

# Cisco PGW 2200的SimWriter测试拨号计划

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## Introduction

当您创建一拨号计划然后测试它时，没有办法验证呼叫如何通过Cisco PGW 2200的一拨号计划运行。此时，您在呼叫需要做测试通话和运行充分的MDL跟踪。当您查看跟踪时，他们是冗长和复杂的了解。为此，SimWriter在/opt/CiscoMGC/bin目录里是要了解的更加容易的跟踪。转换验证工具提供您方法知道呼叫如何被处理根据您的系统的拨号计划。此工具创建由拨号计划处理呼叫的模拟。

## Prerequisites

## Requirements

Cisco 建议您了解以下主题：

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

## Components Used

本文的信息根据Cisco PGW 2200软交换。

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.

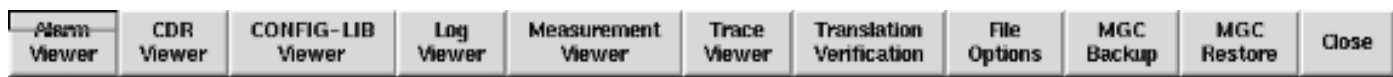
## Conventions

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

## Cisco PGW 2200 SimWriter

为了查看最新的SimWriter帮助选项，去/opt/CiscoMGC/bin目录并且运行**SimWriter命令**或**simWriter - help命令**在line命令。-**请帮助**参数提供您每个参数的帮助说明。本文只着重其中一些参数。如果在一个图形情况要使用此，请通过X-windows运行**MGC\_Toolkit命令**下面目录/opt/Toolkit/bin。这包含在转换验证部分构件的。并且，请使用**SimWriter命令**。

目前，当您发出**.MGC\_Toolkit命令**在/opt/Toolkit/bin目录里时，您获得此信息：



选择**Translation Verification**选项显示此窗口：

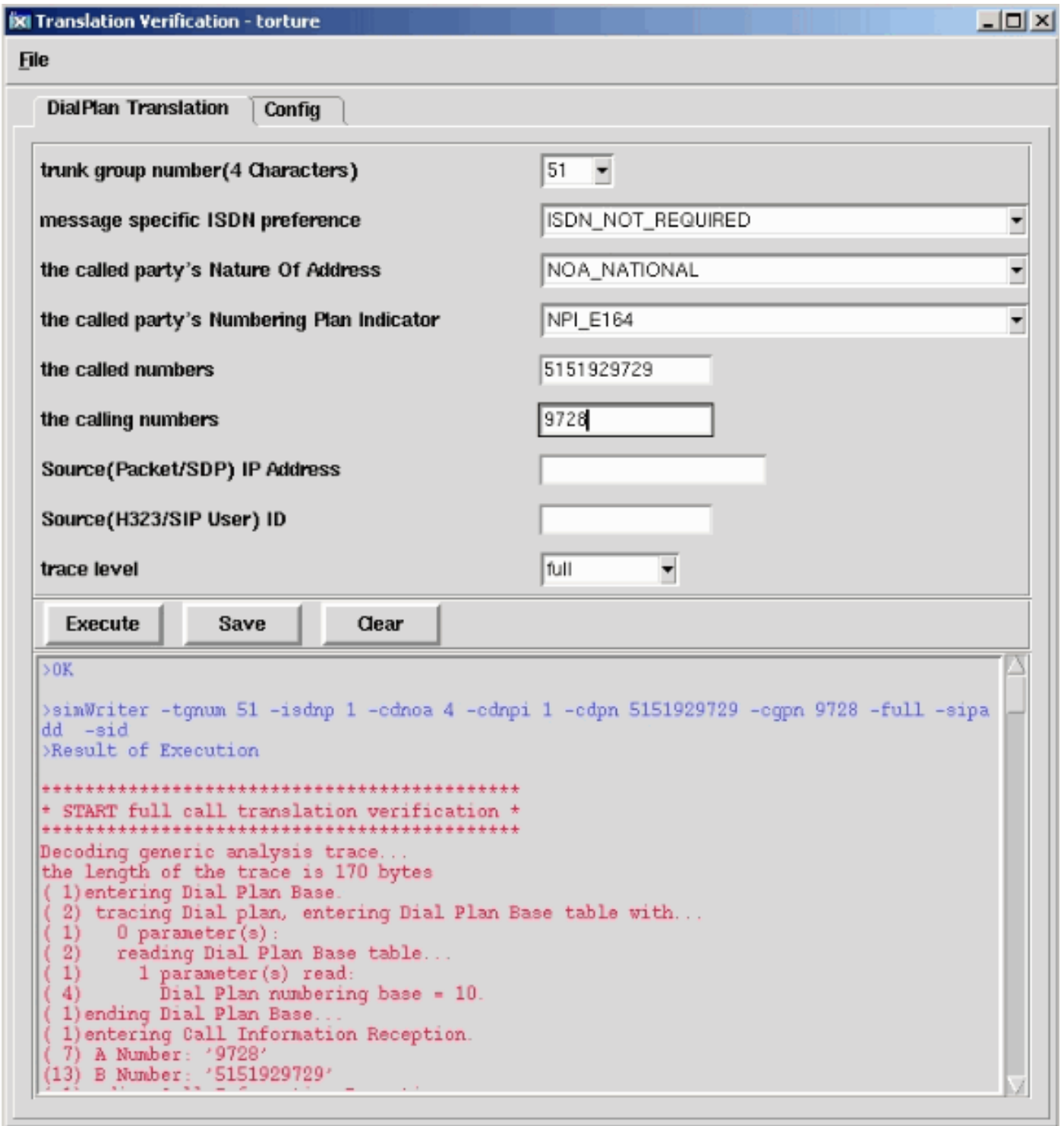


表1 : SimWriter帮助输出信息

选项字符串	参数	参数类型	说明
-tgnum	中继线组编号	4个位	此选项是必须的。它指定中继线组编号呼叫进来。指定的中继线组然后用于发现关于用户的所有被存储的信息和他们的首选从.dat文件。
-	<none>	<	指示对SimWriter和callver一个全面跟踪希

充分	>	n o n e >	望。在此模式下，更加详细的跟踪被打印。请参阅 <a href="#">Callver Output部分</a> 关于此格式的一个详细规格说明。
-di a g	<none >	< n o n e >	指示对SimWriter和callver诊断的跟踪希望。在此模式下所有结果被打印，但是所有表信息忽略。请参阅 <a href="#">Callver Output部分</a> 关于此格式的一个详细规格说明。
-is d p n	ISDP 首选 被列 举的 代码	位	当您选择一个流出的路由时，指定ISDN首选使用。此首选是在最初的指定留言包括的那个。有使用产生中继线组，从.dat文件被拾起的额外路由首选。可能的值在 <a href="#">表2</a> 列出。
-c d n o a	地址 (NOA) 的本 质的 被叫 方	位	表示被叫方的NOA的一个被列举的编号。这是对应与NOAs的值在呼叫上下文的编号。参见 <a href="#">表3</a> 关于NOA类型和他们的整数值。
-c d n p i	被叫 方的 Numb ering Plan Indica tor (NPI)	位	表示被叫方的NOA的一个被列举的编号。这是对应与NPI的值在呼叫上下文的编号。参见 <a href="#">表4</a> 关于NPI类型和他们的整数值。
-c d p n	被叫 号码	数字 串	这是被叫号码。目前，拨号计划只支持位0至9。所以，六角形的位不允许。
-c g n o a	主叫 方的 NOA	位	表示主叫方的NOA的一个被列举的编号。这是对应与NOAs的值在呼叫上下文的编号。
-c g n p i	主叫 方的 NPI	位	表示主叫方的NOA的一个被列举的编号。这是对应与NPI的值在呼叫上下文的编号。
-c g p n	主叫 方编 号	数字 串	这是主叫方编号。目前，拨号计划只支持位0至9。六角形的位不允许。

表2 : ISDN的整数值

ISDN类型	整数值
CLASS_ISDN_PREFERRED	0
CLASS_ISDN_NOT_REQUIRED默认值	1
CLASS_ISDN_REQUIRED	2

表3 : NOA的整数值

NOA类型	整数值
NOA_NONE	1
NOA_UNKNOWN	2
NOA_SUBSCRIBER	3
NOA_NATIONAL	4
NOA_INTERNATIONAL	5
NOA_NETWORK	6
NOA_MERIDIAN	7
NOA_ABBR	8
NOA_UNIQUE_3DIG_NAT_NUM	9
NOA_ANI	10
NOA_NO_ANI_REC'D	11
NOA_NON_UNIQUE_SUBSCRIBER	12
NOA_NON_UNIQUE_NATIONAL	13 ↑
NOA_NON_UNIQUE_INTERNATIONAL	14
NOA_OPRREQ_TREATED	15
NOA_OPRREQ_SUBSCRIBER	16
NOA_OPRREQ_NATIONAL	17
NOA_OPRREQ_INTERNATIONAL	18
NOA_OPRREQ_NO_NUM	19
NOA_CARRIER_NO_NUM	20
NOA_950_CALL	21
NOA_TEST_LINE_CODE	22
NOA_INT_INBOUND	23
NOA_NAT_OR_INTL_CARRIER_ACC_CODE_INC	24
NOA_CELL_GLOBAL_ID_GSM	25
NOA_CELL_GLOBAL_ID_NMT_900	26
NOA_CELL_GLOBAL_ID_NMT_450	27
NOA_CELL_GLOBAL_ID_AUTONET	28
NOA_PORTED_NUMBER	29
NOA_PISN_SPECIFIC_NUMBER	30
NOA_UK_SPECIFIC_ADDRESS	31

NOA_SPARE	32
NOA_SUBSCRIBER_OPERATOR_REQUESTED	33
NOA_NATIONAL_OPERATOR_REQUESTED	34
NOA_INTERNATIONAL_OPERATOR_REQUESTED	35
NOA_NO_NUMBER_PRESENT_OPERATOR_REQUESTED	36
NOA_NO_NUMBER_CUT_THROUGH_TO_CARRIER	37
NOA_950_PUBLIC_HOTEL_LINE	38
NOA_TEST_CALL	39
NOA_MCI_VNET	40
NOA_INTERNATIONAL_OPERATOR_TO_OPERATOR_OUTSIDE_WZI	41
NOA_INTERNATIONAL_OPERATOR_TO_OPERATOR_INSIDE_WZI	42
NOA_DIRECT_TERMINATION_OVERFLOW	43
NOA_ISN_EXTENDED_INTERNATIONAL_TERMINATION	44
NOA_TRANSFER_ISN_TO_ISN	45
NOA_CREDIT_CARD	46
预留	47

表4 : NPI的整数值

NPI类型	整数值
NPI_NONE	0
NPI_E164默认值	1
NPI_DATA	2
NPI_TELEX	3
NPI_PNP	4
NPI_NATIONAL	5
NPI_TELEPHONY	6
NPI_MARITIME_MOBILE	7
NPI_LAND_MOBILE	8
NPI_ISDN_MOBILE	9

## SimWriter使用示例

在本例中，TDM发夹呼叫通过对NAS的PGW2200被做。首先，查看通过SimWriter为了看到Cisco PGW 2200拨号计划是否当时报告任何错误PGW2200不正确地设置。

**Note:** 由于在SimWriter的若干修改，Cisco建议您升级PGW到最新的补丁程序。检查其他信息。并且请保证您发现`engine.SysVirtualSwitch = 1`在`XECfgParm.dat`文件在`/opt/CiscoMGC/etc`目录里，并且`CALLVER*.mdos`安装在`/opt/CiscoMGC/lib`目录里。参考Cisco Bug ID CSCee18831 ([仅registeredcustomers](#))寻址SimWriter如何应该能捕获所有属性被驱动的更改。

此示例从B编号在route51去除前两个位并且重路由呼叫取消。BMODDIG结果类型有一“dw=1”和“dw=2”，指示开始去除从B编号的第一个数字开始和删除前两位[dw=2]。

```
numan-add:resultset:custgrpid="sw01",name="rset51"
```

```
numan-add:resulttable:custgrpid="sw01",name="strip51",resulttype="BMODDIG",
dw1="1",dw2="2",setname="rset51"
```

```
numan-add:resulttable:custgrpid="sw01",name="route51",resulttype="ROUTE",
dw1="rtgrp51",setname="rset51"
```

在您添加BMODDIG并且路由mml命令和发出mml prov-cpy or prov-dply命令后，使用prov-rtrv和numan-rtrv命令，您能检查配置。

```
PGW2200 mml>prov-rtrv:trnkgp:"all"
MGC-01 - Media Gateway Controller 2004-02-02 18:51:34.983 WET
M RTRV
"session=UnsolNot_On17:trnkgp"
/*
NAME          CLLI          SVC          TYPE          SELSEQ        QABLE
----          -
51            NULL           ss7-bru8     TDM_ISUP      LIDL          N
*/
;
```

```
PGW2200 mml>numan-rtrv:bdigtrees:custgrpid="sw01",callside="originating"
MGC-01 - Media Gateway Controller 2004-02-02 18:54:31.632 WET
M RTRV
"session=UnsolNot_On17:bdigtrees"
/*
digitString      callSide
-----
                    originating
PointInDigitString
-----
51
ResultSetName
-----
rset51
resultName      resultType      dw1      dw2      dw3      dw4      nextResult
-----
strip51         BMODDIG         1         2         0         0         route51
route51         ROUTE           rtgrp51   0         0         0         0
*/
```

在这种情况下，您能或者做测试通话并且检查正确的工作或，请检查SimWriter的输出发现，如果任何错误信息报告了。

如果不记得simWriter参数，请使用一个及时接口而不是命令行，此输出显示：

```
PGW2200 mml>prov-rtrv:trnkgp:"all"
MGC-01 - Media Gateway Controller 2004-02-02 18:51:34.983 WET
M RTRV
"session=UnsolNot_On17:trnkgp"
/*
NAME          CLLI          SVC          TYPE          SELSEQ        QABLE
----          -
51            NULL           ss7-bru8     TDM_ISUP      LIDL          N
*/
;
```

```
PGW2200 mml>numan-rtrv:bdigtrees:custgrpid="sw01",callside="originating"
MGC-01 - Media Gateway Controller 2004-02-02 18:54:31.632 WET
```

```

M RTRV
  "session=UnsolNot_Onl7:bdigtree"
  /*
digitString      callSide
-----
originating
PointInDigitString
-----
51
ResultSetName
-----
rset51
resultName      resultType   dw1      dw2      dw3      dw4      nextResult
-----
strip51         BMODDIG      1        2        0        0        route51
route51         ROUTE        rtgrp51  0        0        0        0

```

当此输出显示，您能也选择直接地使用命令行：

```

!--- This command has been wrapped to the second !--- line for spatial reasons. mgcusr@PGW2200%
simWriter -tgnum 51 -isdnp 0 -cdnoa 4 -cdnpi 1 -cdpn
5151929729 -cgpn 9727 -full -sipadd -sid

```

```

Analyzing .dat files:
used default Route Preference
used default Terminating Max Digits
used default Terminating Min Digits
used default Originating Min Digits
used default Originating Max Digits
used default Carrier Screening property
used default Anumnormalise property
used default Bnumnormalise property
used default Enable IP Screening property
used default NPA
used default AOCEEnabled field
used the default field for default directory number
used the default Database Access Error flag
Analysis complete, writing message...
Message completed, running simulator...
*****
* START full call translation verification *
*****
Decoding generic analysis trace...
the length of the trace is 170 bytes
( 1)entering Dial Plan Base.
( 2) tracing Dial plan, entering Dial Plan Base table with...
( 1) 0 parameter(s):
( 2) reading Dial Plan Base table...
( 1) 1 parameter(s) read:
( 4) Dial Plan numbering base = 10.
( 1)ending Dial Plan Base...
( 1)entering Call Information Reception.
( 7) A Number: '9727'
(13) B Number: '5151929729'
( 1)ending Call Information Reception...
( 1)entering Profile Analysis (NOA).
(13) Tracing call number: '5151929729' (Called party number)
( 7) Trace for customer: 'sw01'
( 5) TreeBase: '10'
( 2) tracing Dial plan, entering NOA_A table with...
( 1) 1 parameter(s):

```



```
( 4)      NOA_A table index = 4.
( 2)      reading NOA_A table...
( 1)      2 parameter(s) read:
( 4)      NPI_A index = 0.
( 4)      Result index = 0.
( 2)      tracing Dial plan, entering CPC table with...
( 1)      1 parameter(s):
( 4)      CPC table index = 9.
( 2)      reading CPC table...
( 1)      1 parameter(s) read:
( 4)      Result Index = 0.
( 2)      tracing Dial plan, entering TMR table with...
( 1)      1 parameter(s):
( 4)      TMR table index = 78.
( 2)      reading TMR table...
( 1)      1 parameter(s) read:
( 4)      Result Index = 0.
( 2)      tracing Dial plan, entering NOA table with...
( 1)      1 parameter(s):
( 4)      NOA table index = 4.
( 2)      reading NOA table...
( 1)      2 parameter(s) read:
( 4)      NPI index = 0.
( 4)      Result index = 0.
( 2)      tracing Dial plan, entering Result table with...
( 1)      1 parameter(s):
( 4)      Result table index = 0.
( 1)ending Profile Analysis (NOA)...
( 1)entering A-Number Analysis.
( 7) Tracing call number: '9727' (Calling party number)
( 7) Trace for customer: 'sw01'
( 2)      tracing Dial plan, entering A-Number digit tree table with...
( 1)      1 parameter(s):
( 4)      A-Number digit tree index = 1 (starting index table)
( 2)      reading A-Number digit tree table...
( 1)      3 parameter(s) read:
( 4)      Digit to present = 0.
( 4)      Next tree index = 0.
( 4)      Result index = 0.
-----break in message reached-----
Decoding generic analysis trace...
the length of the trace is 206 bytes
( 2)      tracing Dial plan, entering A-Number digit tree table with...
( 1)      1 parameter(s):
( 4)      A-Number digit tree index = 10 (table: 2 / digit: '-1')
( 2)      reading A-Number digit tree table...
( 1)      3 parameter(s) read:
( 4)      Digit to present = 0.
( 4)      Next tree index = 0.
( 4)      Result index = 0.
( 1)ending A-Number Analysis...
( 1)entering B-Number Analysis.
(13) Tracing call number: '5151929729' (Called party number)
( 7) Trace for customer: 'sw01'
( 2)      tracing Dial plan, entering B-Number digit tree table with...
( 1)      1 parameter(s):
( 4)      B-Number digit tree index = 1 (starting index table)
( 2)      reading B-Number digit tree table...
( 1)      3 parameter(s) read:
( 4)      Digit to present = 0.
( 4)      Next tree index = 0.
( 4)      Result index = 0.
( 2)      tracing Dial plan, entering B-Number digit tree table with...
( 1)      1 parameter(s):
```

```

( 4)      B-Number digit tree index = 6 (table: 1 / digit: '5')
( 2)      reading B-Number digit tree table...
( 1)      3 parameter(s) read:
( 4)      Digit to present = 0.
( 4)      Next tree index = 4.
( 4)      Result index = 0.
( 2)      tracing Dial plan, entering B-Number digit tree table with...
( 1)      1 parameter(s):
( 4)      Route table index = 1.
( 4)      Next route index = 0.
( 4)      Route Size = 1.
( 4)      Distribution (0=Sequential, else=Load Shared) = 0.
( 1)      ending Route Analysis...
( 1)      entering Trunk Group Analysis.
( 2)      tracing Routing plan, entering Trunk route table with...
( 1)      2 parameter(s):
( 4)      Trunk route table index = 1.
( 4)      Trunk route table offset = 1.
( 2)      reading Trunk route table...
( 1)      1 parameter(s) read:
( 4)      Trunk group table index = 1.
( 2)      tracing Routing plan, entering Trunk group table with...
( 1)      1 parameter(s):
( 4)      Trunk group table index = 1.
( 2)      reading Trunk group table...
( 1)      3 parameter(s) read:
( 4)      Trunk group ID = 51.
( 4)      Signalling type = 1.
( 4)      Attributes table index = 1.
( 2)      tracing Routing plan, entering TDM attributes table with...
( 1)      1 parameter(s):
( 4)      TDM attributes table index = 1.
( 2)      reading TDM attributes table...
( 1)      5 parameter(s) read:
( 4)      Reattempts = 0.
( 4)      Queueing = 0.
( 4)      Cut through = 3.
( 4)      Reserve Incoming Percentage = 0.
( 4)      Bearer Capability Index = 0.
( 1)      ending Trunk Group Analysis...
( 1)      entering Trunk Sorting.
( 3)      trunk group summary: 1 primary and 0 secondary trunk groups
           primary trunk groups:
( 4)      51
           secondary trunk groups:
( 1)      ending Trunk Sorting...
( 1)      end of trace reached

```

```

*****
* DONE full call translation verification *
* with 0 bytes left untranslated      *
*****

```

mgcusr@PGW2200%

最后，请做测试通话并且捕获详细资料使用SS7嗅探器(在这种情况下，PT-MCT Cisco嗅探器应用程序)。

Time stamp	Orig IP address	Dest IP address	Prot	Msg	Data
15:44:33.184859	1-010-1[02129]	1-003-1[02073]	ITU ISUP.	->	<b>IAM</b> (01) CIC=00031 CDPN=51929729F SLS=15 Pr:0 Ni:NTL

\*\*\*\*\* DETAIL \*\*\*\*\*

```

CIC 31
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 0x60 0x00
  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 1 isdn_up_pref_not_reqd
  ISDN ACCESS IND. 0 originating_access_non_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 0x03
  TRANSMISSION MEDIUM REQUIRED 3 3_1_kHz_audio
INDEX TO CALLED PTY ADDRESS 0x02
INDEX TO OPTIONAL PART 0x09
CALLED PARTY NUMBER PARM 0x04
  LENGTH: 0x07 VAR. DATA 0x83 0x90 0x15 0x29 0x79 0x92 0x0F
  ODD/EVEN IND 1 odd_number_of_digits
  NATURE OF ADDRESS IND 0x03 national_number
  INTERNAL NETWORK PARM 1 routing_to_internal_network_number_not_allowed
  NUMBERING PLAN 1 ISDN_Telephony_Numbering_Plan
  DIGITS: 51929729F
  EXTENSION DIGIT F -ST
OPTIONAL PARAMETERS:
RESERVED/UNKNOWN OPT PARM 0x3D
  LENGTH: 0x01 OPT. DATA 0x1F
USER SERVICE INFO 0x1D
  LENGTH: 0x03 OPT. DATA 0x90 0x90 0xA3
  EXTENSION BIT 1 last_octet
  CODING STANDARD 0 CCITT_coding_standard
  BC INFO TRANSFER CAP 16 audio_3_1_khz
  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
ACCESS TRANSPORT 0x03
  LENGTH: 0x04 OPT. DATA 0x1E 0x02 0x81 0x83
END OF OPTIONAL PARAMETERS 0x00
***** END_OF_MSG *****

```

```

15:44:33.211009 10.48.84.25:2427 10.48.84.188:2427 MGCP..... ->
                               CRCX 2001761 s0/ds1-0/31@v5300-3.cisco.com MGCP 0.1
                               C: 75
                               L: e:off,nt:LOCAL
                               M: sendrecv
                               R:
                               S:
                               X: 1E8B60
15:44:33.225115 10.48.84.188:2427 10.48.84.25:2427 MGCP..... -> 200 2001761 OK

```

I: 33  
v=0  
o=- 51 0 LOCAL EPN S0/DS1-0/31  
s=Cisco SDP 0  
c=LOCAL EPN S0/DS1-0/31  
t=0 0  
m=audio 0 LOCAL 0

15:44:33.241263 10.48.84.25:2427 10.48.84.188:2427 MGCP..... ->  
CRCX 2001762 s0/ds1-0/1@v5300-3.cisco.com MGCP 0.1

C: 75  
L: e:off,nt:LOCAL  
M: sendrecv  
v=0  
o=- 51 0 LOCAL EPN S0/DS1-0/31  
s=Cisco SDP 0  
c=LOCAL EPN S0/DS1-0/31  
t=0 0  
m=audio 0 LOCAL 0

15:44:33.254784 10.48.84.188:2427 10.48.84.25:2427 MGCP..... -> 200 2001762 OK

I: 34  
v=0  
o=- 52 0 LOCAL EPN S0/DS1-0/1  
s=Cisco SDP 0  
c=LOCAL EPN S0/DS1-0/1  
t=0 0  
m=audio 0 LOCAL 0

15:44:33.270628 1-003-1[02073] 1-010-1[02129] ITU ISUP. ->  
IAM (01) CIC=00001  
CDPN=929729F  
SLS=01 Pr:0 Ni:NTL

\*\*\*\*\* DETAIL \*\*\*\*\*

<b>CIC</b>	<b>1</b>
MESSAGE TYPE	0x01 <b>IAM</b> - 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 0x60 0x00
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	1 isdn_up_pref_not_reqd
ISDN ACCESS IND.	0 originating_access_non_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 0x03
TRANSMISSION MEDIUM REQUIRED	3 3_1_kHz_audio
INDEX TO CALLED PTY ADDRESS	0x02
INDEX TO OPTIONAL PART	0x08
CALLED PARTY NUMBER PARM	0x04
LENGTH:	0x06 VAR. DATA 0x83 0x90 0x29 0x79 0x92 0x0F
ODD/EVEN IND	1 odd_number_of_digits
NATURE OF ADDRESS IND	0x03 national_number
INTERNAL NETWORK PARM	1 routing_to_internal_network_number_not_allowed
NUMBERING PLAN	1 ISDN_Telephony_Numbering_Plan
DIGITS:	<b>929729F</b>

```

EXTENSION DIGIT          F -ST
OPTIONAL PARAMETERS:
RESERVED/UNKNOWN OPT PARM 0x3D
  LENGTH:                0x01 OPT.  DATA 0x1F
USER SERVICE INFO        0x1D
  LENGTH:                0x03 OPT.  DATA 0x90 0x90 0xA3
  EXTENSION BIT          1 last_octet
  CODING STANDARD        0 CCITT_coding_standard
  BC INFO TRANSFER CAP   16 audio_3_1_khz
  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
ACCESS TRANSPORT        0x03
  LENGTH:                0x04 OPT.  DATA 0x1E 0x02 0x81 0x83
RESERVED/UNKNOWN OPT PARM 0x39
  LENGTH:                0x02 OPT.  DATA 0x3D 0xC0
END OF OPTIONAL PARAMETERS 0x00
*****                      END_OF_MSG                      *****

```

```

15:44:33.544074 1-010-1[02129] 1-003-1[02073] ITU ISUP. -> ACM (06) CIC=00001
SLS=01 Pr:0 Ni:NTL

```

```

***** DETAIL *****

```

```

CIC          1
MESSAGE TYPE 0x06 ACM - Address_Complete_Msg
BACKWARD CALL IND 0x11
  LENGTH:    0x02 FIXED DATA 0x02 0x14
  CHARGE IND 2 charge
  CALLED PTYS STATUS IND 0 no_indication_default
  CALLED PARTYS CATEGORY 0 no_indication_default
  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
  REVERSE HOLDING IND 0 reverse_holding_not_required
  ISDN ACCESS IND. 1 terminating_access_ISDN
INDEX TO OPTIONAL PART 0x01
OPTIONAL PARAMETERS:
OPTIONAL BACKWARD CALL IND 0x29
  LENGTH:    0x01 OPT.  DATA 0x01
  FORWARDING IND 0 no_indication
  INBAND INFO IND 1 inband_information
  SIMPLE SEGMENTATION 0 no additional information will be sent
  NET EXCESSIVE DELAY 0 no_indication
  USER NETWORK INTERACTION 0 no_indication
END OF OPTIONAL PARAMETERS 0x00
*****                      END_OF_MSG                      *****

```

```

15:44:33.560716 10.48.84.25:2427 10.48.84.188:2427 MGCP..... ->
MDCX 2001764 s0/ds1-0/31@v5300-3.cisco.com MGCP 0.1
C: 75
I: 33
L: e:off,nt:LOCAL
M: sendrecv
R:
S:
X: 1E8B63
v=0
o-- 52 0 LOCAL EPN S0/DS1-0/1

```

```

s=Cisco SDP 0
c=LOCAL EPN S0/DS1-0/1
t=0 0
m=audio 0 LOCAL 0
15:44:33.565405 10.48.84.188:2427 10.48.84.25:2427 MGCP..... -> 200 2001764 OK
v=0
o=- 51 1 LOCAL EPN S0/DS1-0/31
s=Cisco SDP 0
c=LOCAL EPN S0/DS1-0/31
t=0 0
m=audio 0 LOCAL 0
15:44:33.580472 1-003-1[02073] 1-010-1[02129] ITU ISUP. -> ACM (06) CIC=00031
SLS=15 Pr:0 Ni:NTL

```

\*\*\*\*\* DETAIL \*\*\*\*\*

```

CIC 31
MESSAGE TYPE 0x06 ACM - Address_Complete_Msg
BACKWARD CALL IND 0x11
LENGTH: 0x02 FIXED DATA 0x02 0x14
CHARGE IND 2 charge
CALLED PTYS STATUS IND 0 no_indication_default
CALLED PARTYS CATEGORY 0 no_indication_default
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
REVERSE HOLDING IND 0 reverse_holding_not_required
ISDN ACCESS IND. 1 terminating_access_ISDN
INDEX TO OPTIONAL PART 0x01
OPTIONAL PARAMETERS:
OPTIONAL BACKWARD CALL IND 0x29
LENGTH: 0x01 OPT. DATA 0x01
FORWARDING IND 0 no_indication
INBAND INFO IND 1 inband_information
SIMPLE SEGMENTATION 0 no additional information will be sent
NET EXCESSIVE DELAY 0 no_indication
USER NETWORK INTERACTION 0 no_indication
END OF OPTIONAL PARAMETERS 0x00
***** END_OF_MSG *****

```

```

15:44:34.824070 1-010-1[02129] 1-003-1[02073] ITU ISUP. -> ANM (09) CIC=00001
SLS=01 Pr:0 Ni:NTL

```

\*\*\*\*\* DETAIL \*\*\*\*\*

```

CIC 1
MESSAGE TYPE 0x09 ANM - Answer_Msg
INDEX TO OPTIONAL PART 0x01
OPTIONAL PARAMETERS:
BACKWARD CALL IND 0x11
LENGTH: 0x02 OPT. DATA 0x02 0x04
CHARGE IND 2 charge
CALLED PTYS STATUS IND 0 no_indication_default
CALLED PARTYS CATEGORY 0 no_indication_default
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
REVERSE HOLDING IND 0 reverse_holding_not_required
ISDN ACCESS IND. 0 terminating_access_non_ISDN
ACCESS TRANSPORT 0x03
LENGTH: 0x04 OPT. DATA 0x1E 0x02 0x81 0x82
END OF OPTIONAL PARAMETERS 0x00
***** END_OF_MSG *****

```

15:44:34.841851 1-003-1[02073] 1-010-1[02129] ITU ISUP. -> **ANM** (09) CIC=00031  
SLS=15 Pr:0 Ni:NTL

\*\*\*\*\* DETAIL \*\*\*\*\*

**CIC** 31  
MESSAGE TYPE 0x09 ANM - Answer\_Msg  
INDEX TO OPTIONAL PART 0x01  
OPTIONAL PARAMETERS:  
BACKWARD CALL IND 0x11  
LENGTH: 0x02 OPT. DATA 0x02 0x04  
CHARGE IND 2 charge  
CALLED PTYS STATUS IND 0 no\_indication\_default  
CALLED PARTYS CATEGORY 0 no\_indication\_default  
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  
REVERSE HOLDING IND 0 reverse\_holding\_not\_required  
ISDN ACCESS IND. 0 terminating\_access\_non\_ISDN  
ACCESS TRANSPORT 0x03  
LENGTH: 0x04 OPT. DATA 0x1E 0x02 0x81 0x82  
END OF OPTIONAL PARAMETERS 0x00  
\*\*\*\*\* END\_OF\_MSG \*\*\*\*\*

15:44:39.112351 1-010-1[02129] 1-003-1[02073] ITU ISUP. -> **REL (0c) CIC=00001**  
Cause 16 = Normal Call Clearing  
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 0x90  
EXTENSION BIT 1 diagnostic\_is\_not\_included  
CODING STANDARD 0 CCITT\_standard  
GENERAL LOCATION 0 User  
EXTENSION BIT 1 diagnostic\_is\_not\_included  
CLASS 1 Normal event  
VALUE IN CLASS 0  
CAUSE VALUE 16 Normal\_clearing  
\*\*\*\*\* END\_OF\_MSG \*\*\*\*\*

15:44:39.130674 10.48.84.25:2427 10.48.84.188:242 **MGCP..... ->**  
**DLCX 2001766 s0/ds1-0/31@v5300-3.cisco.com MGCP 0.1**  
C: 75  
I: 33  
R:  
S:  
X: 1E8B65

15:44:39.131018 10.48.84.25:2427 10.48.84.188:2427 **MGCP..... ->**  
**DLCX 2001768 s0/ds1-0/1@v5300-3.cisco.com MGCP 0.1**  
C: 75  
I: 34  
R:  
S:  
X: 1E8B67

15:44:39.131487 1-003-1[02073] 1-010-1[02129] ITU ISUP. ->  
**REL (0c) CIC=00031**





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