

E1 R2信令配置与故障排除

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Conventions](#)

[Configure](#)

[AS5300 : Cisco IOS语音功能卡\(VFC\)软件兼容性](#)

[配置E1 R2](#)

[Network Diagram](#)

[配置](#)

[Verify](#)

[Troubleshoot](#)

[排除E1 R2故障故障](#)

[debug 和 show 命令](#)

[调试输出示例](#)

[Related Information](#)

[Introduction](#)

本文提供是必要为了实现E1 R2发信号的progressive命令条目。本文也提供故障排除信息用调试指令。

Note: 在您使用本文前，建议您首先读[E1 R2信令理论](#)。

[Prerequisites](#)

[Requirements](#)

在您尝试此配置前，请保证您满足这些前提：

- R2信令适用于仅E1。
- Cisco MC3810 路由器不支持 R2 信令。
- 为了运行R2在Cisco 2600/3600系列路由器的信令，需要此硬件：VWIC-1MFT-E1或VWIC-2MFT-E1或者VWIC-2MFT-E1-DI与这些语音密度模块之一一起：[NM-HDV](#) (高密度语音网络模块)或NM-HD-2VE (2 SLOT IP通信Voice/Fax网络模块)。
- 定义ds0-group命令(或**cas组**，根据Cisco IOS版本) E1控制器的(AS5x00，Cisco2600/3600路由器)。
- 请使用cas-custom命令为了定制不同的国家(地区)或地区的E1 R2变形。

[Components Used](#)

本文的信息根据此软件和硬件版本：

- 与Cisco IOS Software Release 12.0.7T的Cisco AS5300

Note: E1 R2发信号被引入给在Cisco IOS Software Releases 12.1.2XH和12.1(3)T的Cisco 2600/3600系列路由器。

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](#)。

[Configure](#)

此部分提交您与您能使用为了配置E1 R2的信息。

Note: 为了找到关于本文使用的命令的其他信息，请参见[命令查找工具\(仅限注册用户\)](#)。

[AS5300 : Cisco IOS语音功能卡\(VFC\)软件兼容性](#)

在您实现发信号在Cisco AS5300路由器前的E1 R2，请保证您的Cisco IOS版本软件是与在E1模块的Cisco VCWare兼容。为了验证Cisco IOS软件兼容性，请参见[Cisco AS5300的Cisco VCWare兼容表](#)。如果版本是不兼容的，在语音卡的数字式的信号处理器(DSP)模块不装载，并且语音信号处理不发生。

一般，如果Cisco VCWare的版本与Cisco IOS软件是不兼容的，如此示例所显示，您能输入**show vfc slot_number interface**命令为了发现此。

```
eefje#show vfc 1 interface
Rx: in ptr 18, outptr 0
Tx: in ptr 14 outptr 14
0 in hw queue, 0 queue head , 0 queue tail
Hardware is VFC out-of-band channel
Interface : state RESET DSP instance (0x61048284)
dsp_number 0, Channel ID 0
TX outstanding 0, max TX outstanding 0
Received 18 packets, 1087 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
121 bytes output, 14 frames output
0 bounce errors 0

DSP module 1 is not installed
DSP module 2 is not installed
DSP module 3 is not installed
DSP module 4 is not installed
DSP module 5 is not installed
```

在第一输出示例的**show vfc slot_number interface**命令中，`DSP`语句表示，版本为该模块号是不兼容的。

此第二套输出是有被装载的正确的Cisco VCWare版本DSP模块的示例：

```
eefje#show vfc 1 interface
Rx: in ptr 24, outptr 0
TX: in ptr 15 outptr 15
0 in hw queue, 0 queue head , 0 queue tail
Hardware is VFC out-of-band channel
Interface : state RESET DSP instance (0x618C6088)
dsp_number 0, Channel ID 0
TX outstanding 0, max TX outstanding 0
Received 283288 packets, 15864278 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
1416459 bytes output, 141647 frames output
0 bounce errors 0
```

```
Slot 1, DSPM 1 (C542), DSP 1, Channel 1
State RESET, DSP instance (0x61914BDC)
TX outstanding 0, max TX outstanding 8
Received 0 packets, 0 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
0 bytes output, 0 frames output
0 bounce errors 0
```

```
Slot 1, DSPM 1 (C542), DSP 2, Channel 1
State RESET, DSP instance (0x6191510C)
TX outstanding 0, max TX outstanding 8
Received 0 packets, 0 bytes, 0 giant packets
0 drops, 0 no buffers, 0 input errors
0 bytes output, 0 frames output
0 bounce errors 0
```

如此示例所显示，为了检查安装的Cisco VCWare版本，请输入show vfc slot_number version vcware命令，：

```
eefje#show vfc 1 version vcware
Voice Feature Card in Slot 1:
```

```
VCware Version : 4.10
ROM Monitor Version : 1.2
DSPware Version :
Technology : C542
```

Note: 确定Cisco VCWare技术版本(c549或c542)匹配安装的VFC DSP技术(DSPM-542 : 单密度语音支持或DSPM-549 : 高密度语音支持)。

[配置E1 R2](#)

完成这些步骤为了配置E1 R2：

1. 设置连接到专用的自动交换分机的控制器E1 (PBX)或交换机。保证适当地设置构建帧和linecoding E1。
2. 对于构筑的E1，请选择CRC或非CRC。
3. 对于linecoding的E1，请选择HDB3或AMI。
4. 对于E1时钟源，请选择内部或线路。记住不同的PBX有在时钟源的不同需求。
5. [配置线路信令。](#)
6. [配置寄存器间信令。](#)
7. 定制配置用cas-custom命令。

配置线路信令

请使用此指令序列为了定义您的线路信令。

```
eefje(config)#controller E1 0
eefje(config-controller)#ds0-group 1 timeslots 1-15 type ?
...
r2-analog          R2 ITU Q411
r2-digital         R2 ITU Q421
r2-pulse           R2 ITU Supplement 7
...
```

这是Cisco IOS Software Release 11.3的指令序列。

```
eefje(config)#controller E1 0
eefje(config-controller)#cas-group 1 timeslot 1-15 type ?
...
```

Note: 如果从Cisco IOS Software Release 11.3升级到12.0， new命令自动地取代一个。

配置寄存器间信令

此指令序列示例说明如何配置不同种类的寄存器间信令：

```
eefje(config)#controller E1 0
eefje(config-controller)#ds0-group 1 timeslots 1-15 type r2-digital ?
dtmf                DTMF tone signaling
r2-compelled        R2 Compelled Register Signaling
r2-non-compelled    R2 Non Compelled Register Signaling
r2-semi-compelled   R2 Semi Compelled Register Signaling
```

R2信令默认情况下Cisco实施有被启用的拨号号码识别服务(DNIS)技术支持。如果enable (event)自动数字标识(ANI)选项， DNIS信息的集仍然执行。ANI选项的规格不禁用DNIS集。DNIS是被呼叫的编号。ANI是呼叫人的编号。例如，如果配置称为A的一个路由器称路由器称为B，然后DNIS编号分配到路由器B，并且ANI编号分配到路由器A。ANI类似于呼叫方ID。

E1 R2定制用cas-custom命令

在cas-custom命令下的子命令用于为了适应不同国家。他们也用于为了定制随路信令(CAS)参数。此指令序列说明您如何能查看所有cas-custom命令选项。

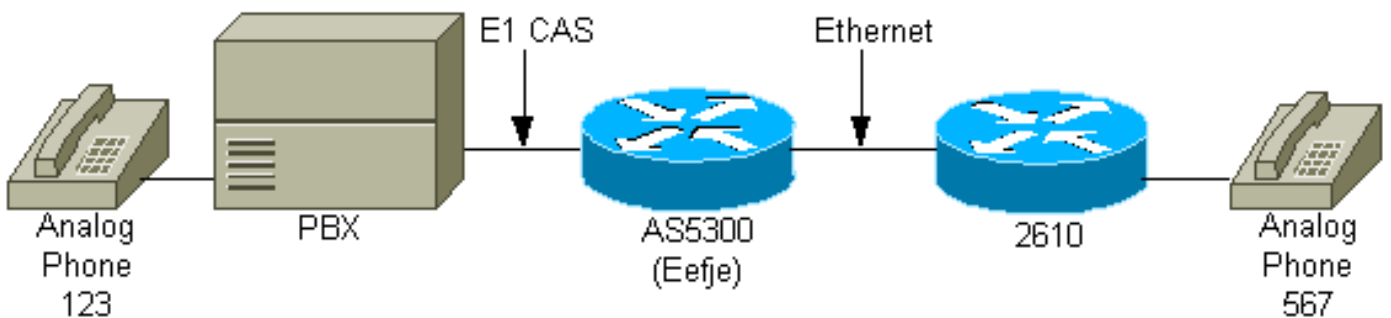
```
eefje(config)#controller E1 0
eefje(config-controller)#cas-custom 1
eefje(config-ctrl-cas)#?
CAS custom commands:
  ani-digits          Expected number of ANI digits
  ani-timeout         Timeout for ANI digits
  answer-guard-time   Wait Between Group-B Answer Signal And Line Answer
  answer-signal       Answer signal to be used
  caller-digits       Digits to be collected before requesting CallerID
  category            Category signal
  country             Country Name
  debounce-time       Debounce Timer
  default             Set a command to its defaults
  dnis-complete       Send I-15 after DNIS digits for dial-out
```

dnis-digits	Expected number of DNIS digits
exit	Exit from cas custom mode
groupa-callerid-end	Send Group-A Caller ID End
invert-abcd	invert the ABCD bits before TX and after rx
ka	kA Signal
kd	KD Signal
metering	R2 network is sending metering signal
nc-congestion	Non Compelled Congestion signal
no	Negate a command or set its defaults
proceed-to-send	Suppress proceed-to-send signal for pulsed line signaling
release-ack	Send Release Acknowledgment to Clear Forward
release-guard-time	Release Guard Timer
request-category	DNIS Digits to be collected before requesting category
seizure-ack-time	Seizure to Acknowledge timer
unused-abcd	Unused ABCD bit values

关于CAS自定义命令参数的更多信息，请参见[E1 R2定制用cas-custom命令](#)。

Network Diagram

本文档使用此网络设置。



配置

为本文的目的，这些是在E1接口间显示的三种不同的R2配置：

- [R2 Digital non-compelled](#)
- [R2数字式半强迫](#)
- [R2数字强制ani](#)

修改配置为了表示仅信息，本文讨论。

为R2 Digital non-compelled配置的eefje

```
hostname eefje
!
controller E1 0
  clock source line primary
  ds0-group 1 timeslots 1-15 type r2-digital r2-non-
  compelled
  cas-custom 1
  !--- For more information on these commands !--- refer
  to ds0-group and cas-custom.
!
voice-port 0:1
  cptone BE
  !--- The cptone command is country specific. For more !-
  -- information on this command, refer to cptone .
```

```
!  
dial-peer voice 123 pots  
  destination-pattern 123  
  direct-inward-dial  
  port 0:1  
  prefix 123  
!  
dial-peer voice 567 voip  
  destination-pattern 567  
  session target ipv4:2.0.0.2  
!
```

为R2数字式半强迫配置的eefje

```
hostname eefje  
!  
controller E1 0  
  clock source line primary  
  ds0-group 1 timeslots 1-15 type r2-digital r2-semi-  
  compelled  
  cas-custom 1  
!--- For more information on these commands !--- refer  
to ds0-group and cas-custom .  
!  
voice-port 0:1  
  cptone BE  
!--- The cptone command is country specific. For more !-  
-- information on this command, refer to cptone .  
  
dial-peer voice 123 pots  
  destination-pattern 123  
  direct-inward-dial  
  port 0:1  
  prefix 123  
!  
dial-peer voice 567 voip  
  destination-pattern 567  
  session target ipv4:2.0.0.2  
!
```

为R2配置的eefje数字强制ani

```
hostname eefje  
! controller E1 0 clock source line primary ds0-group  
1 timeslots 1-15 type r2-digital r2-compelled ani cas-  
custom 1  
!--- For more information on these commands !--- refer  
to ds0-group and cas-custom .  
  
voice-port 0:1 cptone BE  
!--- The cptone command is country specific. For more !-  
-- information on this command, refer to cptone .  
  
dial-peer voice 123 pots destination-pattern 123 direct-  
inward-dial port  
0:1 prefix 123  
!  
dial-peer voice 567 voip destination-pattern 567 session  
target ipv4:2.0.0.2  
!
```

[Verify](#)

当前没有可用于此配置的验证过程。

[Troubleshoot](#)

本部分提供的信息可用于对配置进行故障排除。

[排除E1 R2故障故障](#)

这是故障排除信息与此配置有关。请按照以下说明排除配置故障。

1. 验证控制器E1 0是UP。如果它发生故障，请检查构建帧，线路代码，时钟源，警报，替换电缆，重新安装卡，等等。以[CAS自定义命令文件](#)使用[E1 R2定制](#)作为参考。
2. 如果使用-AS5300，请检查DSP正确地安装有**show vfc slot number interface**命令。
3. 配置在无格式老电话业务(POTS)对等体的直接拨入(DID)，因此接收的数字用于选择一个流出对等体。
4. 指定**cptone** (cptone为您的国家是特定的)在voice-ports。必须配置一个**cptonecountry**命令为了匹配**cas-custom country**命令。cptone参数集一个特定国家(地区)的呼叫进展信号音和更加重要地设置编码为A律或u-law，依靠国家。美国的默认编码是u-law。
5. 对交换机配置的对口线和寄存器信令提供。
6. 打开在本文显示的某些**调试**并且学习输出。
7. 检查路由器和PBX之间的通信或者交换：线路被占用？路由器是否收到/发送位？发现边清除呼叫。若可能，请使用最新的Cisco IOS软件版本可用在Cisco.com。

[debug 和 show 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。

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

Note: 对于Cisco IOS Software Release 12.0，请使用这些**调试**：

- **debug cas** -线路信令。
- **debug csm voice** -寄存器间信令。
- **debug vtsp**包括一切的命令有所有消息(位)的输出被交换在PBX和路由器之间。

对于Cisco IOS Software Release IOS 11.3，请使用这些命令：

- **modem-mgmt csm debug-rbs** -线路信令(您需要首先指定**service internal**在配置模式。)
- **debug csm voice** -寄存器间信令。
- **debug vtsp**包括一切的命令有所有消息(位)的输出被交换在PBX和路由器之间。

对于AS5400和AS5350平台，请使用这些调试：

- **debug sigsm r2** -寄存器间信令
- **debug vtsp**包括一切的命令有所有消息(位)的输出被交换在PBX和路由器之间。

调试输出示例

因为有在本文以前显示的三种不同的配置，这是三不同的调试：

[R2 Digital non-compelled : 呼入的呼叫到567](#)

为了更好了解此调试输出，请参见[E1 R2信令理论](#)。

```
eefje#show debug
CAS:
  Channel Associated Signaling debugging is on
CSM Voice:
Voice Call Switching Module debugging is on
Voice Telephony session debugging is on
Voice Telephony dsp debugging is on
Voice Telephony error debugging is on
eefje#
eefje#
eefje#
Jan 6 10:41:28.677: from NEAT(0): (0/0): Rx SEIZURE (ABCD=0001)
Jan 6 10:41:28.717: VDEV_ALLOCATE: failed to allocate a device
Jan 6 10:41:28.717: VDEV_ALLOCATE: 1/28 is allocated
Jan 6 10:41:28.721: csm_vtsp_init_tdm (voice_vdev=0x620BF874)
Jan 6 10:41:28.721: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 2,
dspm 1, dsp 5, dsp_channel 1
Jan 6 10:41:28.721: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 5,
channel 3, bank 1, bp_channel 4, BP_stream 255
Jan 6 10:41:28.721: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0018): EVENT_CALL_DIAL_IN
at slot 2 and port 16
Jan 6 10:41:28.721: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT at slot 2,
port 16
Jan 6 10:41:28.721: csm_vtsp_start_digit_collect (voice_vdev=0x620BF874)
Jan 6 10:41:28.721: Enter csm_connect_pri_vdev function
Jan 6 10:41:28.721: csm_connect_pri_vdev:tdm_allocate_BP_ts()call. BP TS allocated
at BP_stream0, BP_Ch28,vdev_common 0x6 20BF8E4
Jan 6 10:41:28.721: to NEAT:(cid0018) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan0
Jan 6 10:41:28.721: vtsp_do_call_setup_ind
Jan 6 10:41:28.721: vtsp_do_call_setup_ind: Call ID=65681, guid=61FAF610
Jan 6 10:41:28.721: vtsp_do_call_setup_ind: type=0, under_spec=0, name=, id0=0,
id1=0, id2=0, calling=, called=
Jan 6 10:41:28.721: vtsp_do_call_setup_ind: redirect DN = reason =
0vtsp_open_voice_and_set_params
Jan 6 10:41:28.721: dsp_close_voice_channel: [0:1:0] packet_len=8 channel_id
=8529 packet_id=75
Jan 6 10:41:28.721: dsp_open_voice_channel_20: [0:1:0] packet_Len=16 channel_id
=8529 packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0 time_slot=0
serial_port=0
Jan 6 10:41:28.721: dsp_encap_config_20: [0:1:0] packet_Len=24 channel_id=8529
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 10:41:28.721: dsp_set_playout: [0:1:0] packet_Len=18 channel_id=8529
packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 6 10:41:28.721: dsp_echo_canceller_control: [0:1:0] packet_Len=10
channel_id=8529 packet_id=66 flags=0x0
Jan 6 10:41:28.721: dsp_set_gains: [0:1:0] packet_Len=12 channel_id=8529
packet_id=91 in_gain=0 out_gain=0
Jan 6 10:41:28.721: dsp_vad_enable: [0:1:0] packet_Len=10 channel_id=8529
packet_id=78 thresh=-38
Jan 6 10:41:28.721: dsp_voice_mode: [0:1:0] packet_Len=24 channel_id=8529
packet_id=73 coding_type=1 voice_field_size=80 V AD_flag=0 echo_length=64
comfort_noise=1 inband_detect=1 digit_relay=2
```



```
AGC_flag=0vtsp_do_r2_start_digit(): dsp_dtmf_mode()
dsp_dtmf_mode(VTSP_TONE_R2_MF_FORWARD_MODE)
Jan 6 10:41:28.725: dsp_dtmf_mode: [0:1:0] packet_len=10 channel_id=8529
packet_id=65 dtmf_or_mf=1vtsp_do_r2_start_digit():fsm_push(vtsp_r2_state_table)
Jan 6 10:41:28.725: csm_vtsp_call_setup_resp (vdev_info=0x620BF874,
vtsp_cdb=0x621C5F3C)
Jan 6 10:41:28.725: csm_vtsp_call_setup_resp:vdev_common BP TS allocatedat
BP_stream0,BP_Ch28
Jan 6 10:41:28.725: csm_vtsp_call_setup_resp:dst_tdm_chnl call. BP TS allocatedat
stream 5, chan 3,BP_stream 255, BP_ch 4
Jan 6 10:41:28.725: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
stream 5, chan 3,BP_stream 0, BP_ch 28
Jan 6 10:41:28.725: CSM_PROC_IC1_COLLECT_ADDR_INFO: CSM_EVENT_MODEM_OFFHOOK
(DNIS=, ANI=) at slot 2, port 16
Jan 6 10:41:28.725: R2 Incoming Voice(2/16): DSX (E1 0:0): STATE: R2_IN_IDLE R2
Got Event R2_START
Jan 6 10:41:28.821: CSM_RX_CAS_EVENT_FROM_NEAT:(0018):EVENT_START_RX_TONE at slot 2
and port 16
Jan 6 10:41:28.821: from NEAT(0): (0/0): TX SEIZURE_ACK (ABCD=1101)
!--- Digit 5 is sent: Forward Signal Group I-5. Jan 6 10:41:29.233: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN: digit=5,
rtp_timestamp=0x0CA95D43 dc_digit_up
Jan 6 10:41:29.233: csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C) received digit (5)
Jan 6 10:41:29.233: CSM voice (2/16): Rcvd Digit detected(5)
Jan 6 10:41:29.233: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE: R2_IN_COLLECT_DNIS R2
Got Event 5
Jan 6 10:41:29.365: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=5,
duration=8321dc_digit
Jan 6 10:41:29.365: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C) received digit (5)
Jan 6 10:41:29.365: CSM voice (2/16): Rcvd Digit detected(5)
Jan 6 10:41:29.365: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE:R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_OFF
!--- Digit 6 is sent: Forward Signal Group I-6. Jan 6 10:41:29.593: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN: digit=6,
rtp_timestamp=0x0CA95D43 dc_digit_up
Jan 6 10:41:29.593: csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C) received digit (6)
Jan 6 10:41:29.593: CSM voice (2/16): Rcvd Digit detected(6)
Jan 6 10:41:29.593: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE: R2_IN_COLLECT_DNIS R2
Got Event 6
Jan 6 10:41:29.725: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=6,
duration=8321dc_digit
Jan 6 10:41:29.725: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C) received digit (6)
Jan 6 10:41:29.725: CSM voice (2/16): Rcvd Digit detected(6)
Jan 6 10:41:29.725: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE: R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_OFF
!--- Digit 7 is sent: Forward Signal Group I-7. Jan 6 10:41:29.953: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN:
digit=7, rtp_timestamp=0x0CA95D43 dc_digit_up
Jan 6 10:41:29.953: csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C)
received digit (7)
Jan 6 10:41:29.953: CSM voice (2/16): Rcvd Digit detected(7)
Jan 6 10:41:29.953: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE:R2_IN_COLLECT_DNIS R2
Got Event 7
Jan 6 10:41:30.085: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF:
digit=7, duration=8321dc_digit
Jan 6 10:41:30.085: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C)received digit (7)
Jan 6 10:41:30.085: CSM voice (2/16): Rcvd Digit detected(7)
Jan 6 10:41:30.085: R2 Incoming Voice(2/16): DSX (E1 0:0):
STATE: R2_IN_COLLECT_DNIS R2
```

Got Event R2_TONE_OFF

!--- Timeout: 3 seconds (default timer - AS5300 assumes DNIS is finished). Jan 6 10:41:32.953:

R2 Incoming Voice(2/16): DSX (E1 0:0): STATE: R2_IN_COLLECT_DNIS R2 **Got Event R2_TONE_TIMER**

!--- Send digit 6: Backward Signal Group B-6 (subscriber's line free-charge). Jan 6

10:41:32.953: vtsp_r2_generate_digits: vdev_common=0x620BF8E4, string=567dc_dial()

vtsp_dial_nopush **dsp_dtmf_dialing(): dial_string = 6#**

Jan 6 10:41:32.953: dsp_dtmf_dialing: [0:1:0] packet_Len=36 channel_id=8529

packet_id=90 string=6# digits=2, time_on=150, time_off=30

Jan 6 10:41:32.953:& digit=e, components=2, freq_of_first=900,

freq_of_second=780, amp_of_first=8192, amp_of_second=8192

Jan 6 10:41:32.953: digit=o, components=2, freq_of_first=0,

freq_of_second=0, amp_of_first=1, amp_of_second=1

Jan 6 10:41:33.313: vtsp_process_dsp_message:

MSG_TX_DIALING_DONE dc_dialing_done()

Jan 6 10:41:33.313: R2 Incoming Voice(2/16): DSX (E1 0:0):

STATE:R2_IN_ANSWER_PULSE R2

Got Event R2_DIGITS_GENR2_ALERTING

Jan 6 10:41:34.313: R2 Incoming Voice(2/16): DSX (E1 0:0):

STATE: R2_IN_ANSWER_PULSE R2

Got Event R2_TONE_TIMER

Jan 6 10:41:34.313: R2_IN_IDLE:2 r2_in_connect called

Jan 6 10:41:34.313: CSM_PROC_IC1_COLLECT_ADDR_INFO:

CSM_EVENT_ADDR_INFO_COLLECTED (DNIS=567, ANI=) at slot 2, port 16

Jan 6 10:41:34.313: vtsp_tsp_call_accept_check (sdb=0x61B8F0E0, calling_number=
called_number=567): peer_tag=0

Jan 6 10:41:34.313: VDEV_ALLOCATE: failed to allocate a device

Jan 6 10:41:34.313: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem

Jan 6 10:41:34.313: VDEV_ALLOCATE: failed to allocate a device

Jan 6 10:41:34.313: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem

Jan 6 10:41:34.313: VDEV_ALLOCATE: failed to allocate a device

Jan 6 10:41:34.313: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem

Jan 6 10:41:34.313: CSM_PROC_IC3_WAIT_FOR_RES_RESP: CSM_EVENT_RESOURCE_OK at slot 2,
port 16

Jan 6 10:41:34.313: vtsp_ic_switch : (voice_vdev= 0x620BF874)

Jan 6 10:41:34.313: vtsp_tsp_call_switch_ind (cdb=0x621C5F3C, tsp_info=0x620BF874,
calling_number= called_number=567 redir ect_number=):

peer_tag=123dc_switch: fsm_pop()

Jan 6 10:41:34.313: vtsp_do_call_setup_ind

Jan 6 10:41:34.313: vtsp_do_call_setup_ind: Call ID=65683, guid=61FAF610

Jan 6 10:41:34.313: vtsp_do_call_setup_ind: type=0, under_spec=0,

name=ab^Lx, id0=1, id1=0, id2=0, calling=123, called=567

Jan 6 10:41:34.317: dsp_cp_tone_off: [] packet_Len=8 channel_id=8529 packet_id=71

Jan 6 10:41:34.317: dsp_idle_mode: [] packet_Len=8 channel_id=8529 packet_id=68

Jan 6 10:41:34.317: dsp_close_voice_channel: [] packet_Len=8 channel_id=8529

packet_id=75

Jan 6 10:41:34.317: vtsp_timer_stop: 67475758

Jan 6 10:41:34.317: csm_vtsp_call_setup_resp (vdev_info=0x620BF874,

vtsp_cdb=0x621C5F3C)

Jan 6 10:41:34.317: csm_vtsp_call_setup_resp:vdev_common

BP TS allocatedat BP_stream0,

BP_Ch28

Jan 6 10:41:34.317: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
stream 5, chan 3,BP_stream 0, BP_ch 28

Jan 6 10:41:34.317: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
stream 5, chan 3,BP_stream 0, BP_ch 28vt sp_open_voice_and_set_params

Jan 6 10:41:34.317: dsp_close_voice_channel: [0:1 (54)] packet_Len=8 channel_id=8529
packet_id=75

Jan 6 10:41:34.317: dsp_open_voice_channel_20: [0:1 (54)] packet_Len=16

channel_id=8529

packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0 time_slot=0

serial_port=0

Jan 6 10:41:34.317: dsp_encap_config_20: [0:1 (54)] packet_Len=24 channel_id=8529

packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0

```
Jan 6 10:41:34.317: dsp_set_payout: [0:1 (54)] packet_Len=18 channel_id=8529
packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 6 10:41:34.317: dsp_echo_canceller_control: [0:1 (54)] packet_Len=10
channel_id=8529
packet_id=66 flags=0x0
Jan 6 10:41:34.317: dsp_set_gains: [0:1 (54)] packet_Len=12
channel_id=8529 packet_id=91
in_gain=0 out_gain=0
Jan 6 10:41:34.317: dsp_vad_enable: [0:1 (54)] packet_Len=10
channel_id=8529 packet_id=78
thresh=-38act_proceeding
Jan 6 10:41:34.321: csm_vtsp_call_proceeding:DST_tdm_chnl call.
BP TS allocatedstream 5,
chan 3,BP_stream 0, BP_ch 28act_alert
Jan 6 10:41:34.345: vtsp_ring_noan_timer_start: 67475761
Jan 6 10:41:34.345: csm_vtsp_call_alert (vtsp_cdb=0x621C5F3C)act_bridge act_caps_ind
Jan 6 10:41:34.589: act_caps_ind:Encap 1, Vad 2, Codec 0x4, CodecBytes 20,
FaxRate 2, FaxBytes 20 SignalType 0
DtmfRelay 1, Modem 1act_caps_ack
Jan 6 10:41:34.589: dsp_idle_mode: [0:1 (54)] packet_Len=8
channel_id=8529 packet_id=68
Jan 6 10:41:34.589: act_caps_ack: codec = 15, ret = 1
Jan 6 10:41:34.589: dsp_cp_tone_off: [0:1 (54)] packet_Len=8 channel_id=8529
packet_id=71
Jan 6 10:41:34.589: dsp_idle_mode: [0:1 (54)] packet_Len=8
channel_id=8529 packet_id=68
Jan 6 10:41:34.589: dsp_encap_config_20: [0:1 (54)] packet_Len=24 channel_id=8529
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 10:41:34.589: dsp_voice_mode: [0:1 (54)] packet_Len=24 channel_id=8529
packet_id=73 coding_type=20 voice_field_size=20 VAD_flag=1 echo_length=64
comfort_noise=1 inband_detect=1 digit_relay=2 AGC_flag=0act_alert_connect
Jan 6 10:41:36.857: vtsp_ring_noan_timer_stop: 67476012
Jan 6 10:41:36.857: dsp_cp_tone_off: [0:1 (54)] packet_Len=8 channel_id=8529
packet_id=71
Jan 6 10:41:36.857: csm_vtsp_call_connect (vtsp_cdb=0x621C5F3C,
voice_vdev=0x620BF874)
Jan 6 10:41:36.857: CSM_IC5_WAIT_FOR_SWITCH_OVER: CSM_EVENT_MODEM_OFFHOOK
at slot 2, port 16
Jan 6 10:41:36.917: CSM_RX_CAS_EVENT_FROM_NEAT:(0018): EVENT_CHANNEL_CONNECTED
at slot 2 and port 16
Jan 6 10:41:36.917: CSM_PROC_IC6_WAIT_FOR_CONNECT: CSM_EVENT_DSX0_CONNECTED
at slot 2, port 16
Jan 6 10:41:36.921: from NEAT(0): (0/0): TX ANSWERED(ABCD=0101)
eefje#
```

[R2数字式半强迫：呼入的呼叫到567](#)

为了更好了解此调试输出，请参见[E1 R2信令理论](#)。

```
eefje#show debug
CAS:
Channel Associated Signaling debugging is on
CSM Voice:
Voice Call Switching Module debugging is on
Voice Telephony session debugging is on
Voice Telephony dsp debugging is on
Voice Telephony error debugging is on
eefje#
eefje#
eefje#
Jan 6 09:53:42.389: from NEAT(0): (0/2): Rx SEIZURE(ABCD=0001)
Jan 6 09:53:42.433: VDEV_ALLOCATE: failed to allocate a device
```

Jan 6 09:53:42.433: VDEV_ALLOCATE: 1/27 is allocated
Jan 6 09:53:42.433: csm_vtsp_init_tdm (voice_vdev=0x620BF320)
Jan 6 09:53:42.433: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 2, dspm 1,
dsp 4, dsp_channel 4
Jan 6 09:53:42.433: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 7, channel 0,
bank 4, BP_channel 3, BP_stream 255
Jan 6 09:53:42.433: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0017): EVENT_CALL_DIAL_IN
at slot 2 and port 15
Jan 6 09:53:42.433: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT
at slot 2, port 15
Jan 6 09:53:42.433: csm_vtsp_start_digit_collect (voice_vdev=0x620BF320)
Jan 6 09:53:42.433: Enter csm_connect_pri_vdev function
Jan 6 09:53:42.433: csm_connect_pri_vdev:tdm_allocate_BP_Ts()call. BP TS allocated
at BP_stream0, BP_Ch27,vdev_common 0x6 20BF390
Jan 6 09:53:42.433: to NEAT:(cid0017) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan2
Jan 6 09:53:42.433: vtsp_do_call_setup_ind
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: Call ID=65675, guid=61FAF610
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: type=0, under_spec=0, name=, id0=0,
id1=0, id2=0, calling=, called=
Jan 6 09:53:42.433: vtsp_do_call_setup_ind: redirect DN = reason =
0vtsp_open_voice_and_set_params
Jan 6 09:53:42.433: dsp_close_voice_channel: [0:1:2] packet_Len=8 channel_id=8516
packet_id=75
Jan 6 09:53:42.433: dsp_open_voice_channel_20: [0:1:2] packet_Len=16
channel_id=8516
packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=1 serial_port=1
Jan 6 09:53:42.433: dsp_encap_config_20: [0:1:2] packet_Len=24 channel_id=8516
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 09:53:42.433: dsp_set_payout: [0:1:2] packet_Len=18 channel_id=8516
packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 6 09:53:42.433: dsp_echo_canceller_control: [0:1:2]
packet_Len=10 channel_id=8516
packet_id=66 flags=0x0
Jan 6 09:53:42.437: dsp_set_gains:[0:1:2] packet_Len=12
channel_id=8516 packet_id=91
in_gain=0 out_gain=0
Jan 6 09:53:42.437: dsp_vad_enable: [0:1:2] packet_Len=10 channel_id=8516
packet_id=78 thresh=-38
Jan 6 09:53:42.437: dsp_voice_mode: [0:1:2] packet_Len=24 channel_id=8516
packet_id=73 coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
comfort_noise=1 inband_detect=1 digit_relay=2 AGC_flag=0vtsp_do_r2_start_digit():
dsp_dtmf_mode() dsp_dtmf_mode(VTSP_TONE_R2_MF_FORWARD_MODE)
Jan 6 09:53:42.437: dsp_dtmf_mode: [0:1:2] packet_Len=10 channel_id=8516
packet_id=65 dtmf_or_mf=1vtsp_do_r2_start_digit(): fsm_push(vtsp_r2_state_table)
Jan 6 09:53:42.437: csm_vtsp_call_setup_resp (vdev_info=0x620BF320,
vtsp_cdb=0x621C5F3C)
Jan 6 09:53:42.437: csm_vtsp_call_setup_resp:vdev_common BP
TS allocatedat BP_stream0,
BP_Ch27
Jan 6 09:53:42.437: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
stream 7, chan 0,BP_stream 255, BP_ch 3
Jan 6 09:53:42.437: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
stream 7, chan 0,BP_stream 0, BP_ch 27
Jan 6 09:53:42.437: CSM_PROC_IC1_COLLECT_ADDR_INFO: CSM_EVENT_MODEM_OFFHOOK
(DNIS=, ANI=) at slot 2, port 15
Jan 6 09:53:42.437: R2 Incoming Voice(2/15): DSX (E1 0:2): STATE:R2_IN_IDLE R2
Got Event R2_START
Jan 6 09:53:42.533: CSM_RX_CAS_EVENT_FROM_NEAT:(0017):EVENT_START_RX_TONE
at slot 2 and port 15
Jan 6 09:53:42.533: from NEAT(0): (0/2): **TX SEIZURE_ACK (ABCD=1101)**
!--- Digit 5 is sent: Forward Signal Group I-5. Jan 6 09:53:42.641: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN: digit=5, rtp_timestamp=0x9330B42B dc_digit_up Jan 6 09:53:42.641:
csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C) received digit (5) Jan 6 09:53:42.641: CSM voice

(2/15): Rcvd Digit detected(5) Jan 6 09:53:42.641: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_COLLECT_DNIS R2

Got Event 5

!--- Digit 1 sent (pulse): Backward Signal Group A-1 (Send next digit) !--- "#" this indicates that it is a pulse). Jan 6 09:53:42.641: vtsp_r2_generate_digits: vdev_common=0x620BF390, string=5dc_dial() vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = 1#

Jan 6 09:53:42.641: dsp_dtmf_dialing: [0:1:2] packet_Len=36 channel_id=8516
packet_id=90 string=1# digits=2, time_on=150, time_off=30

Jan 6 09:53:42.641: digit=` , components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192

Jan 6 09:53:42.641: digit=o, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1

Jan 6 09:53:42.741: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=5,
duration=8291dc_digit

Jan 6 09:53:42.741: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C) received digit (5)

Jan 6 09:53:42.741: CSM voice (2/15): Rcvd Digit detected(5)

Jan 6 09:53:42.741: R2 Incoming Voice(2/15): DSX (E1 0:2):

STATE:R2_IN_COLLECT_DNIS R2

Got Event R2_TONE_OFF

!--- Digit 6 is sent: Forward Signal Group I. Jan 6 09:53:42.881: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN: digit=6, rtp_timestamp=0x9330B42B dc_digit_up Jan 6 09:53:42.881:
csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C)received digit (6) Jan 6 09:53:42.881: CSM voice
(2/15): Rcvd Digit detected(6) Jan 6 09:53:42.881: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_COLLECT_DNIS R2 Got Event 6

!--- Digit 1 sent (pulse): Backward Signal Group A-1. (Send next digit.) Jan 6 09:53:42.881:
vtsp_r2_generate_digits: vdev_common=0x620BF390, string=56dc_dial() vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 1#

Jan 6 09:53:42.881: dsp_dtmf_dialing: [0:1:2] packet_Len=36 channel_id=8516
packet_id=90 string=1# digits=2, time_on=150, time_off=30

Jan 6 09:53:42.881: digit=` , components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192

Jan 6 09:53:42.881: digit=o, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1

Jan 6 09:53:42.981: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=6,
duration=8291dc_digit

Jan 6 09:53:42.981: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C) received digit (6)

Jan 6 09:53:42.981: CSM voice (2/15): Rcvd Digit detected(6)

Jan 6 09:53:42.981: R2 Incoming Voice(2/15): DSX (E1 0:2):

STATE:R2_IN_COLLECT_DNIS R2

Got Event R2_TONE_OFF

!--- Digit 7 is sent: Forward Signal Group I-7. Jan 6 09:53:43.121: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_BEGIN:

digit=7, rtp_timestamp=0x9330B42B dc_digit_up

Jan 6 09:53:43.121: csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C)received digit (7)

Jan 6 09:53:43.121: CSM voice (2/15): Rcvd Digit detected(7)

Jan 6 09:53:43.121: R2 Incoming Voice(2/15): DSX (E1 0:2):

STATE:R2_IN_COLLECT_DNIS R2

Got Event 7

!--- Send digit 1 (pulse): Backward Signal Group A-1. Jan 6 09:53:43.121:
vtsp_r2_generate_digits: vdev_common=0x620BF390, string=567dc_dial() vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 1#

Jan 6 09:53:43.121: dsp_dtmf_dialing: [0:1:2] packet_Len=36 channel_id=8516
packet_id=90 string=1# digits=2, time_on=150, time_off=30

Jan 6 09:53:43.121: digit=` , components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192

Jan 6 09:53:43.121: digit=o, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1

Jan 6 09:53:43.221: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=7,

duration=8291dc_digit
Jan 6 09:53:43.221: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C) received digit (7)
Jan 6 09:53:43.221: CSM voice (2/15): Rcvd Digit detected(7)
Jan 6 09:53:43.221: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_OFF
Jan 6 09:53:43.489: vtsp_process_dsp_message: MSG_TX_DIALING_DONEdc_dialing_done()
!--- Timeout is 3 seconds. Jan 6 09:53:46.121: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_TIMER
!--- Digit 3 sent(pulse): Backward Signal Group A-3. !--- (Address-complete, changeover to reception of Group-B signals). Jan 6 09:53:46.121: vtsp_r2_generate_digits:
vdev_common=0x620BF390, string=567dc_dial() vtsp_dial_nopush dsp_dtmf_dialing(): dial_string =
3# Jan 6 09:53:46.121: dsp_dtmf_dialing: [0:1:2] packet_Len=36 channel_id=8516 packet_id=90
string=3# digits=2, time_on=150, time_off=30 Jan 6 09:53:46.121: digit=b, components=2,
freq_of_first=1020, freq_of_second=900, amp_of_first=8192, amp_of_second=8192 Jan 6
09:53:46.121: digit=o, components=2, freq_of_first=0, freq_of_second=0, amp_of_first=1,
amp_of_second=1 *!--- Digit 1 is sent: Forward Signal Group II-1 !--- (subscriber without priority).* Jan 6 09:53:46.361: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN:**
digit=1, rtp_timestamp=0x9330B42B dc_digit_up
Jan 6 09:53:46.361: csm_vtsp_digit_ready_up (vtsp_cdb=0x621C5F3C)
received digit (1)
Jan 6 09:53:46.361: CSM voice (2/15): Rcvd Digit detected(1)
Jan 6 09:53:46.361: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_CATEGORY R2
Got Event 1
Jan 6 09:53:46.361: r2_comp_category:R2_ALERTING
!--- Digit 6 sent (pulse): Backward Signal Group B-6 !--- (the subscriber line free of charge).
Jan 6 09:53:46.361: vtsp_r2_generate_digits: vdev_common=0x620BF390, string=567dc_dial()
vtsp_dial_nopush **dsp_dtmf_dialing(): dial_string = 6#**
Jan 6 09:53:46.361: dsp_dtmf_dialing: [0:1:2] packet_Len=36 channel_id=8516
packet_id=90 string=6# digits=2, time_on=150, time_off=30
Jan 6 09:53:46.361: digit=e, components=2, freq_of_first=900,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 6 09:53:46.361: digit=o, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
Jan 6 09:53:46.461: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF:digit=1,
duration=8291dc_digit
Jan 6 09:53:46.461: csm_vtsp_digit_ready (vtsp_cdb=0x621C5F3C)received digit (1)
Jan 6 09:53:46.461: CSM voice (2/15): Rcvd Digit detected(1)
Jan 6 09:53:46.461: R2 Incoming Voice(2/15): DSX (E1 0:2): **STATE:R2_IN_COMPLETE R2**
Got Event R2_TONE_OFF
Jan 6 09:53:46.729: vtsp_process_dsp_message: MSG_TX_DIALING_DONEdc_dialing_done()
Jan 6 09:53:47.461: R2 Incoming Voice(2/15): DSX (E1 0:2):
STATE:R2_IN_WAIT_GUARD R2
Got Event R2_TONE_TIMER
Jan 6 09:53:47.461: R2_IN_IDLE:2 r2_in_connect called
Jan 6 09:53:47.461: CSM_PROC_IC1_COLLECT_ADDR_INFO: CSM_EVENT_ADDR_INFO_COLLECTED
(DNIS=567, ANI=) at slot 2, port 15
Jan 6 09:53:47.461: vtsp_tsp_call_accept_check (sdb=0x61B8F0E0,calling_number=
called_number=567): peer_tag=0
Jan 6 09:53:47.461: VDEV_ALLOCATE: failed to allocate a device
Jan 6 09:53:47.461: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem
Jan 6 09:53:47.461: VDEV_ALLOCATE: failed to allocate a device
Jan 6 09:53:47.461: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem
Jan 6 09:53:47.461: VDEV_ALLOCATE: failed to allocate a device
Jan 6 09:53:47.461: VDEV_ALLOCATE_ALMOST_READY: failed to allocate a non-idle modem
Jan 6 09:53:47.461: CSM_PROC_IC3_WAIT_FOR_RES_RESP: CSM_EVENT_RESOURCE_OK at slot 2,
port 15
Jan 6 09:53:47.461: vtsp_IC_switch : (voice_vdev= 0x620BF320)
Jan 6 09:53:47.461: vtsp_tsp_call_switch_ind (cdb=0x621C5F3C,tsp_info=0x620BF320,
calling_number= called_number=567 redirect_number=):


```
peer_tag=123dc_switch: fsm_pop()
Jan 6 09:53:47.461: vtsp_do_call_setup_ind
Jan 6 09:53:47.461: vtsp_do_call_setup_ind: Call ID=65677, guid=61FAF610
Jan 6 09:53:47.461: vtsp_do_call_setup_ind: type=0, under_spec=0, name=AB^Lo, id0=3,
  id1=0, id2=0, calling=123, called=567
Jan 6 09:53:47.465: dsp_cp_tone_off: [] packet_Len=8 channel_id=8516 packet_id=71
Jan 6 09:53:47.465: dsp_idle_mode: [] packet_Len=8 channel_id=8516 packet_id=68
Jan 6 09:53:47.465: dsp_close_voice_channel: [] packet_Len=8 channel_id=8516
packet_id=75
Jan 6 09:53:47.465: vtsp_timer_stop: 67189073
Jan 6 09:53:47.465: csm_vtsp_call_setup_resp (vdev_info=0x620BF320,
  vtsp_cdb=0x621C5F3C)
Jan 6 09:53:47.465: csm_vtsp_call_setup_resp:vdev_common
BP TS allocatedat BP_stream0,
  BP_Ch27
Jan 6 09:53:47.465: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
  stream 7, chan 0,BP_stream 0, BP_ch 27
Jan 6 09:53:47.465: csm_vtsp_call_setup_resp:DST_tdm_chnl call. BP TS allocatedat
  stream 7, chan 0,BP_stream 0, BP_ch 27vtsp_open_voice_and_set_params
Jan 6 09:53:47.465: dsp_close_voice_channel: [0:1 (52)] packet_Len=8 channel_id=8516
  packet_id=75
Jan 6 09:53:47.465: dsp_open_voice_channel_20: [0:1 (52)]
packet_Len=16 channel_id=8516
  packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=1 serial_port=1
Jan 6 09:53:47.465: dsp_encap_config_20: [0:1 (52)] packet_Len=24
channel_id=8516
  packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 09:53:47.465: dsp_set_payout: [0:1 (52)] packet_Len=18 channel_id=8516
  packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 6 09:53:47.465: dsp_echo_canceller_control: [0:1 (52)] packet_Len=10
channel_id=8516
  packet_id=66 flags=0x0
Jan 6 09:53:47.465: dsp_set_gains: [0:1 (52)] packet_Len=12 channel_id=8516
  packet_id=91 in_gain=0 out_gain=0
Jan 6 09:53:47.465: dsp_vad_enable: [0:1 (52)] packet_Len=10 channel_id=8516
  packet_id=78 thresh=-38act_proceeding
Jan 6 09:53:47.469: csm_vtsp_call_proceeding:DST_tdm_chnl call. BP TS
allocatedstream 7,
  chan 0,BP_stream 0, BP_ch 27act_alert
Jan 6 09:53:47.493: vtsp_ring_noan_timer_start: 67189076
Jan 6 09:53:47.493: csm_vtsp_call_alert (vtsp_cdb=0x621C5F3C)
act_bridge act_caps_ind
Jan 6 09:53:47.737: act_caps_ind:Encap 1, Vad 2, Codec 0x4, CodecBytes 20,
  FaxRate 2, FaxBytes 20 SignalType 0
  DtmfRelay 1, Modem 1act_caps_ack
Jan 6 09:53:47.737: dsp_idle_mode: [0:1 (52)] packet_Len=8 channel_id=8516
packet_id=68
Jan 6 09:53:47.737: act_caps_ack: codec = 15, ret = 1
Jan 6 09:53:47.737: dsp_cp_tone_off: [0:1 (52)] packet_Len=8 channel_id=8516
  packet_id=71
Jan 6 09:53:47.737: dsp_idle_mode: [0:1 (52)] packet_Len=8 channel_id=8516
  packet_id=68
Jan 6 09:53:47.737: dsp_encap_config_20: [0:1 (52)] packet_Len=24 channel_id=8516
  packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 6 09:53:47.737: dsp_voice_mode: [0:1 (52)] packet_Len=24 channel_id=8516
  packet_id=73 coding_type=20 voice_field_size= 20 VAD_flag=1 echo_length=64
  comfort_noise=1 inband_detect=1 digit_relay=2 AGC_flag=0act_alert_connect
Jan 6 09:53:49.461: vtsp_ring_noan_timer_stop: 67189273
Jan 6 09:53:49.461: dsp_cp_tone_off: [0:1 (52)] packet_Len=8 channel_id=8516
  packet_id=71
Jan 6 09:53:49.461: csm_vtsp_call_connect (vtsp_cdb=0x621C5F3C,
voice_vdev=0x620BF320)
Jan 6 09:53:49.461: CSM_IC5_WAIT_FOR_SWITCH_OVER: CSM_EVENT_MODEM_OFFHOOK
```

```
at slot 2, port 15
Jan 6 09:53:49.617: CSM_RX_CAS_EVENT_FROM_NEAT:(0017): EVENT_CHANNEL_CONNECTED
at slot 2 and port 15
Jan 6 09:53:49.617: CSM_PROC_IC6_WAIT_FOR_CONNECT: CSM_EVENT_DSX0_CONNECTED
at slot 2, port 15
Jan 6 09:53:49.621: from NEAT(0): (0/2): TX ANSWERED(ABCD=0101)
eefje#
eefje#
```

[R2数字强制ani : 呼入的呼叫到567](#)

为了更好地了解此调试输出，请参见[E1 R2信令理论](#)。

```
eefje#debug csm voice
Voice Call Switching Module debugging is on
eefje#debug cas
Channel Associated Signaling debugging is on
Jan 7 10:00:02.907: from NEAT(0): debug-cas is on
Jan 7 10:00:02.907: from NEAT(0): special debug-cas is offg vtsp all
Voice telephony call control all debugging is on
eefje#
eefje#
Jan 7 10:00:23.883: from NEAT(0): (0/8): Rx SEIZURE (ABCD=0001)
Jan 7 10:00:23.927: VDEV_ALLOCATE: failed to allocate a device
Jan 7 10:00:23.927: VDEV_ALLOCATE: 1/2 is allocated
Jan 7 10:00:23.927: csm_vtsp_init_tdm (voice_vdev=0x61F19688)
Jan 7 10:00:23.927: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm slot 1,
dspm 3, dsp 4,
dsp_channel 1
Jan 7 10:00:23.927: csm_vtsp_init_tdm: dsprm_tdm_allocate: tdm stream 5,
channel 13,
bank 0, BP_channel 15, BP_stream 255
Jan 7 10:00:23.927: CSM_RX_CAS_EVENT_FROM_NEAT:(cid0007):
EVENT_CALL_DIAL_IN at slot 1
and port 60
Jan 7 10:00:23.927: CSM_PROC_IDLE: CSM_EVENT_START_DIGIT_COLLECT at slot 1, port 60
Jan 7 10:00:23.927: csm_vtsp_start_digit_collect (voice_vdev=0x61F19688)
Jan 7 10:00:23.927: Enter csm_connect_pri_vdev function
Jan 7 10:00:23.927: csm_connect_pri_vdev:tdm_allocate_BP_Ts() call. BP
TS allocated at BP_stream0, BP_Ch8,vdev_common 0x6205E5F8
Jan 7 10:00:23.927: to NEAT:(cid0007) EVENT_CHANNEL_LOCK for slot0 ctrl0 chan8
Jan 7 10:00:23.927: vtsp_do_call_setup_ind
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: Call ID=65579, guid=62031A88
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: type=0, under_spec=0,
name=, id0=0, id1=0,id2=0, calling=, called=
Jan 7 10:00:23.927: vtsp_do_call_setup_ind: redirect DN = reason =
0vtsp_do_r2_start_digit(): fsm_push(vtsp_r2_state_table)

Jan 7 10:00:23.927: csm_vtsp_call_setup_resp (vdev_info=0x61F19688,
vtsp_cdb=0x61B5BFF8)
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:vdev_common
BP TS allocatedat BP_stream0,
BP_Ch8
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream
5, chan 13,BP_stream 255, BP_ch 15
Jan 7 10:00:23.927: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream
5, chan 13,BP_stream 0, BP_ch 8
Jan 7 10:00:23.927: CSM_PROC_IC1_COLLECT_ADDR_INFO: CSM_EVENT_MODEM_OFFHOOK
(DNIS=, ANI=) at slot 1, port 60
```


Jan 7 10:00:23.931: R2 Incoming Voice(1/60): DSX (E1 0:8): STATE: R2_IN_IDLE
R2 Got Event R2_START
Jan 7 10:00:24.027: CSM_RX_CAS_EVENT_FROM_NEAT:(0007): EVENT_START_RX_TONE
at slot 1 and port 60
Jan 7 10:00:24.027: from NEAT(0): (0/8): **TX SEIZURE_ACK**
(ABCD=1101)dc_init_dsp
vtsp_open_voice_and_set_params
Jan 7 10:00:24.151: dsp_close_voice_channel: [0:1:8] packet_Len=8 channel_id=4929
packet_id=75
Jan 7 10:00:24.151: dsp_open_voice_channel_20: [0:1:8] packet_Len=16
channel_id=4929
packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=0 serial_port=0
Jan 7 10:00:24.151: dsp_encap_config_20: [0:1:8] packet_Len=24 channel_id=4929
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0 r_vpxcc=0x0
Jan 7 10:00:24.151: dsp_set_payout: [0:1:8] packet_Len=18 channel_id=4929
packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 7 10:00:24.151: dsp_echo_canceller_control: [0:1:8]
packet_Len=10 channel_id=4929
packet_id=66 flags=0x0
Jan 7 10:00:24.151: dsp_set_gains: [0:1:8] packet_Len=12
channel_id=4929 packet_id=91
in_gain=0 out_gain=0
Jan 7 10:00:24.151: dsp_vad_enable: [0:1:8] packet_Len=10
channel_id=4929 packet_id=78
thresh=-38
Jan 7 10:00:24.151: dsp_voice_mode: [0:1:8] packet_Len=24
channel_id=4929 packet_id=73
coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
comfort_noise=1
inband_detect=1 digit_relay=2 AGC_flag=0dsp_dtmf_mode
(VTSP_TONE_R2_MF_FORWARD_MODE)
Jan 7 10:00:24.151: dsp_dtmf_mode: [0:1:8] packet_Len=10 channel_id=4929
packet_id=65dtmf_or_mf=1
!--- Digit 5 is sent: Forward Signal Group I-5 (First DNIS digit). Jan 7 10:00:24.203:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=5,**
rtp_timestamp=0x04030000 dc_digit_up
Jan 7 10:00:24.203: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)received digit (5)
Jan 7 10:00:24.203: CSM voice (1/60): Rcvd Digit detected(5)
Jan 7 10:00:24.203: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_PRE_CALLERID R2
Got Event 5
!--- Send Backward Signal Group A-5 (caller category request). Jan 7 10:00:24.203:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial()vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 5
Jan 7 10:00:24.203: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929packet_id=90
string=5 digits=1, time_on=65435, time_off=30
Jan 7 10:00:24.203: digit=, components=2, freq_of_first=1020,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:24.303: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF:digit=5,
duration=30dc_digit
Jan 7 10:00:24.303: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (5)
Jan 7 10:00:24.303: CSM voice (1/60): Rcvd Digit detected(5)
Jan 7 10:00:24.303: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event R2_TONE_OFF
Jan 7 10:00:24.303: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()
vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:24.303: dsp_dtmf_dialing: [0:1:8] packet_Len=24 channel_id=4929

packet_id=90 string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:24.303: digit=, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Caller Category Forward Signal Group II-1 is sent. Jan 7 10:00:24.403:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=1,**
rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:24.403: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)received
digit (1)
Jan 7 10:00:24.403: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:24.403: R2 Incoming Voice(1/60): DSX (E1 0:8): STATE:R2_IN_CALLERID R2
Got Event 1
!--- Send Backward Signal Group A-5 (Caller ID request). Jan 7 10:00:24.403:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial() vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 5
Jan 7 10:00:24.403: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=5 digits=1, time_on=65435, time_off=30
Jan 7 10:00:24.403: digit=, components=2, freq_of_first=1020, freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:24.503: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_OFF: digit=1,**
duration=30dc_digit
Jan 7 10:00:24.503: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (1)
Jan 7 10:00:24.503: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:24.503: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event R2_TONE_OFF
Jan 7 10:00:24.503: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()
vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:24.503: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:24.503: digit=, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- First ANI digit is sent: Forward Signal Group I-1. Jan 7 10:00:24.603:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN:**
digit=1, rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:24.603: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8) received digit (1)
Jan 7 10:00:24.603: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:24.603: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event 1
!--- Send Backward Signal Group A-5 (Caller ID request). Jan 7 10:00:24.603:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial()vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 5
Jan 7 10:00:24.603: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=5 digits=1, time_on=65435, time_off=30
Jan 7 10:00:24.603: digit=, components=2, freq_of_first=1020,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:24.703: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_OFF: digit=1,**
duration=30dc_digit
Jan 7 10:00:24.703: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (1)
Jan 7 10:00:24.703: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:24.703: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event R2_TONE_OFF
Jan 7 10:00:24.703: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:24.703: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30

Jan 7 10:00:24.703: digit=, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Second ANI digit is sent: Forward Signal Group I-2. Jan 7 10:00:24.803:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN:digit=2,**
rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:24.803: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (2)
Jan 7 10:00:24.803: CSM voice (1/60): Rcvd Digit detected(2)
Jan 7 10:00:24.803: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event 2
!--- Send Backward Signal Group A-5 (Caller ID request). Jan 7 10:00:24.803:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial()vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 5
Jan 7 10:00:24.803: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929packet_id=90
string=5 digits=1, time_on=65435, time_off=30
Jan 7 10:00:24.803: digit=, components=2, freq_of_first=1020,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:24.903: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_OFF: digit=2,**
duration=30dc_digit
Jan 7 10:00:24.903: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (2)
Jan 7 10:00:24.903: CSM voice (1/60): Rcvd Digit detected(2)
Jan 7 10:00:24.903: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID
R2 Got Event R2_TONE_OFF
Jan 7 10:00:24.903: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:24.903: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:24.903: digit=, components=2, freq_of_first=0,
freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Third ANI digit is sent: Forward Signal Group I-3. Jan 7 10:00:25.003:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=3,**
rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:25.003: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (3)
Jan 7 10:00:25.003: CSM voice (1/60): Rcvd Digit detected(3)
Jan 7 10:00:25.003: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event 3
!--- Send Backward Signal Group A-5 (Caller ID request). Jan 7 10:00:25.003:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial()vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 5
Jan 7 10:00:25.003: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=5 digits=1, time_on=65435, time_off=30
Jan 7 10:00:25.003: digit=, components=2, freq_of_first=1020,
freq_of_second=780,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:25.103: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_OFF:digit=3,**
duration=30dc_digit
Jan 7 10:00:25.103: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (3)
Jan 7 10:00:25.103: CSM voice (1/60): Rcvd Digit detected(3)
Jan 7 10:00:25.103: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_CALLERID R2
Got Event R2_TONE_OFF
Jan 7 10:00:25.103: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #

Jan 7 10:00:25.103: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:25.103: digit=, components=2, freq_of_first=0,
freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Digit 15 is sent: Forward Signal Group I-15 (end of ANI digit). Jan 7 10:00:25.203:
vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_BEGIN: digit=15, rtp_timestamp=0x001E0010
dc_digit_up Jan 7 10:00:25.203: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8) received digit (*)
Jan 7 10:00:25.203: CSM voice (1/60): Rcvd Digit detected(*) Jan 7 10:00:25.203: R2 Incoming
Voice(1/60): DSX (E1 0:8): **STATE:R2_IN_CALLERID R2**
Got Event 15
!--- Send Backward Signal Group A-1 (next DNIS digit). Jan 7 10:00:25.203:
vtsp_r2_generate_digits: vdev_common=0x6205E5F8, string=5dc_dial()vtsp_dial_nopush
dsp_dtmf_dialing(): dial_string = 1
Jan 7 10:00:25.203: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=1 digits=1, time_on=65435, time_off=30
Jan 7 10:00:25.203: digit=, components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:25.303: vtsp_process_dsp_message:
MSG_TX_DTMF_DIGIT_OFF: digit=15, duration=30dc_digit Jan 7 10:00:25.303: csm_vtsp_digit_ready
(vtsp_cdb=0x61B5BFF8) received digit (*) Jan 7 10:00:25.303: CSM voice (1/60): Rcvd Digit
detected(*) Jan 7 10:00:25.303: R2 Incoming Voice(1/60): DSX (E1 0:8): **STATE:R2_IN_COLLECT_DNIS**
R2
Got Event R2_TONE_OFF
Jan 7 10:00:25.303: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=5dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:25.303: dsp_dtmf_dialing: [0:1:8] packet_Len=24 channel_id=4929
packet_id=90 string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:25.303: digit=, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Second DNIS digit is sent: Forward Signal Group I-6. Jan 7 10:00:25.391:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=6,**
rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:25.391: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (6)
Jan 7 10:00:25.391: CSM voice (1/60): Rcvd Digit detected(6)
Jan 7 10:00:25.391: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_COLLECT_DNIS
R2 Got Event 6
!--- Send Backward Signal Group A-1. Jan 7 10:00:25.391: vtsp_r2_generate_digits:
vdev_common=0x6205E5F8, string=56dc_dial() vtsp_dial_nopush **dsp_dtmf_dialing(): dial_string = 1**
Jan 7 10:00:25.391: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=1 digits=1, time_on=65435, time_off=30
Jan 7 10:00:25.391: digit=, components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:25.491: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF:digit=6,
duration=30dc_digit
Jan 7 10:00:25.491: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8) received digit (6)
Jan 7 10:00:25.491: CSM voice (1/60): Rcvd Digit detected(6)
Jan 7 10:00:25.491: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE: R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_OFF
Jan 7 10:00:25.491: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=56dc_dial() vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:25.491: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:25.491: digit=, components=2, freq_of_first=0,

freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Third DNIS digit is sent: Forward Signal Group I-7. Jan 7 10:00:25.583:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=7,**
rtp_timestamp=0x001E0010 dc_digit_up
Jan 7 10:00:25.583: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (7)
Jan 7 10:00:25.583: CSM voice (1/60): Rcvd Digit detected(7)
Jan 7 10:00:25.583: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_COLLECT_DNIS R2
Got Event 7
!--- Send Backward Signal Group A-1. Jan 7 10:00:25.583: vtsp_r2_generate_digits:
vdev_common=0x6205E5F8, string=567dc_dial()vtsp_dial_nopush **dsp_dtmf_dialing(): dial_string = 1**
Jan 7 10:00:25.583: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=1 digits=1, time_on=65435, time_off=30
Jan 7 10:00:25.583: digit=, components=2, freq_of_first=1020,
freq_of_second=1140,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:25.683: vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_OFF: digit=7,**
duration=30dc_digit
Jan 7 10:00:25.683: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8)
received digit (7)
Jan 7 10:00:25.683: CSM voice (1/60): Rcvd Digit detected(7)
Jan 7 10:00:25.683: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_OFF
Jan 7 10:00:25.683: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=567dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:25.683: dsp_dtmf_dialing: [0:1:8] packet_Len=24
channel_id=4929 packet_id=90
string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:25.683: digit=, components=2, freq_of_first=0,
freq_of_second=0,
amp_of_first=1, amp_of_second=1
Jan 7 10:00:25.835: vtsp_process_dsp_message: **MSG_TX_DIALING_DONEdc_dialing_done()**
!--- Timeout is 3 seconds. Jan 7 10:00:28.583: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_COLLECT_DNIS R2
Got Event R2_TONE_TIMER
*!--- Send Backward Signal Group A-3: address-complete, changeover !--- to reception of group-B
signal.* Jan 7 10:00:28.583: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=567dc_dial()vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = 3# Jan 7 10:00:28.583:
dsp_dtmf_dialing: [0:1:8] packet_Len=36
channel_id=4929 packet_id=90
string=3# digits=2, time_on=150, time_off=30
Jan 7 10:00:28.583: digit=, components=2, freq_of_first=1020,
freq_of_second=900,
amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:28.583: digit=, components=2, freq_of_first=0, freq_of_second=0,
amp_of_first=1, amp_of_second=1
!--- Forward Signal Group II-1 is sent: subscriber without priority. Jan 7 10:00:28.831:
vtsp_process_dsp_message: **MSG_TX_DTMF_DIGIT_BEGIN: digit=1,** rtp_timestamp=0x001E0003 dc_digit_up
Jan 7 10:00:28.831: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8) received digit (1) Jan 7
10:00:28.831: CSM voice (1/60): Rcvd Digit detected(1) Jan 7 10:00:28.831: R2 Incoming
Voice(1/60): DSX (E1 0:8): **STATE:R2_IN_CATEGORY R2 Got Event 1**
Jan 7 10:00:28.831: CSM_PROC_IC1_COLLECT_ADDR_INFO:
CSM_EVENT_ADDR_INFO_COLLECTED
(DNIS=567, ANI=123) at slot 1, port 60
Jan 7 10:00:28.831: vtsp_tsp_call_accept_check (sdb=0x61DADEE0,
calling_number=123
called_number=567): peer_tag=0
Jan 7 10:00:28.835: VDEV_ALLOCATE: failed to allocate a device
Jan 7 10:00:28.835: VDEV_ALLOCATE_ALMOST_READY: failed to allocate

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a non-idle modem
Jan 7 10:00:28.835: VDEV_ALLOCATE: failed to allocate a device
Jan 7 10:00:28.835: VDEV_ALLOCATE_ALMOST_READY: failed to allocate
a non-idle modem
Jan 7 10:00:28.835: VDEV_ALLOCATE: failed to allocate a device
Jan 7 10:00:28.835: VDEV_ALLOCATE_ALMOST_READY: failed to allocate
a non-idle modem
Jan 7 10:00:28.835: CSM_PROC_IC3_WAIT_FOR_RES_RESP: CSM_EVENT_RESOURCE_OK
at slot 1,
port 60
Jan 7 10:00:28.835: vtsp_IC_switch : (voice_vdev= 0x61F19688)
Jan 7 10:00:28.835: vtsp_tsp_call_switch_ind (cdb=0x61B5BFF8,
tsp_info=0x61F19688,
calling_number=123 called_number=567 redirect_number=):
peer_tag=123dc_switch: fsm_pop()
Jan 7 10:00:28.835: vtsp_do_call_setup_ind
Jan 7 10:00:28.835: vtsp_do_call_setup_ind: Call ID=65581,
guid=62031A88
Jan 7 10:00:28.835: vtsp_do_call_setup_ind: type=0, under_spec=0,
name=b`, id0=9,
id1=0, id2=0, calling=123, called=567
Jan 7 10:00:28.835: dsp_cp_tone_off: [] packet_Len=8 channel_id=4929
packet_id=71
Jan 7 10:00:28.835: dsp_idle_mode: [] packet_Len=8 channel_id=4929
packet_id=68
Jan 7 10:00:28.835: dsp_close_voice_channel: [] packet_Len=8
channel_id=4929 packet_id=75
Jan 7 10:00:28.835: vtsp_timer_stop: 7063006
Jan 7 10:00:28.839: csm_vtsp_call_setup_resp (vdev_info=0x61F19688,
vtsp_cdb=0x61B5BFF8)
Jan 7 10:00:28.839: csm_vtsp_call_setup_resp:vdev_common BP TS
allocatedat BP_stream0,
BP_Ch8
Jan 7 10:00:28.839: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream 5, chan 13,BP_stream 0, BP_ch 8
Jan 7 10:00:28.839: csm_vtsp_call_setup_resp:DST_tdm_chnl call.
BP TS allocatedat stream 5, chan 13,BP_stream 0, BP_ch
8vtsp_open_voice_and_set_params
Jan 7 10:00:28.839: dsp_close_voice_channel: [0:1 (17)]
packet_Len=8 channel_id=4929
packet_id=75
Jan 7 10:00:28.839: dsp_open_voice_channel_20: [0:1 (17)] packet_Len=16
channel_id=4929
packet_id=74 alaw_ulaw_select=1 associated_signaling_channel=0
time_slot=0 serial_port=0
Jan 7 10:00:28.839: dsp_encap_config_20: [0:1 (17)] packet_Len=24
channel_id=4929
packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0t_vpxcc=0x0
r_vpxcc=0x0
Jan 7 10:00:28.839: dsp_set_playout: [0:1 (17)] packet_Len=18
channel_id=4929 packet_id=76 mode=1 initial=60 min=4 max=200 fax_nom=300
Jan 7 10:00:28.839: dsp_echo_canceller_control: [0:1 (17)]
packet_Len=10 channel_id=4929
packet_id=66 flags=0x0
Jan 7 10:00:28.839: dsp_set_gains: [0:1 (17)] packet_Len=12
channel_id=4929 packet_id=91
in_gain=0 out_gain=0
Jan 7 10:00:28.839: dsp_vad_enable: [0:1 (17)] packet_Len=10
channel_id=4929 packet_id=78
thresh=-38act_proceeding
Jan 7 10:00:28.839: csm_vtsp_call_proceeding:DST_tdm_chnl call.
BP TS allocatedstream 5,
chan 13,BP_stream 0, BP_ch 8act_alert
Jan 7 10:00:28.867: vtsp_ring_noan_timer_start: 7063009
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Jan 7 10:00:28.867: csm_vtsp_call_alert (vtsp_cdb=0x61B5BFF8)
Jan 7 10:00:28.867: csm_vtsp_call_alert: CSM_EVENT_ALERTING_RECEIVED
Jan 7 10:00:28.867: CSM_IC5_WAIT_FOR_SWITCH_OVER: at slot 1, port 60
Jan 7 10:00:28.867: CSM_EVENT_ALERTING_RECEIVED:
Jan 7 10:00:28.867: calling alerting_start_event
!--- Note: For modems, Backward Signal !--- Group B-6 (subscriber's line free, charge) !--- is
sent immediately. !--- For voice, it is delayed until alerting is received. !--- Notice that
"R2_REJECT" is printed instead of R2_ALERTING. !--- This printing issue is solved in Cisco IOS
Software Release 12.1T.

Jan 7 10:00:28.867: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE:R2_IN_IDLE R2
  Got Event R2_REJECT
Jan 7 10:00:28.867: R2_ALERTING: r2_comp_idle
Jan 7 10:00:28.867: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=567act_bridge
Jan 7 10:00:28.867: dsp_voice_mode: [0:1 (17)] packet_Len=24
channel_id=4929 packet_id=73
  coding_type=1 voice_field_size=80 VAD_flag=0 echo_length=64
comfort_noise=1
  inband_detect=1 digit_relay=2 AGC_flag=0dsp_dtmf_mode
(VTSP_TONE_R2_MF_FORWARD_MODE)
!--- Answer signal (B-6) is sent after alerting is received. !--- Send Backward Signal Group B6
signal (Subscriber's line free, charge). Jan 7 10:00:28.871: dsp_dtmf_mode: [0:1 (17)]
packet_Len=10 channel_id=4929 packet_id=65 dtmf_or_mf=1vtsp_r2_dial vtsp_r2_dial():
fsm_push(vtsp_r2_state_table) dsp_dtmf_dialing(): dial_string = 6

Jan 7 10:00:28.871: dsp_dtmf_dialing: [0:1 (17)] packet_Len=24
channel_id=4929
  packet_id=90 string=6 digits=1, time_on=65435, time_off=30
Jan 7 10:00:28.871: digit=, components=2, freq_of_first=900,
freq_of_second=780,
  amp_of_first=8192, amp_of_second=8192
Jan 7 10:00:28.923: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_BEGIN: digit=1,
  rtp_timestamp=0x001E0006 dc_digit_up
Jan 7 10:00:28.923: csm_vtsp_digit_ready_up (vtsp_cdb=0x61B5BFF8)
received digit (1)
Jan 7 10:00:28.923: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:28.923: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE: R2_IN_COMPLETE
  R2 Got Event 1
Jan 7 10:00:28.971: vtsp_process_dsp_message: MSG_TX_DTMF_DIGIT_OFF: digit=1,
  duration=30dc_digit
Jan 7 10:00:28.971: csm_vtsp_digit_ready (vtsp_cdb=0x61B5BFF8)
received digit (1)
Jan 7 10:00:28.971: CSM voice (1/60): Rcvd Digit detected(1)
Jan 7 10:00:28.971: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE: R2_IN_COMPLETE R2
  Got Event R2_TONE_OFF
Jan 7 10:00:28.971: vtsp_r2_generate_digits: vdev_common=0x6205E5F8,
string=567dc_dial()
  vtsp_dial_nopush dsp_dtmf_dialing(): dial_string = #
Jan 7 10:00:28.971: dsp_dtmf_dialing: [0:1 (17)] packet_Len=24
channel_id=4929
  packet_id=90 string=# digits=1, time_on=150, time_off=30
Jan 7 10:00:28.975: digit=, components=2, freq_of_first=0,
freq_of_second=0,
  amp_of_first=1, amp_of_second=1ds_dialing_defaultds_dialing_default
Jan 7 10:00:29.127: vtsp_process_dsp_message:
MSG_TX_DIALING_DONEdc_dialing_done()
Jan 7 10:00:29.971: R2 Incoming Voice(1/60): DSX (E1 0:8):
STATE: R2_IN_WAIT_GUARD R2
  Got Event R2_TONE_TIMER
Jan 7 10:00:29.971: R2_IN_IDLE:2 r2_in_connect called
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Jan 7 10:00:29.971: R2_IN_CONNECT: call end dial
Jan 7 10:00:29.971: pop the dial state machine
Jan 7 10:00:29.971: vtsp_r2_end_dial: vdev_common=0x6205E5F8,
string=567ds_end_dial():
  fsm_pop() act_caps_ind
Jan 7 10:00:29.971: act_caps_ind:Encap 1, Vad 2, Codec 0x4,
CodecBytes 20, FaxRate 2,
  FaxBytes 20 SignalType 0 DtmfRelay 1, Modem 1act_caps_ack
Jan 7 10:00:29.971: dsp_idle_mode: [0:1 (17)] packet_Len=8
channel_id=4929 packet_id=68
Jan 7 10:00:29.971: act_caps_ack: codec = 15, ret = 1
Jan 7 10:00:29.971: dsp_cp_tone_off: [0:1 (17)] packet_Len=8
channel_id=4929 packet_id=71
Jan 7 10:00:29.971: dsp_idle_mode: [0:1 (17)] packet_Len=8
channel_id=4929 packet_id=68
Jan 7 10:00:29.971: dsp_encap_config_20: [0:1 (17)] packet_Len=24
channel_id=4929
  packet_id=92 TransportProtocol 2 t_ssrc=0x0 r_ssrc=0x0 t_vpxcc=0x0
r_vpxcc=0x0
Jan 7 10:00:29.971: dsp_voice_mode: [0:1 (17)] packet_Len=24
channel_id=4929 packet_id=73
  coding_type=19 voice_field_size=20 VAD_flag=1 echo_length=64
comfort_noise=1
  inband_detect=1 digit_relay=2 AGC_flag=0act_alert_connect
Jan 7 10:00:30.255: vtsp_ring_noan_timer_stop: 7063148
Jan 7 10:00:30.255: dsp_cp_tone_off: [0:1 (17)] packet_Len=8
channel_id=4929 packet_id=71
Jan 7 10:00:30.255: csm_vtsp_call_connect (vtsp_cdb=0x61B5BFF8,
voice_vdev=0x61F19688)
Jan 7 10:00:30.255: CSM_IC5_WAIT_FOR_SWITCH_OVER:
CSM_EVENT_MODEM_OFFHOOK at slot 1,
  port 60
Jan 7 10:00:30.607: CSM_RX_CAS_EVENT_FROM_NEAT:(0007):
EVENT_CHANNEL_CONNECTED at slot 1
  and port 60
Jan 7 10:00:30.607: CSM_PROC_IC6_WAIT_FOR_CONNECT:
CSM_EVENT_DSX0_CONNECTED at slot 1,
  port 60
Jan 7 10:00:30.607: from NEAT(0): (0/8): TX ANSWERED (ABCD=0101)
eefje#
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