in the MIB.
CSCsf62866	SNMP: No DEFVALs are documented for most of the card table attributes.
CSCsf74002	SNMP: Years, hours, minutes, and seconds have improper MIB definitions.
CSCsf84902	SNMP: The description of the `iccEntryStatus` object is incorrect.
CSCsf84959	SNMP does not provide support for the Convert Reorder Tone to Busy feature flag. **Note** SNMP support has also been added for the following feature flags: – Enable AllPortsDeactivated Alrm – $EA Reports on DChannel RESTART – Enable NET5 Overlap Receiving – K1197 Layer 3 Testing – Enable Host Call Ref
CSCsf85084	SNMP does not support IP subnet mask.
CSCsf85259	SPC does not detect when you change the parameter of the Set System to A-Law field in the System Features screen.

Open Caveats

Table 6 describes possible unexpected behavior by Cisco VCO/4K release 5.1(1). Unless noted, these caveats apply to all Cisco VCO/4K system software releases up to and including 5.1(1).

Table 6   Open Caveats up to and Including Release 5.1(1)

DDTs Issue	Description
	With Four Span E1 cards, resource groups can include channel 17, depending on whether the card spans are provisioned for CCS/31B or CAS. In CCS/31B mode, channel 17 is a bearer channel and can be added to a resource group. In CAS mode, channel 17 is used as the D-channel, and therefore, cannot be in a resource group.
	After you add and configure a Four Span E1 card, you can change the mode from the Resource Group Configuration screen. However, the system does not automatically remove channel 17 from the resource group when you change the mode from CCS/31B to CAS, or automatically add channel 17 to the resource group when you change the mode from CAS to CCS/31B. When you change the span from CCS/31B to CAS, all call attempts on channel 17 fail because channel 17 is no longer a bearer channel. When you change a span from CAS to CCS/31B mode, bandwidth is wasted.
	Resolution: Verify that resource groups properly reflect the nature of channel 17 when changing the mode of a Four Span E1 card span between CCS and CAS.
	Note The system administration console and SNMP do not prevent users from configuring bearer-channel signaling and timing parameters for channels that are not truly bearer channels. This applies to channel 17 for CAS mode and channel 1 for both modes. (Channel 1 is used for framing.) Users may find this misleading, but it is harmless.
CSCdm40053	When you power up the switch, or change the states of cards, the ports on one ISDN span may show OOS FE while the ports on the other ISDN span stays in SERV-IDLE.
CSCdm50255

CSCdp23217

CSCdp46324 | Live Upgrade is not supported.

Workaround: Refer to the "Live Upgrade is Not Supported" section on page 12, for installation instructions. |
CSCdp48261	When you configure an ICC span as ESF_NR, the SS7 signaling links through the ICC and D+I cards are not up and running. This occurs when SS7 sends messages through SS7 signaling links at the time of startup. The paths are set up between the D+I ports and the ICC T1 timeslots. SS7 restarts. When MTP L2/L3 is up, the signaling links are also up. When cktint is up and begins sending the GRS messages, the signaling links go down.
	Workaround: First start SS7, and then set up the path between the D+I ports and the ICC T1 timeslots.
CSCsf31137	After a warm start, the system sends a ($DC) report to start call processing before IPRC prompt downloading is complete.
	Workaround: From the System Host Configuration screen, enable the Host Control of Call Load feature. When you enable this feature, host links are not marked as available for call processing until a $C0 04 host command is received from the host.
CSCsf41605	If an error occurs in the disk operation when you use the Data Base Store or Data Base Retrieve commands (under File Utilities), no warning is displayed to indicate that all files may not have been copied correctly.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf41657	If a SLIC ICT (incoming trunk) is telerouted to a SLIC OGT (outgoing trunk), and the SLIC OGT is ringing during a switchover, the SLIC OGT does not stop ringing when the SLIC ICT goes back on-hook.
CSCsf41717	Avoid using the Software/Firmware Configuration screen to view the contents of floppy diskettes (device A:). This screen does not produce consistent information. **Workaround:** To view the contents of a floppy diskette, use the Disk Utilities Show Directory function.
CSCsf51888	You must specify a resource type when you use the RELEASE inpulse rule token. If you do not specify a resource (IPRC, MRC, DRC, DTG, or CPA), the RELEASE token has no effect.
CSCsf51960	If you use an Ethernet system host interface with up to four hosts and high loads, the system may fail. Higher loads may support even fewer host connections.
CSCsf51966	One of the fields in Trunk Timing configuration is the Wink Send. For E1, this is the time period of the delayed dial signal. Tests have shown that this is about 60ms as opposed to the 30ms stated in the specifications.
CSCsf52155	When the Four Span T1 is configured as FXO-LS, the card processes a WINK command after it seizes out. **Workaround:** Do not use a WINK in an outpulse rule when Four Span T1 cards are configured as FXO-LS.
CSCsf52242	MF Digit ($D0) reports indicating garbled digits are not sent to the host when the inpulse rule performing the collection contains the reporting control tokens REP EACH or REP NEXT. The system sends an Inpulse Rule Complete ($DD) report informing the host that the inpulse rule was aborted, but does not send a subsequent $D0 report. All other conditions that cause an inpulse rule to abort generate an additional report explaining the cause. If you use the reporting control token REP END in the inpulse rule, the $DD report correctly contains a $D0 segment indicating that the MF digits are garbled. If an inpulse rule with a REP EACH or REP NEXT token aborts while performing MF digit collection without generating an additional report, assume that the digit collection is garbled.
CSCsf52244	You can use the $67 command to append an odd number of digits to a field, which already contains an odd number of digits. However, the last digit of the first string and the first digit of the last string are lost. Two zeros are added to the end of the string to provide the correct number of digits. **Workaround:** To avoid this condition, use two-digit fields for digit storage instead of appending digits to an existing field.
CSCsf52245	You can use the $67 command to collect up to 40 digits. Specify the number of digits that you want to collect in the Digit Collection Control byte. Command processing does not currently check this value to verify that the number is less than 40. If you specify a number greater than 40, the system still attempts to collect only 40 digits. The command is not rejected with a Network Status byte value of $2C, as would be expected. **Workaround:** Specify 40 or less digits in the Digit Collection Control byte.
CSCsf52246	An Inpulse Rule Complete ($DD) report is generated when an inpulse rule aborts due to a CPA exhaust condition. The report does not, however, correctly specify the cause for the abort. The report indicates that the rule aborted because no outpulse channels were available (T = 1 in the Inpulse Rule/DVC Port byte offset 10). However, the CPA exhaust condition is identified by a Resource Allocation ($D6) report, which specifies a resource limitation for the CPA resource group.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf52247	You may experience a corrupted database if you inadvertently try to load a backup copy of an outdated database. The system does not detect the outdated database and does not automatically perform the database conversion.
CSCsf52300	When the caller enters digits, a combination of the $67 command and inpulse rule is being processed. The digits that are reported are the first three digits that the caller input. Those digits are reported in a $DD report and are also stored in field 1. A second collection command (by means of the inpulse rule specified in the $6A command) does not completely override the first collection command (in the $67 command). The DRC collects only 3 digits and reports them to the host, per the $67 command, but then stores those digits in field 1 per the inpulse rule. **Workaround**: Have the application remove the receiver attached with the $67 command when the outgoing hangs up. Then send the $6C, and then the $6A to start the inpulse rule.
CSCsf52355	When a channel RESTART occurs, the system issues an ISDN Port Change of State ($EA) report. The event code (byte offset 16 for standard API, byte offset 20 for extended API) contains a value of $4D (RELEASE message received) instead of a $46 (RESTART message received). The IEs received are included in the report, therefore, the host can still interpret the report as a RESTART.
CSCsf52581	Aux1 alarms triggered by the hardware (power supply, fan unit, or ring voltage failure) are not displayed on the System Alarms Display screen. Therefore, remote users cannot determine if a major hardware alarm is set.
CSCsf62790	A load seize on inpulse rules with record and speak tokens at 22 seizures causes IPRC cards to go OOS. If simultaneous seizures occur while the IPRC is recording and playing temporary prompts, on systems configured with MFCR2 and Four Span E1 cards, which use Channel Associated Signaling (CAS) with CRC4 set to ON, the IPRC goes out of service and causes the system to fail. The IPRC also goes out of service and causes the system to dump and reboot when an inpulse rule (used to collect DTMF or MFCR2 digits) is followed by an inpulse rule (used to record a prompt) with the GOTO RULE or DO IRULE token.
CSCsf62862	A network status byte of $02 (Invalid command function ID) is returned by the Subrate Path Control ($65) command when the $65 command contains 82 destinations. The ISDN Port Control ($49) command also returns a network status byte of 02 if the $49 command contains between 258 and 261 bytes.
CSCsf62917	There is a mismatch between the on-line and diskette disk utilities. Files that are created with the diskette disk utilities and which have special characters in them, such as underscores, are not readable with the on-line system software disk utilities when the system is up and running.
CSCsf62948	Four Span T1 and Four Span E1 cards perceive the test patterns from a TTS-3 Analyzer as incoming seizures and generate FRM373 (Internal Message Length Error) and FRM102 (Card MSG) errors. **Resolution:** Remove the test boxes before connecting the system to the network and processing calls.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf62956	The administration console intermittently gets re-initialized when the system reboots. This causes the keyboard type to reset to Numeric, instead of Application, which is required by the system software. **Workaround:** To correct this condition on systems with VT220 consoles, perform the following steps: a. From the login screen, press **PF3**. The Set-Up Directory menu appears. b. Use the arrow keys to position the cursor in the General field and press **Enter**. The General Set-Up Menu appears. c. Use the arrow keys to position the cursor in the Keypad=Numeric field and press **Enter**. The field toggles to Keypad=Application. d. Press **PF3** to save the setting and return to the login screen. To correct this condition on systems with WYSE consoles, perform the following steps: a. From the login screen, press **PF3**. The Set-Up Directory menu appears. b. Press **PF11** (Kbd2). The Keyboard2 Set-Up Menu appears with the cursor in the Keypad=Numeric field. c. Press **Enter**. The field toggles to Keypad=Application. d. Press **PF4** to save the setting and return to the login screen.
CSCsf62982	Major Alarm Not Set on Loss of Hosts: The system does not generate the following alarm when all external host connections are lost and TeleRouter is not enabled. `ALM011: No Hosts Available` If you disable TeleRouter, after you enabled it, the system still does not generate the alarm unless you configure a new Ethernet host, and then all host connections are lost.
CSCsf63022	Telerouter $D5 (Routing Action) reports do not appear in the system trace file, but they are sent to the host.
CSCsf63117	When you change the system host configuration, the system may generate the following error: `RED44: Standby DB Update Error - Bad Record Count, File [filename]` When this error occurs, the changes made on the active side do not get written to the standby side.
CSCsf63144	During the broadcast download cycle, Four Span T1 and Four Span E1 cards intermittently generate an internal error code 1. The broadcast download fails, but the system recovers and successfully performs a direct download to each card. **Resolution:** None. This issue does not affect service.
CSCsf63245	If you attempt to update the gateway routing tables before you install and enable Ethernet, the gateway routing tables get corrupted. **Resolution:** Install and enable Ethernet before you attempt to update the routing tables.
CSCsf63261	If you use SNMP to configure resource groups on redundant systems, the port.tbl file gets corrupted and ports are missing from the resource groups.
CSCsf63269	The RELEASE DTG token does not work: The RELEASE outpulse rule token does not release the DTG/DTG-2 and causes the system to log an error during inpulse rule execution.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf63349	Outgoing ports on Single Span T1 cards intermittently become stuck in CP_OUTPUL after incoming seizures.
CSCsf63398	If you add or delete a tone generator card while another tone generator is outpulsing, the switch may be unable to do further outpulsing and may even fail. **Workaround:** Do not add or delete tone generator cards while the switch is processing calls.
CSCsf63502	From the active side of the system, if you change the mode on a Four Span T1 card from active to maintenance, and then to out of service, the changes also occur on the standby side. However, if you change the mode back to active from the active side, the card stays in maintenance mode on the standby side. If the switch changes over while this condition exists, calls are lost. **Workaround:** From the active side of the switch, change the mode back to out of service, to active, to maintenance, and then back to active. This causes the standby side to change from maintenance to active mode.
CSCsf63569	If the outgoing Four Span T1 trunk resource groups are set to ROTARY search, the ports in the resource group get stuck in CP_WTFSUP. **Workaround:** Use CYCLIC search.
CSCsf63570	If you press the ABORT button on the system controller it has no effect if you have not installed the Ethernet option.
CSCsf73771	When you perform a switchover with redundant DTG-2 cards, the system sets and then clears FRM113 T1/E1 remote alarms for all the cards in the system. This occurs when the DTG-2 from one NBC switches to the other DTG-2. **Workaround:** Use DTG cards rather than DTG-2 cards. The drawback to this workaround is that the DTG card occupies a separate slot in the switch.
CSCsf73828	If you delete a DTG from the database in an active system, outpulsing ceases. This occurs even when there is no DTG physically present but there is a working DTG-2 available. **Workaround:** Reboot the system, or perform a system switchover to the other side, to restore normal operation of the DTG-2. When you switch back to the first side (after the switchover) the system continues to operate normally.
CSCsf73902	The system does not log an error indication when the switch fails. Earlier releases of the software logged an error indication to aid in determining the cause of failure.
CSCsf73909	Following a warm reset, the 4xE1 cards display ACTIVE while downloading.
CSCsf73960	The FTP quote command is inconsistent. The quote compress command requires a drive specification (c:), but the uncompress and the split commands cannot accept it.
CSCsf73961	The FTP command, `quote join c:core1 c:core1.x??`, does not work. The command results in the following error message: `500, Command not understood`
CSCsf74440	The Display Card Data screen does not record slips. The system was forced to slip by changing the AM2-D bulk call generator from internal to LINE A. Slips are recorded at the load box but the slip count does not increase on the Display Card Data screen.
CSCsf84591	The active and standby sides may not correctly reflect the license of the opposite side: The numbers match but the active side reports a lower number of timeslots being allocated on the active side than on the standby side. **Workaround:** Set the license on both sides from the install diskettes.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf84601	When the system attempts to delete large trace files, the following message may appear: `Error During Disk Operation` **Resolution:** Delete a large trace file by means of FTP. However, tracing should not be enabled on a loaded switch for extended periods of time.
CSCsf84608	The prompt library is not working properly. When the prompts are loaded, the library menu lists the prompts and the duration of each, but the total usage field displays an invalid sum of the prompt times. The IPRC behaves normally, and no other effects are noticed in the system.
CSCsf84732	A network status byte of $23 (illegal address error) is returned by the Subrate Path Control ($65) command when the $65 command contains an address greater than 0x7ff. This occurs during the following scenario: • The Subrate Switching Card (SSC) is active. • C-bus is enabled. • Several spans of an ICC-E1 card are then added. • The spans are located at address 0x900 and above. When a $65 command is sent to connect a subrate path through the spans, the switch returns NSB = 23.
CSCsf84795	The Programmable Trunk Configuration (non ICC or 4xT1/E1), Diagnostics Port Display, Call Progress Tone Monitor, and Routing Statistics Display screens support only two digits for inpulse and outpulse rules. In a future release, all appropriate fields will be increased to three digits to support the increased inpulse and outpulse rule system limits.
CSCsf84962	All inpulse rules are aborting on port $47F when using an ICC-T1 and a 1xT1. This does not, however, occur with a DTG card.
CSCsf84981	The following error message may appear when you activate the SPC. `DWNLD Error opening specs file (filename)` This error is expected and should not indicate any unusual error condition.
CSCsf85047	On cold or warm starts, the Subrate Switching Card (SSC) downloads then goes into maintenance (M) state. **Workaround:** Take the card out of service (OOS), then bring it to an active (A) state.
CSCsf85087	The ICC-E1 does not work with the D+I card when the backplane law (System Features screen) and all ICC-E1 ports (ICC Programmable Trunk Configuration screen) are set to Mu-law.
CSCsf85092	When your system is operating in extended mode, the "C" bit in the last fragment of the $83 report is reporting digits rather than a 0 (zero). This bit should report a zero indicating that this is the last fragment.
CSCsf85097	When you first add an SSC to the database, the Card Summary screen shows a port address of zero. The card downloads, but rather than the card going active (A), it goes into maintenance (M) state. If you take the card out of service (OOS) then bring it to an active state, the following message may appear: `Download is in Progress` **Workaround:** To display the correct port address for the SSC, and have the card go into an active state, you must reboot the system.

Table 6   Open Caveats up to and Including Release 5.1(1) (continued)

DDTs Issue	Description
CSCsf85137	If a DSP SRM is not physically installed on the SPC, but the DSPs are configured in the database, the system displays the SPC with a status of Maintenance (M) rather than Out of Service (O).
CSCsf85166	When the system is running in extended mode, the api_stat.c routine to format the rack, level, and slot in the $83 command from tokens does not work correctly. In extended mode, the system should add two bytes before rack and level, and two bytes before slot and span. Instead, it is adding one filler byte between rack, level, slot, and span.
CSCsf85189	The $C0 00 extended mode command returns a network status byte of $01 (command successfully processed) when it should return a network status byte of $1A (invalid clock value).
CSCsf85214	Spans that have been taken OOS are reactivated on a warm reboot.
CSCsf85237	SPC-OUTP does not work properly when used in a resource group. The system stops outpulsing even when SPC-OUTP is taken out of service. **Workaround:** Use a DTG-2 card rather than SPC-OUTP. This issue will be resolved in a future release.
CSCsf85261	The VCO switch does not properly respond to an ARP (address resolution protocol) message requesting a MAC (media access control) address. Instead of sending a unicast reply to the requesting machine, it sends a broadcast reply. Therefore, the requesting machine is not able to install the MAC address in its cache. For example, Host-A sends a broadcast ARP message requesting that the machine that owns IP address x.x.x.x (VCO switch) respond with its MAC address. IP address x.x.x.x sends a broadcast ARP reply to Host-A. As a result, Host-A is not able to install the MAC address of the switch in its cache. This causes congestion on the Ethernet line, and each time Host-A wants to communicate with the switch, it must send a broadcast ARP request rather than "knowing" where to send the message. **Workaround:** The IP stack of the VCO switch no longer sends an ARP reply. You must manually define the switch's MAC address in the ARP cache of the devices most likely to communicate with the switch. These devices include hosts, routers, SS7 stations, VRUs, and so forth. You can find the 12-digit MAC address of the switch in the License Configuration screen under the Serial Number field. (The first six digits should be 08003e.) Define both the A and B sides of the switch if running a redundant system. **Note** Refer to the product manual of each device for instructions on how to statically define (force) a MAC address into its ARP cache.

Related Documentation

The following documents contain information that may be useful to system software 5.1(1) users.

- *Cisco VCO/4K Software Installation Guide*
- *Cisco VCO/4K System Administrator's Guide*
- *Card Technical Descriptions* (for Cisco VCO/4K)
- Product supplements for optional software, including:
    - *VCO/4K Management Information Base (MIB) Reference Guide*
    - *VCO/4K Management Information Base (MIB) User's Guide*
    - *VCO/4K Standard Programming Reference*
    - *VCO/4K Extended Programming Reference*
    - *VCO/4K ASIST/API Programming Reference*
    - *VCO/4K TeleRouter Reference Guide*
    - *VCO/4K ICC ISDN Supplement*
    - *VCO/4K Ethernet Supplement*
    - Applicable country supplements

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