

E1 R2 信令配置与故障排除

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简介

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。

注意： 在您使用本文前，推荐您首先读[E1 R2信令理论](#)。

先决条件

要求

在您尝试此配置前，请保证您满足这些前提条件：

- 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，此硬件要求：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。

使用的组件

本文档中的信息根据此软件和硬件版本：

- 有Cisco IOS软件版本12.0.7T的Cisco AS5300

注意： E1 R2发信号介绍到Cisco 2600/3600系列路由器在Cisco IOS软件版本12.1.2XH和12.1(3)T。

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](#)。

配置

此部分提交您与您能使用为了配置E1 R2的信息。

注意： 要找到关于本文使用的命令的其他信息，请参考[命令查找工具](#) (仅限[注册用户](#))。

[AS5300 : Cisco IOS语音特性卡\(VFC\)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，参考[Cisco AS5300的Cisco VCWare兼容性矩阵](#)。如果版本是不兼容的，在语音卡的数字信号信号处理器(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
在第一示例输出show vfc slot_number interface命令中， DSP语句显示版本为该模块号是不兼容的。
```

此第二套输出是有装载的正确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，为了检查已安装Cisco VCWare版本，请输入show vfc slot_number version
vcware命令，：
```

```
eefje#show vfc 1 version vware Voice Feature Card in Slot 1: Vcware Version : 4.10 ROM Monitor Version : 1.2 DSPware Version : Technology : C542
```

注意： 确保Cisco VCWare技术版本(c549或c542)匹配已安装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. 设置连接到专用自动小交换机的控制器E1 (PBX)或交换机。保证帧和linecoding E1适当地设置。
2. 对于成帧的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有在时钟源的不同的需求。
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软件版本11.3的指令序列。

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

注意： 如果从Cisco IOS软件版本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实施有启用的拨号号码识别服务(DNIS)支持。如果启用自动数字标识(ANI)选项，DNIS信息的集仍然执行。ANI选项的规格不禁用DNIS集。DNIS是呼叫的编号。ANI是呼叫方的编号。例如，如果配置呼叫A的路由器称路由器呼叫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。

[用 cas-custom 命令定制 E1 R2](#)

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，参考[用cas-custom命令定制E1 R2](#)。

网络图

本文档使用此网络设置。

配置

为本文的目的，这些是在E1接口间显示的三不同的R2配置：

- [R2 Digital non-compelled](#)
- [R2数字半强迫](#)
- [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
!
```

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。

排除故障E1 R2失败

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，请检查帧，线性编码，时钟源，警报，替换电缆，重新安装卡，等等。作为参考请使用[用cas-custom命令定制E1 R2](#)文档。
2. 如果使用—AS5300，请检查DSP用[show vfc slot number interface](#)命令正确地安装。
3. 配置在普通旧式电话服务对等体的直接拨入(DID)，因此接收的数字用于选择流出对等体。
4. 指定[cptone](#) ([cptone](#)为您的国家是特定)在voice-ports。必须配置—[cptonecountry](#)命令为了匹配[cas-custom country](#)命令。[cptone](#)参数集特定国家(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？路由器是否接收/发送位？发现侧清除呼叫。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。

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

注意： 对于Cisco IOS软件版本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](#)包括一切的命令有输出所有消息(位)被交换在PBX和路由器之间。

对于Cisco IOS软件版本IOS 11.3，请使用这些命令：

- **modem-mgmt csm debug-rbs** -线路信令(您需要首先指定在配置模式的**service internal**。)
- **debug csm voice** -寄存器间信令。
- **debug vtsp**包括一切的命令有输出所有消息(位)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**包括一切的命令有输出所有消息(位)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不同的配置，这是三不同的**调试**：

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

为了了解更加好此的**debug**输出，参考[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=lvtsps_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_playout: [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 lact_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数字半强迫：呼入呼叫到567](#)

为了了解更加好此的debug输出，参考[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_playout: [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_playout: [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 lact_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 : 呼入呼叫到567

为了了解更加好此的debug输出，参考[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_DONE dc_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 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 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:

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dsp_dtmf_mode: [0:1 (17)] packet_Len=10 channel_id=4929 packet_id=65 dtmf_or_mf=lvtsr_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_defaultsds_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 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 lact_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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