

# 数据呼叫 E1 R2 信令的配置与故障排除

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## 简介

本文为数据呼叫提供配置示例和故障排除技术发信号的E1 R2的。

## 先决条件

### 要求

在尝试此配置前，推荐您读[E1 R2信令理论](#)文档。关于发信号为语音应用的E1 R2的信息，参考本文[E1 R2信令配置和故障排除](#)。

### 使用的组件

此配置使用下面软件和硬件版本开发并且被测试。此配置表示在Cisco 3640路由器和Cisco AS5300访问服务器之间的一个背对背实验室设置。

- AS5300模拟客户端和运行Cisco IOS软件版本12.2(3)。
- 3640作为服务器和运行Cisco IOS软件版本12.1(10)。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

### 规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

## 背景信息

E1 R2发信号允许Cisco通用接入服务器谈到也使用E1 R2发信号的中心局中继线。R2信令是对信道化E1网络是普通的国际信令标准。没有R2信令的标准。ITU-T Q.400-Q.490建议定义了R2，但是一定数量的国家(地区)用完全不同的方式实现R2。

Cisco系统通过支持R2信令的许多本地化的实施在其Cisco IOS软件方面针对此挑战。R2自定义本地化意味着R2信令为各种各样的国家(地区)和地理区域支持。思科在新的国家(地区)连续支持发信号变形的E1 R2。

**注意：** 仅ISDN调制解调器信道集中(MICA)和NextPort数字调制解调器模块支持R2功能。R2支持为Microcom调制解调器或非调制解调器应用程序没有提供。

## 配置

本部分提供有关如何配置本文档所述功能的信息。此配置为以下方案是有效：

- 在E1 R2的Modem dialin连接
- E1 R2背对背连接
- Cisco路由器之间的E1 R2连接

**注意：** E1控制器的配置是相同的为数据或语音呼叫。唯一的差异是：

- 对于数据呼叫您需要配置调制解调器接受呼叫。
- 对于语音呼叫您需要配置语音端口接受呼叫。

**注意：** 要查找本文档所用命令的其他信息，请使用[命令查找工具](#)（[仅限注册用户](#)）。

## 网络图

本文档使用下图所示的网络设置。

## 配置

配置数据呼叫的E1 R2包括两个一般步骤：

- 配置 E1 R2
- 配置调制解调器和相关问题

E1 R2配置根据从Telco得到的信息。参考本文[E1 R2信令配置和故障排除](#)关于E1 R2特定配置的更多信息。

调制解调器配置类似于那为所有接入服务器与，例如，PRI线路。

### 莫妮卡(AS5300)

```
Monica#show running-config controller E1 1 !--- E1 R2
configuration framing NO-CRC4 clock source line
secondary 1 ds0-group 1 timeslots 1-15,17-31 type r2-
digital r2-compelled cas-custom 1 country easteuropa
use-defaults interface Async60 !--- Interface
configuration for outgoing call no ip address
encapsulation ppp dialer in-band dialer rotary-group 3
async mode dedicated ppp authentication chap line 60 !---
```

```
- Line configuration for outgoing call modem InOut modem
dialout controller e1 1 !--- Specify that e1 1 is used
for outgoing call transport input all autoselect during-
login autoselect ppp
```

## 安格拉(3640)

```
angela#show running-config interface Ethernet0/0 ip
address 10.200.20.2 255.255.255.0 controller E1 2/0 !---
E1 R2 configuration framing NO-CRC4 ds0-group 1
timeslots 1-15,17-31 type r2-digital r2-compelled cas-
custom 1 country easteuropa use-defaults interface
Group-Async1 ip unnumbered Ethernet0/0 encapsulation ppp
async mode interactive peer default ip address pool
DIAL_POOL ppp authentication chap group-range 97 114 !
ip local pool DIAL_POOL 105.41.30.101 105.41.30.132 line
97 114 !--- Line configuration for incoming calls modem
InOut autocommand ppp transport input all autoselect
during-login autoselect ppp
```

## 验证

当前没有可用于此配置的验证过程。

## 故障排除

本部分提供的信息可用于对配置进行故障排除。

关于故障排除E1 R2失败的更多信息，参考[E1 R2信令配置和故障排除](#)。

## 故障排除命令

[命令输出解释程序工具](#) ( [仅限注册用户](#) ) 支持某些 **show** 命令，使用此工具可以查看对 **show** 命令输出的分析。

**注意：** 在发出 **debug** 命令之前，请参阅[有关 Debug 命令的重要信息](#)。

- **show controllers e1** -显示是特定对控制器硬件的控制器状态。关于详细信息，参考[了解show controllers e1命令](#)。
- 如果所有硬件被认可， **show diag** -在Cisco3600，显示路由器的硬件信息，验证。
- **debug modem csm** -调试(CSM)用于的呼叫交换模块连接在调制解调器的呼叫。
- **debug cas** - CAS信令位状态的提供实时跟踪。
- **debug modem** -显示在接入服务器的调制解调器线路活动。
- **show modem version** -显示关于调制解调器固件、控制器和DSP编码的版本信息。

```
angela#show modem version Slot 3:MICA-6DM Firmware, Source - flash:/mica-modem-pw.2.7.3.0.bin
CP ver 2730 - 5/23/2001, CheckSum BCCEB316. SP ver 2730 - 5/23/2001. MICA 0: HW Version 2.1,
Serial Number 21094004. angela#show diag Slot 2: CE1 (Balanced) Port adapter, 1 port Port
adapter is analyzed Port adapter insertion time unknown EEPROM contents at hardware discovery:
Hardware revision 1.1 Board revision A0 Serial number 11359839 Part number 800-01234-04 Test
history 0x0 RMA number 00-00-00 EEPROM format version 1 EEPROM contents (hex): 0x20: 01 2A 01 01
00 AD 56 5F 50 04 D2 04 00 00 00 00 0x30: 50 00 00 00 98 11 24 00 FF FF FF FF FF FF FF FF
angela#show controllers e1 2/0 E1 2/0 is up. Applique type is Channelized E1 - balanced Far End
Block Errors Detected No alarms detected. Framing is NO-CRC4, Line Code is HDB3, Clock Source is
Line. Data in current interval (34 seconds elapsed): 0Line Code Violations, 0 Path Code
Violations 0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins 0 Errored Secs, 0
```

Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs Robbed bit signals state: timeslots rxA rxB  
rxC rxD txA txB txC txD 1 1 0 0 1 1 0 0 1 2 1 0 0 1 1 0 0 1 3 1 0 0 1 1 0 0 1 4 1 0 0 1 1 0 0 1  
5 1 0 0 1 1 0 0 1 6 1 0 0 1 1 0 0 1 7 1 0 0 1 1 0 0 1 8 1 0 0 1 1 0 0 1 9 1 0 0 1 1 0 0 1 10 1 0  
0 1 1 0 0 1 11 1 0 0 1 1 0 0 1 12 1 0 0 1 1 0 0 1 13 1 0 0 1 1 0 0 1 14 1 0 0 1 1 0 0 1 15 1 0 0  
1 1 0 0 1 17 1 0 0 1 1 0 0 1 18 1 0 0 1 1 0 0 1 19 1 0 0 1 1 0 0 1 20 1 0 0 1 1 0 0 1 21 1 0 0 1  
1 0 0 1 22 1 0 0 1 1 0 0 1 23 1 0 0 1 1 0 0 1 24 1 0 0 1 1 0 0 1 25 1 0 0 1 1 0 0 1 26 1 0 0 1 1  
0 0 1 27 1 0 0 1 1 0 0 1 28 1 0 0 1 1 0 0 1 29 1 0 0 1 1 0 0 1 30 1 0 0 1 1 0 0 1 31 1 0 0 1 1 0  
0 1

客户端拨号在服务器的调试的789个必要的解释。

monica#2.2.2.1 2060 Trying 2.2.2.1, 2060 ... Open at OK atdt789

要改善请了解此debug输出，参考[E1 R2信令理论文档](#)。

```
angela#show debug General OS: Modem control/process activation debugging is on CAS: Channel
Associated Signaling debugging is on CSM Modem Management: Modem Management Call Switching
Module debugging is on angela# Oct 29 15:59:46.591: Modem 255/255 CSM: received
EVENT_CALL_DIAL_IN with call_id 0006 Oct 29 15:59:46.591: src 2/0/25 dest 255/0/255 cause 768
Oct 29 15:59:46.591: CSM: Next free modem = 3/6; statbits = 80010020 Oct 29 15:59:46.591: Modem
3/6 CSM: modem is allocated, modems free=17 Oct 29 15:59:46.591: Modem 3/6 CSM:
(CSM_PROC_IDLE)<--DSX0_CALL Oct 29 15:59:46.595: Modem 3/6 Mica: configured for Answer mode,
with Lower R2 signaling, 0x0 tone detection. Oct 29 15:59:46.707: Modem 3/6 CSM: received
EVENT_START_RX_TONE with call_id 0006 Oct 29 15:59:46.707: src 2/0/25 dest 3/0/6 cause 0 Oct 29
15:59:46.707: Modem 3/6 CSM:(CSM_PROC_IC_CAS_CHANNEL_LOCKED)<--DSX0_START_RX_TONE Oct 29
15:59:46.707: Modem 3/6 CSM:(CSM_PROC_IC_CAS_CHANNEL_LOCKED)<--CSM_EVENT_MODEM_SETUP Oct 29
15:59:46.711: R2 Incoming Modem(3/6): DSX (E1 2/0:25): STATE: R2_IN_IDLE R2 Got Event R2_START
Oct 29 15:59:46.715: Modem 3/6 Mica: in modem state CALL_SETUP Oct 29 15:59:46.883: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_COLLECTED !--- We can see number 7 Oct 29
15:59:46.887: R2 Incoming Modem(3/6): DSX (E1 2/0:25): STATE:R2_IN_COLLECT_DNIS R2 Got Event 7
Oct 29 15:59:46.887: Modem 3/6 Mica: dialing number '1' !--- MICA sends 1 (which means send next
digit) Oct 29 15:59:46.887: Modem 3/6 Mica: Detected dial digit '7' Oct 29 15:59:46.959: Modem
3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_GENERATED Oct 29 15:59:47.011: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_COLLECTED Oct 29 15:59:47.011: R2 Incoming
Modem(3/6): DSX (E1 2/0:25): STATE: R2_IN_COLLECT_DNIS R2 Got Event R2_TONE_OFF Oct 29
15:59:47.011: Modem 3/6 Mica: dialing number '#' Oct 29 15:59:47.011: Modem 3/6 Mica: Detected
dial digit '#' Oct 29 15:59:47.099: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_GENERATED Oct 29 15:59:47.163: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_COLLECTED !--- We can see number 8 Oct 29 15:59:47.163: R2 Incoming Modem(3/6): DSX
(E1 2/0:25): STATE: R2_IN_COLLECT_DNIS R2 Got Event 8 Oct 29 15:59:47.163: Modem 3/6 Mica:
dialing number '1' !--- MICA sends 1 (which means send next digit) Oct 29 15:59:47.163: Modem
3/6 Mica: Detected dial digit '8' Oct 29 15:59:47.235: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_GENERATED Oct 29 15:59:47.299: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_COLLECTED Oct 29 15:59:47.299: R2 Incoming
Modem(3/6): DSX (E1 2/0:25): STATE: R2_IN_COLLECT_DNIS R2 Got Event R2_TONE_OFF Oct 29
15:59:47.299: Modem 3/6 Mica: dialing number '#' Oct 29 15:59:47.299: Modem 3/6 Mica: Detected
dial digit '#' Oct 29 15:59:47.375: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_GENERATED Oct 29 15:59:47.427: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_COLLECTED Oct 29 15:59:47.427: R2 Incoming Modem(3/6): DSX (E1 2/0:25):
STATE:R2_IN_COLLECT_DNIS R2 Got Event 9 Oct 29 15:59:47.427: Modem 3/6 Mica: dialing number '1'
!--- MICA sends 1 (which means send next digit) Oct 29 15:59:47.427: Modem 3/6 Mica: Detected
dial digit '9' Oct 29 15:59:47.499: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_GENERATED Oct 29 15:59:47.551: Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--
MODEM_DIGITS_COLLECTED Oct 29 15:59:47.551: R2 Incoming Modem(3/6): DSX (E1 2/0:25):
STATE:R2_IN_COLLECT_DNIS R2 Got Event R2_TONE_OFF Oct 29 15:59:47.551: Modem 3/6 Mica: dialing
number '#' Oct 29 15:59:47.551: Modem 3/6 Mica: Detected dial digit '#' Oct 29 15:59:47.639:
Modem 3/6 CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_GENERATED !--- NORMAL TIMEOUT--> 3
seconds Oct 29 16:00:02.426: R2 Incoming Modem(3/6): DSX (E1 2/0:25): STATE: R2_IN_COLLECT_DNIS
R2 Got Event R2_TONE_TIMER !--- MICA sends 3 (which means ADDRESS COMPLETE) Oct 29 16:00:02.426:
Modem 3/6 Mica: dialing number '3#' Oct 29 16:00:02.654: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_GENERATED Oct 29 16:00:02.678: Modem 3/6
CSM:(CSM_PROC_IC_CAS_COLLECT_DIGITS)<--MODEM_DIGITS_COLLECTED !--- We can see number 1 after we
send 3 Oct 29 16:00:02.678: R2 Incoming Modem(3/6): DSX (E1 2/0:25): STATE:R2_IN_CATEGORY R2 Got
Event 1 Oct 29 16:00:02.682: r2_comp_category:R2_ALERTING !--- MICA sends 3 (which means ADDRESS
COMPLETE) Oct 29 16:00:02.682: Modem 3/6 Mica: dialing number '6' Oct 29 16:00:02.682: Modem 3/6
```

Mica: Detected dial digit '1' Oct 29 16:00:02.834: Modem 3/6  
CSM:(CSM\_PROC\_IC\_CAS\_COLLECT\_DIGITS)<--MODEM\_DIGITS\_COLLECTED Oct 29 16:00:02.834: R2 Incoming  
Modem(3/6): DSX (E1 2/0:25): STATE: R2\_IN\_COMPLETE R2 Got Event R2\_TONE\_OFF Oct 29 16:00:02.834:  
Modem 3/6 CSM: Pending digit generation for # Oct 29 16:00:02.834: Modem 3/6 Mica: Detected dial  
digit '#' Oct 29 16:00:02.854: Modem 3/6 CSM:(CSM\_PROC\_IC\_CAS\_COLLECT\_DIGITS)<--  
MODEM\_DIGITS\_GENERATED Oct 29 16:00:02.854: Modem 3/6 Mica: dialing number '#' Oct 29  
16:00:02.854: Modem 3/6 CSM: Generate 1 pending digit(s) # Oct 29 16:00:02.918: Modem 3/6  
CSM:(CSM\_PROC\_IC\_CAS\_COLLECT\_DIGITS)<--MODEM\_DIGITS\_GENERATED Oct 29 16:00:03.834: R2 Incoming  
Modem(3/6): DSX (E1 2/0:25): STATE:R2\_IN\_WAIT\_GUARD R2 Got Event R2\_TONE\_TIMER Oct 29  
16:00:03.834: R2\_IN\_IDLE:2 r2\_in\_connect called Oct 29 16:00:03.834: Modem 3/6  
CSM:(CSM\_PROC\_IC\_CAS\_COLLECT\_DIGITS)<--ADDR\_INFO\_COLLECTED Oct 29 16:00:03.842: Modem 3/6 CSM:  
received EVENT\_CHANNEL\_CONNECTED with call\_id 0006 Oct 29 16:00:03.842: src 2/0/25 dest 3/0/6  
cause 0 Oct 29 16:00:03.842: Modem 3/6 CSM:(CSM\_PROC\_IC\_CAS\_ANSWER\_CALL)<--DSX0\_CONNECTED Oct 29  
16:00:04.926: Modem 3/6 Mica: in modem state CONNECT Oct 29 16:00:12.290: Modem 3/6 Mica: in  
modem state LINK Oct 29 16:00:21.278: Modem 3/6 Mica: in modem state TRAINUP Oct 29  
16:00:23.002: Modem 3/6 Mica: in modem state EC\_NEGOTIATING Oct 29 16:00:23.170: Modem 3/6  
CSM:(CSM\_PROC\_CAS\_WAIT\_FOR\_CARRIER)<--MODEM\_CONNECTED Oct 29 16:00:23.170: Modem 3/6 Mica: in  
modem state STEADY Oct 29 16:00:23.194: Modem 3/6 Mica: CONNECT at 33600/33600 (Tx/Rx), V34+,  
LAPM, V42bis Oct 29 16:00:23.446: TTY103: DSR came up Oct 29 16:00:23.446: tty103: Modem: IDLE-  
>(unknown) Oct 29 16:00:23.446: TTY103: Autoselect started Oct 29 16:00:23.446: TTY103: create  
timer type 0, 120 seconds ----- monica#show debug General OS: Modem control/process  
activation debugging is on CAS: Channel Associated Signaling debugging is on Modem Management:  
Modem Management Call Switching Module debugging is on monica# Oct 29 15:59:46.540: Mica  
Modem(1/59): Rcvd Dial String(T789) Oct 29 15:59:46.540: Mica Modem(1/59): Dropped character T  
Oct 29 15:59:46.540: Mica Modem(1/59): Dial String to be processed (789) Oct 29 15:59:46.540:  
Mica Modem(1/59): End of Dial String Oct 29 15:59:46.540: CSM\_PROC\_IDLE: CSM\_EVENT\_MODEM\_OFFHOOK  
at slot 1, port 59 Oct 29 15:59:46.540: csm\_get\_signaling\_channel csm\_call\_info->bchan\_num  
0xFFFFFFFF Oct 29 15:59:46.540: csm\_get\_signaling\_channel dchan\_index=24952,next\_index=0,  
dchan\_info=0x62269D0C Oct 29 15:59:46.540: csm\_get\_signaling\_channel csm\_call\_info->bchan\_num  
0xFFFFFFFF Oct 29 15:59:46.540: csm\_get\_signaling\_channel dchan\_index=0,next\_index=1,  
dchan\_info=0x61d37574 Oct 29 15:59:46.540: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(8007): EVENT\_CHANNEL\_LOCK  
at slot 1 port 59 on ctrlr 1 chan 25 Oct 29 15:59:46.544: CSM\_PROC\_OC4\_DIALING:  
CSM\_EVENT\_DSX0\_BCHAN\_ASSIGNED at slot 1, port 59 Oct 29 15:59:46.544: csm\_connect\_pri\_vdev: TS  
allocated at bp\_stream 1, bp\_Ch 9, vdev\_common 0x61B7BBAC 1/59 Oct 29 15:59:46.544: Mica  
Modem(1/59): Configure(0x1 = 0x1) Oct 29 15:59:46.544: Mica Modem(1/59): Configure(0x23 = 0x4)  
Oct 29 15:59:46.544: Mica Modem(1/59): Call Setup Oct 29 15:59:46.544: from Trunk(0): (1/25): Tx  
SEIZURE (ABCD=0001) Oct 29 15:59:46.616: Mica Modem(1/59): State Transition to Call Setup Oct 29  
15:59:46.712: from Trunk(0): (1/25): Rx SEIZURE\_ACK (ABCD=1101) Oct 29 15:59:46.752:  
CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(8007): EVENT\_START\_TX\_TONE at slot 1 and port 59 Oct 29  
15:59:46.752: CSM\_PROC\_OC4\_DIALING: CSM\_EVENT\_DSX0\_START\_TX\_TONE at slot 1, port 59 Oct 29  
15:59:46.752: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_IDLE R2 Got Event R2\_START  
Oct 29 15:59:46.752: Mica Modem(1/59): Generate digits:called\_party\_num=# len=1 Oct 29  
15:59:46.752: Mica Modem(1/59): Will Generate digits:called\_party\_num=7 len=1 Oct 29  
15:59:46.824: Mica Modem(1/59): Rcvd Digits Generated Oct 29 15:59:46.824: Mica Modem(1/59):  
Generate digits Oct 29 15:59:46.900: Mica Modem(1/59): Rcvd Digits Generated Oct 29  
15:59:46.944: Mica Modem(1/59): Rcvd Digit detected(1) Oct 29 15:59:46.944: R2 Outgoing  
Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_A R2 Got Event 1 Oct 29 15:59:46.944: Mica  
Modem(1/59): Generate digits:called\_party\_num=# len=1 Oct 29 15:59:47.020: Mica Modem(1/59):  
Rcvd Digits Generated Oct 29 15:59:47.108: Mica Modem(1/59): Rcvd Digit detected(#) Oct 29  
15:59:47.108: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_A R2 Got Event  
R2\_TONE\_OFF Oct 29 15:59:47.108: Mica Modem(1/59): Generate digits:called\_party\_num=8 len=1 Oct  
29 15:59:47.184: Mica Modem(1/59): Rcvd Digits Generated Oct 29 15:59:47.228: Mica Modem(1/59):  
Rcvd Digit detected(1) Oct 29 15:59:47.228: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE:  
R2\_OUT\_PROCESS\_A R2 Got Event 1 Oct 29 15:59:47.228: Mica Modem(1/59): Generate  
digits:called\_party\_num=# len=1 Oct 29 15:59:47.304: Mica Modem(1/59): Rcvd Digits Generated Oct  
29 15:59:47.380: Mica Modem(1/59): Rcvd Digit detected(#) ct 29 15:59:47.380: R2 Outgoing  
Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_A R2 Got Event R2\_TONE\_OFF Oct 29  
15:59:47.380: Mica Modem(1/59): Generate digits:called\_party\_num=9 len=1 Oct 29 15:59:47.440:  
Mica Modem(1/59): Rcvd Digits Generated Oct 29 15:59:47.484: Mica Modem(1/59): Rcvd Digit  
detected(1) Oct 29 15:59:47.484: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_A  
R2 Got Event 1 Oct 29 15:59:47.484: Mica Modem(1/59): Generate digits:called\_party\_num=# len=1  
Oct 29 15:59:47.560: Mica Modem(1/59): Rcvd Digits Generated Oct 29 15:59:47.636: Mica  
Modem(1/59): Rcvd Digit detected(#) Oct 29 15:59:47.636: R2 Outgoing Modem(1/59): DSX (E1 1:25):  
STATE: R2\_OUT\_PROCESS\_A R2 Got Event R2\_TONE\_OFF Oct 29 16:00:02.521: Mica Modem(1/59): Rcvd

Digit detected(3) Oct 29 16:00:02.521: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_A R2 Got Event 3 Oct 29 16:00:02.521: Mica Modem(1/59): Generate digits:called\_party\_num=# len=1 Oct 29 16:00:02.593: Mica Modem(1/59): Rcvd Digits Generated Oct 29 16:00:02.641: Mica Modem(1/59): Rcvd Digit detected(#) Oct 29 16:00:02.641: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_B R2 Got Event R2\_TONE\_OFF Oct 29 16:00:02.641: Mica Modem(1/59): Generate digits:called\_party\_num=1 len=1 Oct 29 16:00:02.713: Mica Modem(1/59): Rcvd Digits Generated Oct 29 16:00:02.745: Mica Modem(1/59): Rcvd Digit detected(6) Oct 29 16:00:02.745: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_PROCESS\_B R2 Got Event 6 Oct 29 16:00:02.745: Mica Modem(1/59): Generate digits:called\_party\_num=# len=1 Oct 29 16:00:02.745: CSM\_PROC\_OC4\_DIALING: CSM\_EVENT\_ADDR\_INFO\_COLLECTED at slot 1, port 59 Oct 29 16:00:02.821: Mica Modem(1/59): Rcvd Digits Generated Oct 29 16:00:02.925: Mica Modem(1/59): Rcvd Digit detected(#) Oct 29 16:00:02.925: R2 Outgoing Modem(1/59): DSX (E1 1:25): STATE: R2\_OUT\_IDLE R2 Got Event R2\_TONE\_OFF Oct 29 16:00:03.845: from Trunk(0): (1/25): Rx ANSWERED (ABCD=0101) Oct 29 16:00:03.885: CSM\_RX\_CAS\_EVENT\_FROM\_NEAT:(8007): EVENT\_CHANNEL\_CONNECTED at slot 1 and port 59 Oct 29 16:00:03.885: CSM\_PROC\_OC5\_WAIT\_FOR\_CARRIER: CSM\_EVENT\_DSX0\_CONNECTED at slot 1, port 59 Oct 29 16:00:03.885: Mica Modem(1/59): Link Initiate Oct 29 16:00:03.917: Mica Modem(1/59): State Transition to Connect Oct 29 16:00:06.709: Mica Modem(1/59): State Transition to unknown Oct 29 16:00:12.497: Mica Modem(1/59): State Transition to Link Oct 29 16:00:15.197: Mica Modem(1/59): State Transition to unknown Oct 29 16:00:17.241: Mica Modem(1/59): State Transition to unknown Oct 29 16:00:21.385: Mica Modem(1/59): State Transition to Trainup Oct 29 16:00:23.061: Mica Modem(1/59): State Transition to EC Negotiating Oct 29 16:00:23.245: Mica Modem(1/59): State Transition to Steady State

## [相关信息](#)

- [E1 R2 信令理论](#)
- [E1 R2 信令配置与故障排除](#)
- [用 cas-custom 命令定制 E1 R2](#)
- [Cisco AS5300和Cisco AS5200接入服务器的E1 R2信令](#)
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