

PGW 2200 软交换机 'Bearer Capability Not Implemented' 原因值

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Introduction

本文为没断开原因值提供信息在Cisco PGW 2200。本文特别地适用于Cisco SS7语音/数据网关解决方案的互连。

Prerequisites

Requirements

本文档读者应了解以下主题的知识：

- [Cisco Media Gateway Controller Software Release 9](#)知识

Components Used

本文的信息根据Cisco PGW 2200 Software Releases 7.x和9.x。

The information in this document was created from the 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, make sure that you understand the potential impact of any command.

Conventions

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

‘载体功能不可用的’说明

当cisco ios命令isdn incoming-voice modem没有被激活在接口Serial0:x下时，您体验= 0x80BA - Disconnect值。

Note: 某些线路在此命令输出中给空间的原因的第二条线路减少了。

```

Time stamp   Orig IP address   Dest IP address   Prot   Msg   Data
-----
*****
* 03 SNOOPER INFO: Snooper is listening on interface "hme1"... *
*****
14:07:33.450567  1-002-1[02065]   1-010-1[02129]   ITU    ISUP.  -> IAM (01) CIC=00062
                                   CDPN=1492169679F CGPN=9678
                                   SLS=14 Pr:0 Ni:NTL

*****  DETAIL *****
CIC                               62
MESSAGE TYPE                       0x01 IAM - Initial_Address_Msg
NATURE_OF_CONNECTION              0x06
  LENGTH:                          0x01 FIXED DATA 0x00
  SATELLITE IND                     0 no_satellite_circuit_in_connection
  CONTINUITY CHECK IND              0 Continuity_check_not_required
  ECHO SUPPRESSOR IND              0 outgoing_half_echo_suppressor_not_included
FORWARD CALL IND.                 0x07
  LENGTH:                          0x02 FIXED DATA 0x20 0x01
  NATL/INTL CALL IND               0 incoming_national_call
  END-TO-END METHOD IND             0 no_end_to_end_method_available
  INTERWORKING IND                 0 no_interworking_encountered
  END-TO-END INFO IND              0 no_end_to_end_information_available
  ISUP IND.                        1 ISUP_used_all_the_way
  ISDN PREFERENCE IND              0 isdn_up_pref_all_the_way
  ISDN ACCESS IND.                 1 originating_access_ISDN
  SCCP Method                      0 no indication
CALLING PARTYS CATEGORY            0x09
  LENGTH:                          0x01 FIXED DATA 0x0A
  CALLING PARTYS CATEGORY           10 ordinary_subscriber_precedence_level_1
TRANSMISSION MEDIUM REQUIRED        0x02
  LENGTH:                          0x01 FIXED DATA 0x00
  TRANSMISSION MEDIUM REQUIRED       0 speech
INDEX TO CALLED PTY ADDRESS        0x02
INDEX TO OPTIONAL PART              0x0A

```

```

CALLED PARTY NUMBER PARM      0x04
  LENGTH:                    0x08 VAR.  DATA 0x82 0x90 0x41 0x29 0x61 0x69 0x97 0x0F
  ODD/EVEN IND                1 odd_number_of_digits
  NATURE OF ADDRESS IND      0x02 Called_reserved_for_national_use
  INTERNAL NETWORK PARM      1 routing to internal network number not allowed
  NUMBERING PLAN              1 ISDN_Telephony_Numbering_Plan
  DIGITS:                    1492169679F
  EXTENSION DIGIT            F -ST
OPTIONAL PARAMETERS:
CALLING PARTY ADDRESS        0x0A
  LENGTH:                    0x04 OPT.  DATA 0x02 0x11 0x69 0x87
  ODD/EVEN IND                0 even_number_of_digits
  NATURE OF ADDRESS IND      0x02 Calling_reserved_for_national_use
  NUMBER INCOMPLETE IND.     0 complete
  PRESENTATION IND.         0 address_presentation_allowed
  SCREENING IND.            1 user_provided_passed_network_screening
  NUMBERING PLAN              1 ISDN_Telephony_Numbering_Plan
  DIGITS:                    9678
RESERVED/UNKNOWN OPT PARM    0x3D
  LENGTH:                    0x01 OPT.  DATA 0x1F
USER SERVICE INFO           0x1D
  LENGTH:                    0x03 OPT.  DATA 0x80 0x90 0xA3
  EXTENSION BIT               1 last_octet
  CODING STANDARD             0 CCITT_coding_standard
  BC INFO TRANSFER CAP       0 transfer_speech
  EXTENSION BIT               1 last_octet
  TRANSFER MODE               0 circuit_mode
  INFORMATION TRANSFER RATE   16 rate_64_kb_per_s
  EXTENSION BIT               1 last_octet
  USER LAYER IDENTIFICATION   1 user_info_layer_1_protocol
  MULTIPLIER/PROTOCOL ID     3 A_law_speech
END OF OPTIONAL PARAMETERS    0x00
***** END_OF_MSG *****

```

```

14:07:33.607918 1-010-1[02129] 1-002-1[02065] ITU ISUP. -> IAM (01) CIC=00001
                                           CDPN=92169679F CGPN=9678
                                           SLS=01 Pr:0 Ni:NTL

```

```

***** DETAIL *****
CIC 1
MESSAGE TYPE 0x01 IAM - Initial_Address_Msg
NATURE_OF_CONNECTION 0x06
  LENGTH: 0x01 FIXED DATA 0x00
  SATELLITE IND 0 no_satellite_circuit_in_connection
  CONTINUITY CHECK IND 0 Continuity_check_not_required
  ECHO SUPPRESSOR IND 0 outgoing_half_echo_suppressor_not_included
FORWARD CALL IND. 0x07
  LENGTH: 0x02 FIXED DATA 0x20 0x01
  NATL/INTL CALL IND 0 incoming_national_call
  END-TO-END METHOD IND 0 no_end_to_end_method_available
  INTERWORKING IND 0 no_interworking_encountered
  END-TO-END INFO IND 0 no_end_to_end_information_available
  ISUP IND. 1 ISUP_used_all_the_way
  ISDN PREFERENCE IND 0 isdn_up_pref_all_the_way
  ISDN ACCESS IND. 1 originating_access_ISDN
  SCCP Method 0 no indication
CALLING PARTYS CATEGORY 0x09
  LENGTH: 0x01 FIXED DATA 0x0A
  CALLING PARTYS CATEGORY 10 ordinary_subscriber_precedence_level_1
TRANSMISSION MEDIUM REQUIRED 0x02
  LENGTH: 0x01 FIXED DATA 0x00
  TRANSMISSION MEDIUM REQUIRED 0 speech
INDEX TO CALLED PTY ADDRESS 0x02

```

```

INDEX TO OPTIONAL PART          0x09
CALLED PARTY NUMBER PARM       0x04
  LENGTH:                       0x07 VAR.  DATA 0x82 0x90 0x29 0x61 0x69 0x97 0x0F
  ODD/EVEN IND                  1 odd_number_of_digits
  NATURE OF ADDRESS IND         0x02 Called_reserved_for_national_use
  INTERNAL NETWORK PARM         1 routing to internal network number not allowed
  NUMBERING PLAN                1 ISDN_Telephony_Numbering_Plan
  DIGITS:                       92169679F
  EXTENSION DIGIT              F -ST
OPTIONAL PARAMETERS:
CALLING PARTY ADDRESS          0x0A
  LENGTH:                       0x04 OPT.  DATA 0x02 0x11 0x69 0x87
  ODD/EVEN IND                  0 even_number_of_digits
  NATURE OF ADDRESS IND         0x02 Calling_reserved_for_national_use
  NUMBER INCOMPLETE IND.        0 complete
  PRESENTATION IND.            0 address_presentation_allowed
  SCREENING IND.                1 user_provided_passed_network_screening
  NUMBERING PLAN                1 ISDN_Telephony_Numbering_Plan
  DIGITS:                       9678
RESERVED/UNKNOWN OPT PARM      0x3D
  LENGTH:                       0x01 OPT.  DATA 0x1F
USER SERVICE INFO              0x1D
  LENGTH:                       0x03 OPT.  DATA 0x80 0x90 0xA3
  EXTENSION BIT                  1 last_octet
  CODING STANDARD                0 CCITT_coding_standard
  BC INFO TRANSFER CAP           0 transfer_speech
  EXTENSION BIT                  1 last_octet
  TRANSFER MODE                  0 circuit_mode
  INFORMATION TRANSFER RATE      16 rate_64_kb_per_s
  EXTENSION BIT                  1 last_octet
  USER LAYER IDENTIFICATION      1 user_info_layer_1_protocol
  MULTIPLIER/PROTOCOL ID        3 A_law_speech
END OF OPTIONAL PARAMETERS     0x00
*****                          END_OF_MSG                          *****

```

```

14:07:33.630890 10.48.85.24:3001 10.48.85.187:3001
NI2+..... -> SETUP (05) PROT:08 CREF:0003
  IE:BEARER_CAPAB (04) 8090a3
  IE:CHANNEL_ID (18) e9808381
  IE:CALLING_PARTY_NB (6c) 0181 CALLING NB:9678
  IE:CALLED_PARTY_NB (70) 81 CALLED NB:92169679

```

```

14:07:33.640377 10.48.85.187:3001 10.48.85.24:3001

```

```

  NI2+..... -> REL_COMP (5a) PROT:08 CREF:8003

```

```

  IE:CAUSE (08) 80ba

```

```

  Cause 58 = Bearer Cap Not Avail

```

```

14:07:33.660505 1-002-1[02065] 1-010-1[02129]

```

```

  ITU ISUP. -> REL (0c) CIC=00001 Cause 58 = Bearer Cap Not Avail

```

```

  SLS=01 Pr:0 Ni:NTL

```

```

***** DETAIL *****

```

```

CIC 1
MESSAGE TYPE 0x0C REL - Release_Msg
INDEX TO VARIABLE PART 0x02
INDEX TO OPTIONAL PART 0x00
CAUSE IND 0x12
  LENGTH: 0x02 VAR.  DATA 0x80 0xBA
  EXTENSION BIT 1 diagnostic_is_not_included
  CODING STANDARD 0 CCITT_standard
  GENERAL LOCATION 0 User
  EXTENSION BIT 1 diagnostic_is_not_included
  CLASS 3 Service or option not available
  VALUE IN CLASS 10

```

```
CAUSE VALUE                               58 Bearer capability not presently available
*****                                END_OF_MSG                                *****
```

```
14:07:33.742257 1-010-1[02129] 1-002-1[02065]
ITU ISUP. -> REL (0c) CIC=00062 Cause 58 = Bearer Cap Not Available
SLS=14 Pr:0 Ni:NTL
```

```
***** DETAIL *****
CIC 62
MESSAGE TYPE 0x0C REL - Release_Msg
INDEX TO VARIABLE PART 0x02
INDEX TO OPTIONAL PART 0x00
CAUSE IND 0x12
LENGTH: 0x02 VAR. DATA 0x80 0xBA
EXTENSION BIT 1 diagnostic_is_not_included
CODING STANDARD 0 CCITT_standard
GENERAL LOCATION 0 User
EXTENSION BIT 1 diagnostic_is_not_included
CLASS 3 Service or option not available
VALUE IN CLASS 10
CAUSE VALUE 58 Bearer capability not presently available
*****                                END_OF_MSG                                *****
```

```
14:07:33.770574 1-010-1[02129] 1-002-1[02065] ITU ISUP. -> RLC (10) CIC=00001
SLS=01 Pr:0 Ni:NTL
```

```
***** DETAIL *****
CIC 1
MESSAGE TYPE 0x10 RLC - Release_Complete_Msg
*****                                END_OF_MSG                                *****
```

```
14:07:33.780953 1-002-1[02065] 1-010-1[02129] ITU ISUP. -> RLC (10) CIC=00062
SLS=14 Pr:0 Ni:NTL
```

```
***** DETAIL *****
CIC 62
MESSAGE TYPE 0x10 RLC - Release_Complete_Msg
*****                                END_OF_MSG                                *****
```

Note: 发出原因的Cisco IOS debug命令debug isdn q931我= 0x80BA。这在[了解debug isdn q931断开原因代码](#)文件解释。

Note: 原因我= 0x82c1 -没实现的载体功能，网络不能提供用户要求的载体功能。这可以与电信公司问题连接。

如果这是实际情形，请添加命令在Serial interfaces下。如果仍然遇到此问题，请发出debug isdn q931并且确认。如果那样，请发出debug isdn q931命令并且添加这些Cisco IOS命令到配置。

- service timestamps debug datetime msec
 - service timestamps log datetime msec
- 再做测试通话，并且检查输出的debug isdn q931命令。

添加isdn incoming-voice modem命令在Serial interfaces下更改工作情况= 0x80BA。

```
May 3 10:31:02.916: ISDN Se0:15 SC Q931: RX <- SETUP pd = 8 callref = 0x000D
Bearer Capability i = 0x8090A3
Standard = CCITT
```

```

        Transer Capability = Speech
        Transfer Mode = Circuit
        Transfer Rate = 64 kbit/s
    Channel ID i = 0xE980839F
        Exclusive, Interface 0, Channel 31
    Calling Party Number i = 0x0181, '9678'
        Plan:ISDN, Type:Unknown
    Called Party Number i = 0x81, '92169679'
        Plan:ISDN, Type:Unknown
May  3 10:31:02.936: ISDN Se0:15 SC Q931: TX -> CALL_PROC pd = 8  callref = 0x800D
        Channel ID i = 0xE180839F
        Preferred, Interface 0, Channel 31
May  3 10:31:05.300: ISDN Se0:15 SC Q931: TX -> ALERTING pd = 8  callref = 0x800D
        Facility i = 0x9E8100036774640000001B41434D2C0D0A50524E2C6973646E2A2C2C4E45543
52A2C0D0A0D0A
May  3 10:31:07.088: ISDN Se0:15 SC Q931: TX -> CONNECT pd = 8  callref = 0x800D
May  3 10:31:07.108: ISDN Se0:15 SC Q931: RX <- CONNECT_ACK pd = 8  callref = 0x000D
May  3 10:31:09.672: %ISDN-6-CONNECT: Interface Serial0:30 is now connected to 9678
May  3 10:31:09.672: %ISDN-6-DISCONNECT: Interface Serial0:30 disconnected from 9678
, call lasted 2 seconds
May  3 10:31:09.672: ISDN Se0:15 SC Q931: TX -> DISCONNECT pd = 8  callref = 0x800D
        Cause i = 0x8090 - Normal call clearing
        Facility i = 0x9E8100036774640000001B52454C2C0D0A50524E2C6973646E2A2C2C4E45543
52A2C0D0A0D0A
May  3 10:31:09.824: ISDN Se0:15 SC Q931: RX <- RELEASE pd = 8  callref = 0x000D
May  3 10:31:09.828: ISDN Se0:15 SC Q931: TX -> RELEASE_COMP pd = 8  callref = 0x800D

```

排除故障并且验证

如果遇到任何问题，请收集SS7嗅探器跟踪与Cisco IOS debug命令debug isdn q931和Cisco PGW 2200消息定义语言(MDL)跟踪的组合。

收集Cisco PGW 2200 MDL跟踪

遵从这些步骤收集MDL跟踪：

1. 确定呼叫发出的产生的Ss7sigPath编号或产生的TrunkGroup编号。
2. 通过运行脚本转动日志位于/opt/CiscoMGC/bin/log_rotate.sh。
3. 通过发出sta-sc-trc开始MDL跟踪：**ss7sigPath名字/number**命令的orig trunkgroup和确认。如果想要更多详细资料，请发出帮助：**sta-sc-trc help**命令通过人机语言(MML)。
4. 通过做呼叫执行一个测试。
5. 通过发出stp-sc-trc终止MDL跟踪：**all**命令。
6. 识别呼叫ID (C :)坏呼叫。如果测试通话在测试环境被做，只有一呼叫ID显示。这是您接受详细资料的示例，当您发出./get_trc.sh trace_file_name时：

```

/opt/CiscoMGC/bin
mgcusr@PGW2200% ./get_trc.sh _ss7path_20040116104232.btr
get_trc.sh ca/sim/sp Trace File Utility Mistral Version 1.2
The ANALYSIS mdo file is: GENERIC_ANALYSIS.mdo
Retrieving _ss7path_20040116104232.btr trace file Call ID's, please wait...
Enter one of the following commands:
S = Simprint in less
F = Simprint with printing of sent and received Fields in less
D = Display trc trace in less
G = Display trc trace in less (Generated)
C = Convert to trc trace file
A = Display CA file in less
N = Move to Next call ID
P = Move to Previous call ID

```

```

L = List call ID's in current file
X = Set SP flags
H = Print Help
Q = Quit get_trc.sh
Or just enter the ID of the call you want if you know it
Use (N)ext and (P)revious to move between the call ID's
_ss7path_20040116104232.btr contains 10 call(s)
==> Working on call 1 ID 24 H = Help [S/F/D/G/C/A/N/P/L/H/Q/id]?

```

Note: 如果捕获在生产Cisco PGW 2200，被采取这些文件能包含许多混合呼叫追踪。在文件的每个追踪记录有与该记录关连类型的一个特定记录类型和记录信息。每个记录有与一次特定呼叫涉及它的呼叫ID。

7. 转换MDL跟踪成可读的格式。去目录/opt/CiscoMGC/bin并且发出命令./get_trc.sh跟踪文件名。
8. 键入呼叫ID在提示跳到坏呼叫的MDL跟踪。
9. 选择C选项转换跟踪文件。**Note:** 与扩展名.btr的文件是Cisco PGW 2200跟踪程序功能导致的二进制跟踪文件。文件名的主要部分在Cisco PGW 2200 mml命令sta-sc-trc被测量。Cisco PGW 2200总是添加一个.btr扩展名到这些文件。当您使用“C”选项时，文件被转换成文本格式，并且扩展名.trc被添加到文件名。这些文件包含从在模拟重播运行生产文件的MDO代码的详细的一行行的跟踪信息，因此他们包含MDL跟踪。
10. 跟踪文件寻找/opt/CiscoMGC/var/trace。加载.btr和.trc文件到服务要求复核。
11. 收集platform.log文件位于/opt/CiscoMGC/var/log。有时，当处理服务请求，Cisco技术支持工程师问时其他platform.log相关的信息对问题报告。

收集snoop/SIP-SS7嗅探器跟踪

此部分列出收集嗅探器跟踪的几个方法。哪个您选择取决于是否安排[Cisco分组电话中心监测与排障\(PTC-MT\)](#)安装您或运行Cisco刺探者旧版本。Cisco刺探者能提供一好了解SS7-SIP呼叫流。

- 发出snoop命令在所有Solaris平台：要收集UNIX监听信息，请登陆作为超级用户并且发出命令：

```
snoop -o snoop.log IP address
```

输入Ctrl+C退出监听和加载snoop.log文件到案例注释。**Note:** 解释在案例注释此文件通过snoop命令使用是获取的UNIX。

- 运行Cisco刺探者应用程序：要收集Cisco刺探者信息，请登陆作为超级用户并且发出list命令./snooper int接口的PARMS或运行./snooper，给予您一个完整的说明。

```
./snooper int hme'x' ni2+ ss7 > snooper_int1
!--- Where 'x' is the interface number, which you can also find !--- by issuing the ifconfig
-a command.
```

Note: 加载snooper_int1文件到案例注释。

- 运行PTC-MT。收集PTC-MT信息，请登陆作为超级用户和发出./ptcmt int接口PARMS list命令或运行./snooper，给予您一个完整的说明。

```
./ptcmt int hme'x' ni2+ ss7 > snooper_int1
!--- Where 'x' is the interface number, which you can also find !--- by issuing the ifconfig
-a command.
```

加载"snooper_int1"文件到案例注释。

[Related Information](#)

- [Cisco PGW 2200软交换技术说明](#)
- [PGW2200的配置示例](#)
- [语音技术支持](#)
- [语音和统一通信产品支持](#)
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