

Troubleshooting Voice Card Not Being Recognized

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Introduction

This document discusses how to troubleshoot the scenario where voice cards are not recognized by the router. The voice card usage on different platforms are discussed in detail in this document.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is not restricted to any specific software and hardware versions.

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command before you use it.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Problem

The voice card is not recognized or the voice card is not functional on Cisco 2600/2800/3600/3700/3800 platforms.

Solution

The solution to this problem is explained in detail in this document.

Hardware–Software Support

This section provides you with information to make sure the voice card is properly set up and configured.

1. Make sure the proper Cisco IOS® Software Release and feature set are used to support the voice card:
 - ◆ In order to find the proper Cisco IOS release and feature set to support the voice card in use, refer to the Software Advisor (registered customers only)
 - ◆ When you do this, make sure there is enough RAM and Flash memory to support the image.
2. For Cisco 2600/2800/3600/3700/3800 platforms, make sure the proper network modules are used for the voice card:
 - ◆ NM–2V supports voice interface cards (VIC).
 - ◆ NM–HDV supports all voice WAN interface cards (VWIC).
 - ◆ NM–HDA does not have VIC or VWIC cards.
 - ◆ NM–HD supports the VIC2 cards and some VWICs.
 - ◆ NM–HDV2 supports VIC2 cards and some VWICs.

Note: For more information, refer to the Voice Hardware Compatibility Matrix.

Note: NM–HDV does not support any kind of **analog VICs** such as FXS, FXO or E&M. Any analog VICs inserted into a NM–HDV are not recognized by the Cisco IOS release.

Note: When you use an asynchronous interface module (AIM)–VOICE–30 or AIM–ATM–VOICE–30 , the digital signal processors (DSPs) are mapped to a T1 or E1 connection housed in a network module or Cisco 2600 series WIC slot with no local DSPs. For more information on AIM–VOICE–30 or AIM–ATM–VOICE–30 , refer to AIM–ATM, AIM–VOICE–30, and AIM–ATM–VOICE–30 for the Cisco 2600 Series and Cisco 3660.

Note: A network module is not required for the Cisco 17xx platforms.

3. For Cisco 7200 platforms, make sure the T1 or E1 selection is completed with the card type configuration command. For more information on T1 or E1 selection, refer to this section of PBX Interoperability Guidelines for the 7x00 Series Routers.
4. The Cisco Second–Generation (VWIC2–xMFT–T1/E1) also requires a card type configuration, where you can select either T1 or E1 as the card type.

Issue the **router(config)# card type {t1 | e1} <slot no>** command to set or change the card type.

Note: When this command is used for the first time, the configuration takes effect immediately.

Note: A subsequent change in the card type does not take effect unless you enter the **reload** command or reboot the router.

5. You can issue the **show version** and **show diag** commands in order to verify that the voice card is recognized by the router. The analog voice ports appear in the configuration as soon as the voice card is recognized. The digital ports appear after further configuration under the controller. You can issue the **show run** and **show voice port summary** commands in order to check the voice ports. If you want to see details for the voice port, issue the **show voice port** command.
6. If the router fails to see the voice card in the previous step, power down the router and reseal the voice card and network module.

DSPs for Voice Card

Make sure there are enough DSPs to support the voice card:

- NM-1V can support one VIC card¹
- NM-2V can support two VIC cards²
- NM-HDV support depends on how many Packet Voice DSP Module (PVDM)-12 modules are installed on board:
 - ◆ Each PVDM contains three individual c549 DSPs.
 - ◆ Each C549 DSP can support four medium complexity calls or two high complexity calls.
 - ◆ For more information about DSPs, refer to Voice Hardware: C542 and C549 DSPs.

¹When you use the VIC-2BRI-S/T-TE with an NM-1V, you are only able to place two calls. The second BRI port is shutdown.

²When you use the VIC-2BRI-S/T-TE with an NM-2V, you can place four calls. If there is another VIC in the second slot, the second BRI port on the VIC-2BRI-S/T-TE is shut down.

If there are DSP issues, the voice card does not function as desired and, in some cases, cannot be recognized.

Verify

Voice Card

show version Command

In order to view the voice card output on Cisco 1700/2600/2800/3600/3700/3800 platforms, execute the **show version** command to see if the voice ports are recognized.

```
3660 Chassis type: ENTERPRISE
1 FastEthernet/IEEE 802.3 interface(s)
48 Serial network interface(s)
2 Serial(sync/async) network interface(s)
2 Channelized T1/PRI port(s)
1 Compression AIM(s)
2 Voice FXS interface(s)
DRAM configuration is 64 bits wide with parity disabled.
125K bytes of non-volatile configuration memory.
32768K bytes of processor board System flash (Read/Write)
```

show diag Command

You can issue the **show diag** command in order to see if the hardware is recognized. Voice cards show up as daughter cards.

```
Slot 2:
High Density Voice Port adapter
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware Revision       : 1.1
Top Assy. Part Number   : 800-03567-01
Board Revision          : F1
Deviation Number        : 0-0
Fab Version              : 02
PCB Serial Number       : JAB05070QW1
```

```

RMA Test History      : 00
RMA Number           : 0-0-0-0
RMA History          : 00
EEPROM format version 4
EEPROM contents (hex):
0x00: 04 FF 40 00 CC 41 01 01 C0 46 03 20 00 0D EF 01
0x10: 42 46 31 80 00 00 00 02 02 C1 8B 4A 41 42 30
0x20: 35 30 37 30 51 57 31 03 00 81 00 00 00 04 00
0x30: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x40: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x50: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

```

```

WIC Slot 0:
T1 (2 Port) Multi-Flex Trunk (Drop&Insert) WAN Daughter Card
Hardware revision 1.0          Board revision B0
Serial number 17759352        Part number 800-04614-01
Test history 0x0              RMA number 00-00-00
Connector type PCI
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 24 01 00 01 0E FC 78 50 12 06 01 00 00 00 00
0x30: 58 00 00 00 99 12 30 00 FF FF FF FF FF FF FF FF
HDV firmware: Compiled Wed 16-Jan-02 20:43 by pkonda
HDV memory size 524280 heap free 143441

```

```

Slot 3:
4 PORT Voice PM for MARs Port adapter
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware revision 1.1          Board revision B0
Serial number 8400872          Part number 800-02491
FRU Part Number: NM-2V=
Test history 0x0              RMA number 00-00-00
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 65 01 01 00 80 2F E8 50 09 BB 02 00 00 00 00
0x30: 58 00 00 00 98 06 29 17 FF FF FF FF FF FF FF FF

```

```

WIC Slot 0:
FXS Voice daughter card (2 port)
Hardware revision 1.1          Board revision B0
Serial number 22818604        Part number 800-02493
Test history 0x0              RMA number 00-00-00
Connector type Wan Module
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 0E 01 01 01 5C 2F 2C 50 09 BD 02 00 00 00 00
0x30: 58 00 00 00 00 10 26 01 FF FF FF FF FF FF FF FF

```

The AIM card can be seen in this output when the **show diag** command is issued:

```

WIC Slot 1:
E1 Drop&Insert (2 port) WAN daughter card
Hardware revision 1.0 Board revision B0
Serial number 24234788 Part number 800-04615-02
Test history 0x0 RMA number 00-00-00
Connector type PCI
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 25 01 00 01 71 CB 24 50 12 07 02 00 00 00 00
0x30: 58 00 00 00 00 12 19 00 FF FF FF FF FF FF FF FF
ATM AIM

```

```

ATM AIM module with SAR only (no DSPs)
Hardware Revision :1.0
Top Assy. Part Number :800-03700-01
Board Revision :A0
Deviation Number :0-0
Fab Version :02
PCB Serial Number :JAB9801ABCD
RMA Test History :00
RMA Number :0-0-0-0
RMA History :00
EEPROM format version 4
EEPROM contents (hex):
0x00:04 FF 40 01 B0 41 01 00 C0 46 03 20 00 0E 74 01
0x10:42 41 30 80 00 00 00 00 02 02 C1 8B 4A 41 42 39
0x20:38 30 31 41 42 43 44 03 00 81 00 00 00 00 04 00
0x30:FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x40:FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x50:FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x60:FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70:FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

```

Voice Ports

show run Command

In order to view the voice card output on 1700/2600/2800/3600/3700/3800 platforms, issue the **show run** command to see if the voice ports appear in the configuration.

```

controller T1 2/0
 framing esf
 clock source internal
 linecode b8zs
 pri-group timeslots 1-24
!
controller T1 2/1
 framing esf
 linecode b8zs
 pri-group timeslots 1-24
!
voice-port 2/0:23
!
voice-port 2/1:23
!
voice-port 3/0/0
!
voice-port 3/0/1
!

```

show voice port summary Command

Issue the **show voice port summary** command to see the available voice ports on the router.

```
3660-4#show voice port summary
```

PORT	CH	SIG-TYPE	ADMIN	OPER	IN STATUS	OUT STATUS	EC
2/0:23	01	isdn-voice	up	down	none	none	y
2/0:23	02	isdn-voice	up	down	none	none	y
2/0:23	03	isdn-voice	up	down	none	none	y
2/0:23	04	isdn-voice	up	down	none	none	y
2/0:23	05	isdn-voice	up	down	none	none	y

2/0:23	06	isdn-voice	up	down	none	none	y
2/0:23	07	isdn-voice	up	down	none	none	y
2/0:23	08	isdn-voice	up	down	none	none	y
2/0:23	09	isdn-voice	up	down	none	none	y
2/0:23	10	isdn-voice	up	down	none	none	y
2/0:23	11	isdn-voice	up	down	none	none	y
2/0:23	12	isdn-voice	up	down	none	none	y
2/0:23	13	isdn-voice	up	down	none	none	y
2/0:23	14	isdn-voice	up	down	none	none	y
2/0:23	15	isdn-voice	up	down	none	none	y
2/0:23	16	isdn-voice	up	down	none	none	y
2/0:23	17	isdn-voice	up	down	none	none	y
2/0:23	18	isdn-voice	up	down	none	none	y
2/0:23	19	isdn-voice	up	down	none	none	y
2/0:23	20	isdn-voice	up	down	none	none	y
2/0:23	21	isdn-voice	up	down	none	none	y
2/0:23	22	isdn-voice	up	down	none	none	y
2/0:23	23	isdn-voice	up	down	none	none	y
3/0/0	--	fxs-ls	up	dorm	on-hook	idle	y
3/0/1	--	fxs-ls	up	dorm	on-hook	idle	y

DSP

If you want to see the voice card output on Cisco 1700/2600/2800/3600/3700/3800 platforms, issue the **show voice dsp test dsp <slot#>** command.

Note: This is an internal unsupported command. This command is used at the your own risk.

Related Information

- [Voice Technology Support](#)
- [Voice and IP Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support – Cisco Systems](#)

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