

# 带有高带宽租用线路 PPP 和 LLQ 的 VoIP

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## 简介

本文档提供两台Cisco 3640路由器的配置示例。这些配置使路由器能够通过带低延迟队列(LLQ)的高带宽租用线路通过PPP与VoIP通信。有关LLQ的详细信息，请参阅文档[VoIP over PPP Links with Quality of Service\(LLQ / IP RTP Priority, LFI, cRTP\)](#)。

**注意：**当本文档讨论VoIP和QoS方面的高带宽时，高带宽是指高于768 kbps的任何带宽。

## 先决条件

### 要求

本文档没有任何特定的要求。

### 使用的组件

本文档中的信息基于以下软件和硬件版本：

- Cisco IOS®软件版本12.2(19a)IP Plus或12.2、12.2T、12.3或12.3T的任何其他Cisco IOS软件版本
- 两台Cisco 3640路由器，至少具有48 DRAM和16 Mb闪存
- 两个思科NM-2V语音/传真接口卡插槽网络模块以及两个VIC-2FXS接口卡

- 两个串行接口在本例中，两个串行接口是NM-1E2Ws，每个接口都有一个WIC-1T WAN接口卡。
- 用于连接到语音呼叫的外部交换站(FXS)端口的模拟电话

**注意：**NM-1E2W、NM-1E1R2W和NM-2E2W网络模块没有足够的性能功率来支持WIC-2T。缺乏支持是因为硬件限制。

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

有关文件规则的更多信息请参见“Cisco技术提示规则”。

## 背景信息

如果将1500字节的数据包发送到线路上所需的时间大于10毫秒，则需要对数据包进行分段。本文档提供不分段的配置。此配置适用于1544千位链路，1500字节数据包的传输延迟小于10毫秒。

**注意：**在您有专用的完整T1连接的某些情况下，可能不需要分段功能。但是，您仍然需要QoS机制。在本例中使用LLQ。如果将1500字节数据包发送到线路上所需的时间少于10毫秒，则无需对数据包进行分段。完整的T1提供足够的带宽，使语音数据包可以在没有延迟问题的情况下进入和离开队列。

**注意：**如果已在路由器上启用分段，则100%的时间都支持排队机制。如果已配置LLQ，则配置的值会限制优先级队列的流量。当您未启用分段时，路由器仅在发生拥塞时应用QoS策略。

此外，如果线速大于768 kbps，则可能不需要压缩实时传输协议(cRTP)。请参阅文档[VoIP over PPP Links with Quality of Service \[LLQ / IP RTP Priority, LFI, cRTP\]](#)。由于cRTP压缩IP RTP报头，因此使用cRTP有助于节省带宽。在本文档的[配置](#)部分，不需要启用cRTP。T1允许语音数据包在不压缩的情况下通过线路传输足够的带宽，而不会出现问题。

**注意：**如果您决定使用cRTP，请注意cRTP使用CPU资源。cRTP可能会对语音流量负担沉重的路由器加税。

**注意：**在此配置中，两台路由器通过租用线路背靠背连接。但是，在大多数拓扑中，具有语音支持的路由器可以存在于任何位置。通常，语音路由器通过LAN连接到连接到WAN的其他路由器。如果语音路由器不通过租用线路的PPP连接，则需要在连接到WAN的路由器上配置所有WAN连接配置命令；您不要在语音路由器上配置命令，本文档中的[配置](#)显示了这些命令。

**注意：**此配置适用于Cisco 1700、[2600](#)、[3600](#)和[3700](#)系列路由器。

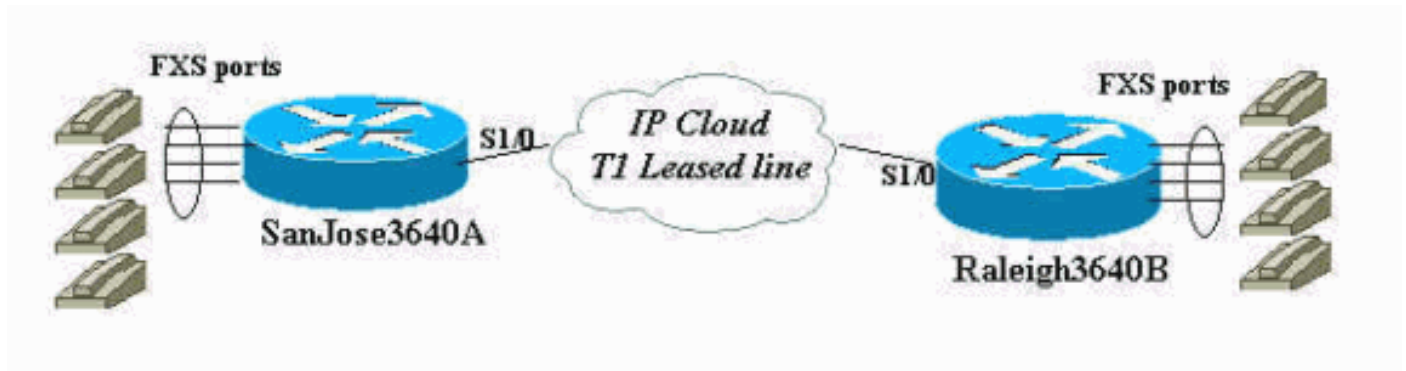
## 配置

本部分提供有关如何配置本文档所述功能的信息。

**注：**要查找有关本文档中使用的命令的其他信息，请使用[命令查找工具](#)([仅注册客户](#))。

## 网络图

本文档使用以下网络设置：



## 配置

本文档使用以下配置：

- [San Jose](#)
- [罗利](#)

### San Jose

```
SanJose3640A# show run
Building configuration...

Current configuration : 1425 bytes
!
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SanJose3640A
!
logging buffered 50000 debugging
!
ip subnet-zero
!
!
no ip domain-lookup
!
call rsvp-sync
!
!
!
!
!
!
!
!
class-map match-all voice-signaling
  match access-group 103
class-map match-all voice-traffic
  match access-group 102
!
!
policy-map voice-policy
  class voice-traffic
    priority 51
```

*!--- These are two uncompressed G729 VoIP calls at 24 kpbs each !--- that have voice activity detection (VAD) disablement. You also need !--- to consider the Layer 2 (L2) overhead. class voice-signaling bandwidth 16 !--- This assigns a queue for voice signaling traffic that ensures 8 kbps. !--- Note:* This action is optional and has nothing to do with good voice !--- quality. This queue assignment is a way to secure signaling.

```
class class-default
  fair-queue
!--- The class-default class classifies traffic that does !--- not fall into one of the class definitions. The fair-queue command !--- associates the default class weighted fair queuing (WFQ).
```

```
!
!
!
interface Ethernet1/0
  ip address 10.89.251.158 255.255.255.192
  half-duplex
!
interface Serial1/0
  bandwidth 1544
  ip address 192.168.1.1 255.255.255.0
  service-policy output voice-policy
  encapsulation ppp
  load-interval 30
  clockrate 2000000
!
ip classless
ip route 0.0.0.0 0.0.0.0 10.89.251.129
no ip http server
!
access-list 102 permit udp any any range 16384 32767
access-list 103 permit tcp any eq 1720 any
access-list 103 permit tcp any any eq 1720
!
voice-port 3/0/0
!
voice-port 3/0/1
!
voice-port 3/1/0
!
voice-port 3/1/1
!
dial-peer cor custom
!
!
!
dial-peer voice 1 voip
  incoming called-number .
  destination-pattern 2...
  session target ipv4:192.168.1.2
  dtmf-relay h245-alphanumeric
  no vad
!
dial-peer voice 2 pots
  destination-pattern 1001
  port 3/0/0
```

```
!  
dial-peer voice 3 pots  
  destination-pattern 1002  
  port 3/0/1  
!  
!  
line con 0  
line aux 0  
line vty 0 4  
password cisco  
login  
!  
end  
  
SanJose3640A#  
  
SanJose3640A#  
SanJose3640A# show version  
Cisco Internetwork Operating System Software  
IOS (tm) 3600 Software (C3640-IS-M), Version 12.2(19a),  
RELEASE SOFTWARE (fc2)  
Copyright (c) 1986-2003 by cisco Systems, Inc.  
Compiled Mon 29-Sep-03 23:45 by pwade  
Image text-base: 0x60008930, data-base: 0x61134000  
  
ROM: System Bootstrap, Version 11.1(20)AA2, EARLY  
DEPLOYMENT RELEASE SOFTWARE (fc1)  
  
SanJose3640A uptime is 5 minutes  
System returned to ROM by reload  
System image file is "flash:c3640-is-mz.122-19a.bin"  
  
cisco 3640 (R4700) processor (revision 0x00) with  
126976K/4096K bytes of memory.  
Processor board ID 15636516  
R4700 CPU at 100Mhz, Implementation 33, Rev 1.0  
Bridging software.  
X.25 software, Version 3.0.0.  
SuperLAT software (copyright 1990 by Meridian Technology  
Corp).  
1 Ethernet/IEEE 802.3 interface(s)  
1 Serial network interface(s)  
2 Voice FXO interface(s)  
2 Voice FXS interface(s)  
DRAM configuration is 64 bits wide with parity disabled.  
125K bytes of non-volatile configuration memory.  
32768K bytes of processor board System flash  
(Read/Write)  
16384K bytes of processor board PCMCIA Slot1 flash  
(Read/Write)  
  
Configuration register is 0x2102  
  
SanJose3640A#
```

## 罗利

```
Raleigh3640A# show run  
Building configuration...  
  
Current configuration : 1406 bytes  
!  
version 12.2
```

```

service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Raleigh3640A
!
logging buffered 50000 debugging
!
ip subnet-zero
!
!
no ip domain-lookup
!
call rsvp-sync
!
!
!
!
!
!
class-map match-all voice-signaling
  match access-group 103
class-map match-all voice-traffic
  match access-group 102
!
!
policy-map voice-policy
  class voice-traffic
    priority 51
!--- These are two uncompressed G729 VoIP calls at 24
kpbs each !--- that have VAD disablement. You also need
to consider !--- the L2 overhead. class voice-signaling
bandwidth 16 !--- This assigns a queue for voice
signaling traffic that ensures 8 kbps. !--- Note: This
action is optional and has nothing to do with good voice
!--- quality. This queue assignment is a way to secure
signaling.

  class class-default
    fair-queue
!--- The class-default class classifies traffic that
does !--- not fall into one of the class definitions.
The fair-queue command !--- associates the default class
WFQ.
!
!
!
interface Ethernet1/0
  ip address 10.89.251.159 255.255.255.192
  half-duplex
!
interface Serial1/0
  bandwidth 1544
  ip address 192.168.1.2 255.255.255.0
  service-policy output voice-policy
  encapsulation ppp
  load-interval 30
!
ip classless
ip route 0.0.0.0 0.0.0.0 10.89.251.129
no ip http server

```

```
!  
access-list 102 permit udp any any range 16384 32767  
access-list 103 permit tcp any eq 1720 any  
access-list 103 permit tcp any any eq 1720  
!  
voice-port 3/0/0  
!  
voice-port 3/0/1  
!  
voice-port 3/1/0  
!  
voice-port 3/1/1  
!  
dial-peer cor custom  
!  
!  
!  
dial-peer voice 1 voip  
  incoming called-number .  
  destination-pattern 1...  
  session target ipv4:192.168.1.1  
  dtmf-relay h245-alphanumeric  
  no vad  
!  
dial-peer voice 2 pots  
  destination-pattern 2001  
  port 3/0/0  
!  
dial-peer voice 3 pots  
  destination-pattern 2002  
  port 3/0/1  
!  
!  
line con 0  
line aux 0  
line vty 0 4  
password cisco  
login  
!  
end  
  
Raleigh3640A#  
Raleigh3640A#  
Raleigh3640A# show version  
Cisco Internetwork Operating System Software  
IOS (tm) 3600 Software (C3640-IS-M), Version 12.2(19a),  
RELEASE SOFTWARE (fc2)  
Copyright (c) 1986-2003 by cisco Systems, Inc.  
Compiled Mon 29-Sep-03 23:45 by pwade  
Image text-base: 0x60008930, data-base: 0x61134000  
  
ROM: System Bootstrap, Version 12.1(17r) [cmong 17r],  
RELEASE SOFTWARE (fc1)  
  
Raleigh3640A uptime is 6 minutes  
System returned to ROM by reload  
System image file is "flash:c3640-is-mz.122-19a.bin"  
  
cisco 3640-A (R4700) processor (revision 0x00) with  
94208K/4096K bytes of memory.  
Processor board ID 29851759  
R4700 CPU at 100Mhz, Implementation 33, Rev 1.0  
Bridging software.  
X.25 software, Version 3.0.0.
```

```
SuperLAT software (copyright 1990 by Meridian Technology Corp).
1 Ethernet/IEEE 802.3 interface(s)
1 Serial network interface(s)
2 Voice FXO interface(s)
2 Voice FXS interface(s)
DRAM configuration is 64 bits wide with parity disabled.
123K bytes of non-volatile configuration memory.
32768K bytes of processor board System flash
(Read/Write)
16384K bytes of processor board PCMCIA Slot0 flash
(Read/Write)

Configuration register is 0x2102

Raleigh3640A#
```

## 验证

在路由器中输入这些配置后，检验它们是否正常工作。此处的命令和相应输出演示了配置的成功实施。

[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。

- **show interface serial 1/0** — 允许您检查串行接口的状态。
- **show call active voice brief** — 允许您在呼叫期间查看呼叫信息。
- **show call active voice** — 允许您在呼叫期间查看呼叫信息。
- **show policy-map interface** — 允许您验证接口使用的QoS策略。
- **show access-list 102** — 允许您通过语音类的访问列表验证数据包选择。几秒钟后再次发出命令，检验数据包计数是否增加。如有必要，请发出**clear access-list counters 102**命令。
- **show voice call summary** — 用于验证呼叫的状态。命令显示呼叫是否有连接。
- **show voice port summary** — 用于验证语音端口的状态。命令将语音端口显示为挂机或摘机。
- **show voice dsp** — 用于验证每个呼叫使用的数字信号处理器(DSP)状态和编码解码器（编解码器）。

## San Jose 路由器验证

在执行验证之前，请检查接口，确保您具有发出呼叫所需的连接。发出**show interface serial 1/0**命令以检查串行接口的状态。使用本文中的“配置”，请确保串行接口和多链路接口处于up状态。另请确保您看到以下内容：

- **LCP Open multilink Open** — 表示PPP连接的建立。
- **IPCP CDPCP** — 告诉您可以通过PPP链路发送IP流量。
- **weighted fair** — 对应于串行接口下的service-policy输出命令行界面(CLI)。策略是配置LLQ以优先处理语音数据。

```
SanJose3640A# show interface serial 1/0
Serial1/0 is up, line protocol is up
Hardware is QUICC Serial
Internet address is 192.168.1.1/24
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
```



```

Encapsulation PPP, loopback not set
Keepalive set (10 sec)
LCP Open
Open: IPCP, CDPCP
Last input 00:00:27, output 00:00:02, output hang never
Last clearing of "show interface" counters 00:00:05
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/1/256 (active/max active/max total)
Reserved Conversations 1/1 (allocated/max allocated)
Available Bandwidth 1091 kilobits/sec
30 second input rate 0 bits/sec, 0 packets/sec
30 second output rate 0 bits/sec, 0 packets/sec
1 packets input, 16 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
1 packets output, 16 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=up DSR=up DTR=up RTS=up CTS=up

```

SanJose3640A#

此输出显示路由器之间的连接成功。如果未看为up，请验证DCE接口上的时钟频率。某些串行接口不支持高速，例如NM-8A/S。此外，检验两端的参数是否匹配，最重要的是，检验封装是否匹配。

此处show call active voice brief命令的输出显示两个成功的呼叫。一个呼叫从Raleigh路由器到San Jose路由器，另一个呼叫从San Jose到Raleigh。此列表说明以粗体显示的输出：

- **Answer 1001 active** — 表示San Jose是发出呼叫的路由器。
- **Tele 3/0/0** — 表示这是电话呼叫段。
- **Originate 2001 active** — 表示罗利侧的电话收到呼叫。
- **IP 192.168.1.2** — 表示这是IP呼叫段。
- **2002** — 表示Raleigh是呼叫发送到的路由器。
- **IP 192.168.1.2** — 表示这是IP呼叫段。
- **Originate 1002 active** — 表示圣荷西侧的电话收到呼叫。
- **Tele 3/0/1** — 表示这是电话呼叫段。

SanJose3640A# **show call active voice brief**

```

<ID>: <start>hs.<index> +<connect> pid:<peer_id> <dir> <addr> <state>
dur hh:mm:ss tx:<packets>/<bytes> rx:<packets>/<bytes>
IP <ip>:<udp> rtt:<time>ms pl:<play>/<gap>ms lost:<lost>/<early>/<late>
delay:<last>/<min>/<max>ms <codec>
MODEMPASS <method> buf:<fills>/<drains> loss <overall%> <multipkt>/<corrected>
last <buf event time>s dur:<Min>/<Max>s
FR <protocol> [int dlci cid] vad:<y/n> dtmf:<y/n> seq:<y/n>
<codec> (payload size)
ATM <protocol> [int vpi/vci cid] vad:<y/n> dtmf:<y/n> seq:<y/n>
<codec> (payload size)
Tele <int>: tx:<tot>/<v>/<fax>ms <codec> noise:<l> acom:<l> i/o:<l>/<l> dBm
Proxy <ip>:<audio udp>,<video udp>,<tcp0>,<tcp1>,<tcp2>,<tcp3> endpt: <type>/<manf>
bw: <req>/<act> codec: <audio>/<video>
tx: <audio pkts>/<audio bytes>,<video pkts>/<video bytes>,<t120 pkts>/<t120 bytes>
rx: <audio pkts>/<audio bytes>,<video pkts>/<video bytes>,<t120 pkts>/<t120 bytes>

```

Total call-legs: 4

11E8 : 115599hs.1 +318 pid:2 **Answer 1001 active**  
dur 00:00:29 tx:1545/30900 rx:1544/30880  
**Tele 3/0/0:20:** tx:30890/30890/0ms g729r8 noise:0 acom:2 i/0:-35/-44 dBm

11E8 : 115823hs.1 +94 pid:1 **Originate 2001 active**  
dur 00:00:31 tx:1556/31120 rx:1602/32040  
**IP 192.168.1.2:**17360 rtt:4ms pl:25590/0ms lost:0/1/0 delay:69/69/70ms g729r8

11F0 : 116855hs.1 +156 pid:1 **Answer 2002 active**  
dur 00:00:20 tx:1087/21740 rx:1009/20180  
**IP 192.168.1.2:**16772 rtt:2ms pl:17270/0ms lost:0/0/0 delay:69/69/70ms g729r8

11F0 : 116855hs.2 +156 pid:3 **Originate 1002 active**  
dur 00:00:20 tx:1009/20180 rx:1087/21740  
**Tele 3/0/1 (23):** tx:21740/21740/0ms g729r8 noise:0 acom:5 i/0:-40/-40 dBm

Total call-legs: 4

SanJose3640A#

**show call active voice**命令的此输出提供了有关活动呼叫的更多详细信息：

SanJose3640A# **show call active voice**

Total call-legs: 4

GENERIC:

SetupTime=115599 ms

Index=1

**PeerAddress=1001**

PeerSubAddress=

PeerId=2

PeerIfIndex=9

LogicalIfIndex=4

ConnectTime=115917

**CallDuration=00:05:05**

CallState=4

CallOrigin=2

ChargedUnits=0

InfoType=2

TransmitPackets=15338

TransmitBytes=306760

ReceivePackets=15337

ReceiveBytes=306740

TELE:

ConnectionId=[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]

IncomingConnectionId=[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]

TxDuration=306740 ms

VoiceTxDuration=306740 ms

FaxTxDuration=0 ms

CoderTypeRate=g729r8

NoiseLevel=0

ACOMLevel=5

OutSignalLevel=-43

InSignalLevel=-36

InfoActivity=2

ERLLevel=5

SessionTarget=

ImgPages=0

GENERIC:

SetupTime=115823 ms

Index=1

PeerAddress=2001

PeerSubAddress=

PeerId=1  
PeerIfIndex=8  
LogicalIfIndex=0  
ConnectTime=115917  
CallDuration=00:05:07  
CallState=4  
CallOrigin=1  
ChargedUnits=0  
InfoType=2  
TransmitPackets=15357  
TransmitBytes=307140  
ReceivePackets=15403  
ReceiveBytes=308060  
VOIP:  
ConnectionId[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]  
IncomingConnectionId[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]  
RemoteIPAddress=192.168.1.2  
RemoteUDPPort=17360  
RemoteSignallingIPAddress=192.168.1.2  
RemoteSignallingPort=1720  
RemoteMediaIPAddress=192.168.1.2  
RemoteMediaPort=17360  
RoundTripDelay=1 ms  
SelectedQoS=best-effort  
tx\_DtmfRelay=h245-alphanumeric  
FastConnect=TRUE

Separate H245 Connection=FALSE

H245 Tunneling=TRUE

SessionProtocol=cisco  
SessionTarget=ipv4:192.168.1.2  
OnTimeRvPlayout=300810  
GapFillWithSilence=0 ms  
GapFillWithPrediction=0 ms  
GapFillWithInterpolation=0 ms  
GapFillWithRedundancy=0 ms  
HiWaterPlayoutDelay=70 ms  
LoWaterPlayoutDelay=69 ms  
ReceiveDelay=69 ms  
LostPackets=0  
EarlyPackets=2  
LatePackets=0

**VAD = disabled**

**CoderTypeRate=g729r8**

CodecBytes=20  
GENERIC:  
SetupTime=116855 ms  
Index=1  
PeerAddress=2002  
PeerSubAddress=  
PeerId=1  
PeerIfIndex=8  
LogicalIfIndex=0  
ConnectTime=117011  
CallDuration=00:04:56  
CallState=4  
CallOrigin=2  
ChargedUnits=0  
InfoType=2  
TransmitPackets=14915  
TransmitBytes=298300  
ReceivePackets=14837

ReceiveBytes=296740  
VOIP:  
ConnectionId[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
IncomingConnectionId[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
RemoteIPAddress=192.168.1.2  
RemoteUDPPort=16772  
RemoteSignallingIPAddress=192.168.1.2  
RemoteSignallingPort=11004  
RemoteMediaIPAddress=192.168.1.2  
RemoteMediaPort=16772  
RoundTripDelay=7 ms  
SelectedQoS=best-effort  
tx\_DtmfRelay=h245-alphanumeric  
FastConnect=TRUE

Separate H245 Connection=FALSE

H245 Tunneling=TRUE

SessionProtocol=cisco  
SessionTarget=  
OnTimeRvPlayout=295580  
GapFillWithSilence=0 ms  
GapFillWithPrediction=0 ms  
GapFillWithInterpolation=0 ms  
GapFillWithRedundancy=0 ms  
HiWaterPlayoutDelay=70 ms  
LoWaterPlayoutDelay=69 ms  
ReceiveDelay=69 ms

**LostPackets=0**  
**EarlyPackets=0**  
**LatePackets=0**  
**VAD = disabled**  
**CoderTypeRate=g729r8**

CodecBytes=20  
GENERIC:  
SetupTime=116855 ms  
Index=2  
PeerAddress=1002  
PeerSubAddress=  
PeerId=3  
PeerIfIndex=10  
LogicalIfIndex=5  
ConnectTime=117011  
CallDuration=00:04:59  
CallState=4  
CallOrigin=1  
ChargedUnits=0  
InfoType=2  
TransmitPackets=14952  
TransmitBytes=299040  
ReceivePackets=15030  
ReceiveBytes=300600

TELE:  
ConnectionId=[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
IncomingConnectionId=[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
TxDuration=300600 ms  
VoiceTxDuration=300600 ms  
FaxTxDuration=0 ms  
CoderTypeRate=g729r8  
NoiseLevel=0  
ACOMLevel=5  
OutSignalLevel=-40  
InSignalLevel=-41

```
InfoActivity=2
ERLLevel=5
SessionTarget=
ImgPages=0Total call-legs: 4
```

```
SanJose3640A#$
```

Other shows:

show policy-map interface **命令的输出**包括以下粗体语句：

- **30 second offered rate 51000 bps** — 显示两个呼叫所需的带宽(51 kpbs)。

```
SanJose3640A# show policy-map interface
Serial1/0
```

```
Service-policy output: voice-policy
```

```
Class-map: voice-traffic (match-all)
99403 packets, 6401420 bytes
30 second offered rate 51000 bps, drop rate 0 bps
Match: access-group 102
Queueing
Strict Priority
Output Queue: Conversation 264
Bandwidth 51 (kbps) Burst 1275 (Bytes)
(pkts matched/bytes matched) 407/65676
(total drops/bytes drops) 0/0
```

```
Class-map: voice-signaling (match-all)
158 packets, 12926 bytes
30 second offered rate 0 bps, drop rate 0 bps
Match: access-group 103
Queueing
Output Queue: Conversation 265
Bandwidth 16 (kbps) Max Threshold 64 (packets)
(pkts matched/bytes matched) 158/12926
(depth/total drops/no-buffer drops) 0/0/0
```

```
Class-map: class-default (match-any)
75 packets, 9221 bytes
30 second offered rate 0 bps, drop rate 0 bps
Match: any
Queueing
Flow Based Fair Queueing
Maximum Number of Hashed Queues 256
(total queued/total drops/no-buffer drops) 0/0/0
SanJose3640A#
```

show access-lists 102 **命令的输出**包括以下粗体语句：

- **100676 matches** — 显示RTP数据包的优先级由于数据包到达访问列表102而发生。

```
SanJose3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (100676 matches)
SanJose3640A#
SanJose3640A#
SanJose3640A#
```

```

SanJose3640A#
SanJose3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (100930 matches)
SanJose3640A#
SanJose3640A#
SanJose3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (101076 matches)
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (101198 matches)
SanJose3640A#
SanJose3640A#
SanJose3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (101304 matches)
SanJose3640A#
SanJose3640A#

```

```

SanJose3640A#
SanJose3640A# show voice call sum
PORT CODEC VAD VTSP STATE VPM STATE
=====
3/0/0 g729r8 n S_CONNECT FXSLS_CONNECT
3/0/1 g729r8 n S_CONNECT FXSLS_CONNECT
3/1/0 - - - FXOLS_ONHOOK
3/1/1 - - - FXOLS_ONHOOK

```

```

SanJose3640A#
SanJose3640A#

```

```

SanJose3640A#
SanJose3640A# show voice port sum
IN OUT
PORT CH SIG-TYPE ADMIN OPER STATUS STATUS EC
=====
3/0/0 -- fxs-ls up up off-hook idle y
3/0/1 -- fxs-ls up up off-hook idle y
3/1/0 -- fxo-ls up dorm idle on-hook y
3/1/1 -- fxo-ls up dorm idle on-hook y

```

```

SanJose3640A#

```

```

SanJose3640A# show voice dsp
DSP DSP DSPWARE CURR BOOT PAK TX/RX
TYPE NUM CH CODEC VERSION STATE STATE RST AI VOICEPORT TS ABORT PACK COUNT
==== ==
C542 001 01 g729r8 3.4.55 busy idle 0 0 3/0/0 NA 0 62487/61902
C542 002 01 g729r8 3.4.55 busy idle 0 0 3/0/1 NA 0 44362/44194
C542 003 01 g711ulaw 3.4.55 IDLE idle 0 0 3/1/0 NA 0 541/546
C542 004 01 g711ulaw 3.4.55 IDLE idle 0 0 3/1/1 NA 0 535/532

```

```

SanJose3640A#

```

**Raleigh 路由器验证**

Raleigh路由器的验证过程与San Jose路由器的验证过程类似。

```
Raleigh3640A# show interface serial 1/0
Serial1/0 is up, line protocol is up
Hardware is QUICC Serial
Internet address is 192.168.1.2/24
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
Keepalive set (10 sec)
LCP Open
Open: IPCP, CDPCP
Last input 00:00:15, output 00:00:00, output hang never
Last clearing of "show interface" counters 00:12:33
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/1/256 (active/max active/max total)
Reserved Conversations 1/1 (allocated/max allocated)
Available Bandwidth 1091 kilobits/sec
30 second input rate 0 bits/sec, 0 packets/sec
30 second output rate 0 bits/sec, 0 packets/sec
167 packets input, 6849 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
169 packets output, 6907 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
11 carrier transitions
DCD=up DSR=up DTR=up RTS=up CTS=up
```

Raleigh3640A#

```
Raleigh3640A#
Raleigh3640A#
Raleigh3640A#
Raleigh3640A# show call active voice
Total call-legs: 4
```

```
GENERIC:
SetupTime=209451 ms
Index=1
PeerAddress=1001
PeerSubAddress=
PeerId=1
PeerIfIndex=8
LogicalIfIndex=0
ConnectTime=209543
CallDuration=00:08:20
CallState=4
CallOrigin=2
ChargedUnits=0
InfoType=2
TransmitPackets=25054
TransmitBytes=501080
ReceivePackets=25008
ReceiveBytes=500160
VOIP:
ConnectionId[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]
IncomingConnectionId[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]
RemoteIPAddress=192.168.1.1
RemoteUDPPort=17210
```

RemoteSignallingIPAddress=192.168.1.1  
RemoteSignallingPort=11006  
RemoteMediaIPAddress=192.168.1.1  
RemoteMediaPort=17210  
RoundTripDelay=3 ms  
SelectedQoS=best-effort  
tx\_DtmfRelay=h245-alphanumeric  
FastConnect=TRUE

Separate H245 Connection=FALSE

H245 Tunneling=TRUE

SessionProtocol=cisco  
SessionTarget=  
OnTimeRvPlayout=497610  
GapFillWithSilence=0 ms  
GapFillWithPrediction=0 ms  
GapFillWithInterpolation=0 ms  
GapFillWithRedundancy=0 ms  
HiWaterPlayoutDelay=70 ms  
LoWaterPlayoutDelay=69 ms  
ReceiveDelay=69 ms  
LostPackets=0  
EarlyPackets=1  
LatePackets=0

**VAD = disabled**

**CoderTypeRate=g729r8**

CodecBytes=20  
GENERIC:  
SetupTime=209451 ms  
Index=2

**PeerAddress=2001**

PeerSubAddress=  
PeerId=2  
PeerIfIndex=9  
LogicalIfIndex=4  
ConnectTime=209543

**CallDuration=00:08:21**

CallState=4  
CallOrigin=1  
ChargedUnits=0  
InfoType=2  
TransmitPackets=25074  
TransmitBytes=501480  
ReceivePackets=25120  
ReceiveBytes=502400

TELE:

ConnectionId=[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]  
IncomingConnectionId=[0x38D3783F 0x14F111CC 0x801CFDB1 0x2D0CC4A5]  
TxDuration=502410 ms  
VoiceTxDuration=502410 ms  
FaxTxDuration=0 ms  
CoderTypeRate=g729r8  
NoiseLevel=0  
ACOMLevel=1  
OutSignalLevel=-41  
InSignalLevel=-37  
InfoActivity=2  
ERLLevel=1  
SessionTarget=  
ImgPages=0  
GENERIC:  
SetupTime=210097 ms



Index=1  
PeerAddress=2002  
PeerSubAddress=  
PeerId=3  
PeerIfIndex=10  
LogicalIfIndex=5  
ConnectTime=210638  
**CallDuration=00:08:10**  
CallState=4  
CallOrigin=2  
ChargedUnits=0  
InfoType=2  
TransmitPackets=24606  
TransmitBytes=492120  
ReceivePackets=24605  
ReceiveBytes=492100  
TELE:  
ConnectionId=[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
IncomingConnectionId=[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
TxDuration=492110 ms  
VoiceTxDuration=492110 ms  
FaxTxDuration=0 ms  
CoderTypeRate=g729r8  
NoiseLevel=0  
ACOMLevel=0  
OutSignalLevel=-46  
InSignalLevel=-33  
InfoActivity=2  
ERLLevel=0  
SessionTarget=  
ImgPages=0  
GENERIC:  
SetupTime=210480 ms  
Index=1  
**PeerAddress=1002**  
PeerSubAddress=  
PeerId=1  
PeerIfIndex=8  
LogicalIfIndex=0  
ConnectTime=210638  
**CallDuration=00:08:11**  
CallState=4  
CallOrigin=1  
ChargedUnits=0  
InfoType=2  
TransmitPackets=24587  
TransmitBytes=491740  
ReceivePackets=24664  
ReceiveBytes=493280  
VOIP:  
ConnectionId[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
IncomingConnectionId[0x6C135AD4 0x14F311CC 0x8024CE4C 0xAA60AB15]  
RemoteIPAddress=192.168.1.1  
RemoteUDPPort=18884  
RemoteSignallingIPAddress=192.168.1.1  
RemoteSignallingPort=1720  
RemoteMediaIPAddress=192.168.1.1  
RemoteMediaPort=18884  
**RoundTripDelay=4 ms**  
SelectedQoS=best-effort  
tx\_DtmfRelay=h245-alphanumeric  
FastConnect=TRUE  
  
Separate H245 Connection=FALSE

H245 Tunneling=TRUE

SessionProtocol=cisco  
SessionTarget=ipv4:192.168.1.1  
OnTimeRvPlayout=487570  
GapFillWithSilence=0 ms  
GapFillWithPrediction=0 ms  
GapFillWithInterpolation=0 ms  
GapFillWithRedundancy=0 ms  
HiWaterPlayoutDelay=70 ms  
LoWaterPlayoutDelay=69 ms  
ReceiveDelay=69 ms  
**LostPackets=0**  
**EarlyPackets=1**  
**LatePackets=0**  
**VAD = disabled**  
**CoderTypeRate=g729r8**  
CodecBytes=20Total call-legs: 4

Raleigh3640A#  
Raleigh3640A#

Raleigh3640A# **show policy interface**  
Serial1/0

Service-policy output: voice-policy

Class-map: voice-traffic (match-all)  
113186 packets, 7289624 bytes  
**30 second offered rate 51000 bps, drop rate 0 bps**  
Match: access-group 102  
Queueing  
Strict Priority  
Output Queue: Conversation 264  
**Bandwidth 51 (kbps) Burst 1275 (Bytes)**  
**(pkts matched/bytes matched) 471/75864**  
**(total drops/bytes drops) 0/0**

Class-map: voice-signaling (match-all)  
162 packets, 13339 bytes  
30 second offered rate 0 bps, drop rate 0 bps  
Match: access-group 103  
Queueing  
Output Queue: Conversation 265  
Bandwidth 16 (kbps) Max Threshold 64 (packets)  
(pkts matched/bytes matched) 162/13339  
(depth/total drops/no-buffer drops) 0/0/0

Class-map: class-default (match-any)  
194 packets, 16761 bytes  
30 second offered rate 0 bps, drop rate 0 bps  
Match: any  
Queueing  
Flow Based Fair Queueing  
Maximum Number of Hashed Queues 256  
**(total queued/total drops/no-buffer drops) 0/0/0**  
Raleigh3640A#

Raleigh3640A# **show access-lists 102**  
Extended IP access list 102  
permit udp any any range 16384 32767 (**113963 matches**)  
Raleigh3640A#

```

Raleigh3640A#
Raleigh3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (114093 matches)
Raleigh3640A#
Raleigh3640A#
Raleigh3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (114188 matches)
Raleigh3640A#
Raleigh3640A#
Raleigh3640A# show access-lists 102
Extended IP access list 102
permit udp any any range 16384 32767 (114404 matches)
Raleigh3640A#
Raleigh3640A#

```

```

Raleigh3640A#
Raleigh3640A# show voice call sum
PORT CODEC VAD VTSP STATE VPM STATE
=====
3/0/0 g729r8 n S_CONNECT FXSLS_CONNECT
3/0/1 g729r8 n S_CONNECT FXSLS_CONNECT
3/1/0 - - - FXOLS_ONHOOK
3/1/1 - - - FXOLS_ONHOOK

```

Raleigh3640A#

```

Raleigh3640A# show voice port sum
IN OUT
PORT CH SIG-TYPE ADMIN OPER STATUS STATUS EC
=====
3/0/0 -- fxs-ls up up off-hook idle y
3/0/1 -- fxs-ls up up off-hook idle y
3/1/0 -- fxo-ls up dorm idle on-hook y
3/1/1 -- fxo-ls up dorm idle on-hook y

```

Raleigh3640A#

```

Raleigh3640A#
Raleigh3640A# show voice dsp
DSP DSP DSPWARE CURR BOOT PAK TX/RX
TYPE NUM CH CODEC VERSION STATE STATE RST AI VOICEPORT TS ABORT PACK COUNT
=====
C542 001 01 g729r8 3.4.55 busy idle 0 0 3/0/0 NA 0 69615/68771
C542 002 01 g729r8 3.4.55 busy idle 0 0 3/0/1 NA 0 51511/51520
C542 003 01 g711ulaw 3.4.55 IDLE idle 0 0 3/1/0 NA 0 541/546
C542 004 01 g711ulaw 3.4.55 IDLE idle 0 0 3/1/1 NA 0 535/532

```

Raleigh3640A#

## [故障排除](#)

本部分提供的信息可用于对配置进行故障排除。

## [故障排除命令](#)

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

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

- **debug voip ccapi inout** — 通过呼叫控制应用编程接口(API)跟踪执行路径。
- **debug vpm all** — 在所有虚拟语音端口模块(VPM)区域上启用调试。
- **show log** — 显示已启用调试的输出。

由于罗利和圣荷西两端在配置和设置方面非常相似，本文档仅为圣荷西路由器显示**debug voip ccapi inout**和**debug vpm all**命令。

如果呼叫建立出现问题，请发出本部分列出的**debug**命令。将输出与此处的信息进行比较。您可以使用软件（如比较或超越比较）来比较两个文本文件并查找差异。此处的输出可作为成功呼叫的参考。

首先，确定呼叫期间路由器中发生的情况。发出**debug voip ccapi inout**和**debug vpm all**命令。如下所示，发出**show debug**命令的输出显示了在San Jose路由器中启用**debug vpm all**命令的过程。您可以确定**debug vpm all**命令的启用，因为除了**debug voip ccapi inout**命令外，输出还显示了四个已启用的**debug**命令。当您发出**debug vpm all**命令时，这四个命令可自动启用。

**注意：**在生成所需的输出后，必须禁用这些debug命令。发出**undebug all**命令时禁用**debug**命令。如果您离开调试启用，您可能会遇到路由器性能问题。启用调试命令会消耗CPU资源。

```
SanJose3640A# show debug
voip:
voip ccAPI function enter/exit debugging is on
Voice Port Module session debugging is on
Voice Port Module DSP message debugging is on
Voice Port Module error debugging is on
Voice Port Module signaling debugging is on
Voice Port Module voaal2 debugging is on
Voice Port Module trunk conditioning is on
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#! Call from 1001 to 2001
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#
*Mar 1 00:05:07.675: http_dsp_message: SEND/RESP_SIG_STATUS: state=0xC timestamp=33146
systemtime=30767
*Mar 1 00:05:07.679: http_process_event: [3/0/0, FXSLS_ONHOOK, E_DSP_SIG_
1100] fxsls_onhook_offhook http_setup_ind
*Mar 1 00:05:07.679: [3/0/0] get_local_station_id calling num= calling name= calling
time=00/00 00:00
*Mar 1 00:05:07.679: cc_api_call_setup_ind (vdbPtr=0x6217C270, callInfo={called=,called_
oct3=0x81,calling=,calling_oct3=0x0,calling_oct3a=0x0,calling_xlated=false,
subscriber_type_str=RegularLine,fdest=0,peer_tag=2, prog_ind=3,callingIE_present 0},
callID=0x61DAB4F4)
*Mar 1 00:05:07.679: cc_api_call_setup_ind calling number is null, answer addr dest
pattern 1001 e164_ans_addr 0 e164_dest_pattern 1
*Mar 1 00:05:07.679: cc_api_call_setup_ind valid dest pattern, copying 1001 to calling
number
*Mar 1 00:05:07.679: cc_api_call_setup_ind type 3 , prot 0
*Mar 1 00:05:07.683: cc_process_call_setup_ind (event=0x62107860)
```

\*Mar 1 00:05:07.683: >>>>CCAPI handed cid 5 with tag 2 to app "DEFAULT"  
\*Mar 1 00:05:07.683: sess\_appl: ev(24=CC\_EV\_CALL\_SETUP\_IND), cid(5), disp(0)  
\*Mar 1 00:05:07.683: sess\_appl: ev(SSA\_EV\_CALL\_SETUP\_IND), cid(5), disp(0)  
\*Mar 1 00:05:07.683: ssaCallSetupInd  
\*Mar 1 00:05:07.683: ccCallSetContext (callID=0x5, context=0x620005E8)  
\*Mar 1 00:05:07.683: ssaCallSetupInd cid(5), st(SSA\_CS\_MAPPING),oldst(0),  
ev(24)ev->e.evCallSetupInd.nCallInfo.finalDestFlag = 0  
\*Mar 1 00:05:07.683: ccCallSetupAck (callID=0x5)  
\*Mar 1 00:05:07.683: ccCallReportDigits (callID=0x5, enable=0x1)  
\*Mar 1 00:05:07.683: cc\_api\_call\_report\_digits\_done (vdbPtr=0x6217C270, callID=0x5,  
disp=0)  
\*Mar 1 00:05:07.683: sess\_appl: ev(53=CC\_EV\_CALL\_REPORT\_DIGITS\_DONE), cid(5), disp(0)  
\*Mar 1 00:05:07.683: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_CALL\_REPORT\_DIGITS\_DONE)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:07.683: ssaReportDigitsDone cid(5) peer list: (empty)  
\*Mar 1 00:05:07.683: ssaReportDigitsDone callid=5 Enable succeeded  
\*Mar 1 00:05:07.687: ccGenerateTone (callID=0x5 tone=8)  
\*Mar 1 00:05:07.687: dsp\_digit\_collect\_on: [3/0/0] packet\_len=20 channel\_id=128 packet\_id=  
35 min\_inter\_delay=240 max\_inter\_delay=9760 mim\_make\_time=10 max\_make\_time=100  
min\_brake\_time=10 max\_brake\_time=100  
\*Mar 1 00:05:07.687: dsp\_soutput: [3/0/0]  
\*Mar 1 00:05:07.687: dsp\_digit\_collect\_on: [3/0/0] packet\_len=20 channel\_id=128 packet\_id=  
35 min\_inter\_delay=240 max\_inter\_delay=9760 mim\_make\_time=10 max\_make\_time=100  
min\_brake\_time=10 max\_brake\_time=100  
\*Mar 1 00:05:07.687: dsp\_soutput: [3/0/0]  
\*Mar 1 00:05:07.687: htsp\_process\_event: [3/0/0, FXSLS\_WAIT\_SETUP\_ACK, E\_HTSP\_SETUP\_ACK]  
\*Mar 1 00:05:09.455: cc\_api\_call\_digit\_begin (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF,  
srcCallId=0x5, digit=2, digit\_begin\_flags=0x1, rtp\_timestamp=0xEB32A6E0  
rtp\_expiration=0x0, dest\_mask=0x1)  
\*Mar 1 00:05:09.455: sess\_appl: ev(10=CC\_EV\_CALL\_DIGIT\_BEGIN), cid(5), disp(0)  
\*Mar 1 00:05:09.455: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_DIGIT\_BEGIN)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:09.455: ssaIgnore cid(5), st(SSA\_CS\_MAPPING),oldst(0), ev(10)  
\*Mar 1 00:05:09.515: cc\_api\_call\_digit\_end (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF,  
srcCallId=0x5,digit=2,duration=95,xruleCallingTag=0,xruleCalledTag=0, dest\_mask=0x1),  
digit\_tone\_mode=0  
\*Mar 1 00:05:09.515: sess\_appl: ev(9=CC\_EV\_CALL\_DIGIT\_END), cid(5), disp(0)  
\*Mar 1 00:05:09.515: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_CALL\_DIGIT)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:09.515: ssaDigit  
\*Mar 1 00:05:09.515: ssaDigit, 0. sct->digit , sct->digit len 0, usrDigit 2,  
digit\_tone\_mode=0  
\*Mar 1 00:05:09.515: ssaDigit,1. callinfo.called , digit 2, callinfo.calling 1001,  
xrulecallingtag 0, xrulecalledtag 0  
\*Mar 1 00:05:09.515: ssaDigit, 7. callinfo.calling 1001, sct->digit 2, result 1  
\*Mar 1 00:05:09.635: cc\_api\_call\_digit\_begin (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF,  
srcCallId=0x5, digit=0, digit\_begin\_flags=0x1, rtp\_timestamp=0xEB32A6E0  
rtp\_expiration=0x0, dest\_mask=0x1)  
\*Mar 1 00:05:09.635: sess\_appl: ev(10=CC\_EV\_CALL\_DIGIT\_BEGIN), cid(5), disp(0)  
\*Mar 1 00:05:09.635: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_DIGIT\_BEGIN)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:09.635: ssaIgnore cid(5), st(SSA\_CS\_MAPPING),oldst(0), ev(10)  
\*Mar 1 00:05:09.695: cc\_api\_call\_digit\_end (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF,  
srcCallId=0x5,digit=0,duration=95,xruleCallingTag=0,xruleCalledTag=0, dest\_mask=0x1),  
digit\_tone\_mode=0  
\*Mar 1 00:05:09.695: sess\_appl: ev(9=CC\_EV\_CALL\_DIGIT\_END), cid(5), disp(0)  
\*Mar 1 00:05:09.695: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_CALL\_DIGIT)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:09.695: ssaDigit  
\*Mar 1 00:05:09.695: ssaDigit, 0. sct->digit 2, sct->digit len 1, usrDigit 0,  
digit\_tone\_mode=0  
\*Mar 1 00:05:09.695: ssaDigit,1. callinfo.called , digit 20, callinfo.calling 1001,  
xrulecallingtag 0, xrulecalledtag 0  
\*Mar 1 00:05:09.695: ssaDigit, 7. callinfo.calling 1001, sct->digit 20, result 1

\*Mar 1 00:05:09.815: cc\_api\_call\_digit\_begin (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF, srcCallId=0x5, digit=0, digit\_begin\_flags=0x1, rtp\_timestamp=0xEB32A6E0 rtp\_expiration=0x0, dest\_mask=0x1)

\*Mar 1 00:05:09.815: sess\_appl: ev(10=CC\_EV\_CALL\_DIGIT\_BEGIN), cid(5), disp(0)

\*Mar 1 00:05:09.815: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_DIGIT\_BEGIN) oldst(SSA\_CS\_MAPPING)cfid(-1)csz(0)in(1)fDest(0)

\*Mar 1 00:05:09.815: ssaIgnore cid(5), st(SSA\_CS\_MAPPING),oldst(0), ev(10)

\*Mar 1 00:05:09.875: cc\_api\_call\_digit\_end (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF, srcCallId=0x5,digit=0,duration=95,xruleCallingTag=0,xruleCalledTag=0, dest\_mask=0x1), digit\_tone\_mode=0

\*Mar 1 00:05:09.875: sess\_appl: ev(9=CC\_EV\_CALL\_DIGIT\_END), cid(5), disp(0)

\*Mar 1 00:05:09.875: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_CALL\_DIGIT) oldst(SSA\_CS\_MAPPING)cfid(-1)csz(0)in(1)fDest(0)

\*Mar 1 00:05:09.875: ssaDigit

\*Mar 1 00:05:09.875: ssaDigit, 0. sct->digit 20, sct->digit len 2, usrDigit 0, digit\_tone\_mode=0

\*Mar 1 00:05:09.875: ssaDigit,1. callinfo.called , digit 200, callinfo.calling 1001, xrulecallingtag 0, xrulecalledtag 0

\*Mar 1 00:05:09.875: ssaDigit, 7. callinfo.calling 1001, sct->digit 200, result 1

\*Mar 1 00:05:09.995: cc\_api\_call\_digit\_begin (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF, srcCallId=0x5, digit=1, digit\_begin\_flags=0x1, rtp\_timestamp=0xEB32A6E0 rtp\_expiration=0x0, dest\_mask=0x1)

\*Mar 1 00:05:09.995: sess\_appl: ev(10=CC\_EV\_CALL\_DIGIT\_BEGIN), cid(5), disp(0)

\*Mar 1 00:05:09.995: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_DIGIT\_BEGIN) oldst(SSA\_CS\_MAPPING)cfid(-1)csz(0)in(1)fDest(0)

\*Mar 1 00:05:09.995: ssaIgnore cid(5), st(SSA\_CS\_MAPPING),oldst(0), ev(10)

\*Mar 1 00:05:10.055: cc\_api\_call\_digit\_end (dstVdbPtr=0x0, dstCallId=0xFFFFFFFF, srcCallId=0x5,digit=1,duration=95,xruleCallingTag=0,xruleCalledTag=0, dest\_mask=0x1), digit\_tone\_mode=0

\*Mar 1 00:05:10.055: sess\_appl: ev(9=CC\_EV\_CALL\_DIGIT\_END), cid(5), disp(0)

\*Mar 1 00:05:10.055: cid(5)st(SSA\_CS\_MAPPING)ev(SSA\_EV\_CALL\_DIGIT) oldst(SSA\_CS\_MAPPING)cfid(-1)csz(0)in(1)fDest(0)

\*Mar 1 00:05:10.055: ssaDigit

\*Mar 1 00:05:10.055: ssaDigit, 0. sct->digit 200, sct->digit len 3, usrDigit 1, digit\_tone\_mode=0

\*Mar 1 00:05:10.055: ssaDigit,1. callinfo.called , digit 2001, callinfo.calling 1001, xrulecallingtag 0, xrulecalledtag 0

\*Mar 1 00:05:10.055: ssaDigit, 7. callinfo.calling 1001, sct->digit 2001, result 0

\*Mar 1 00:05:10.055: ccCallReportDigits (callID=0x5, enable=0x0)

\*Mar 1 00:05:10.055: cc\_api\_call\_report\_digits\_done (vdbPtr=0x6217C270, callID=0x5, disp=0)

\*Mar 1 00:05:10.055: ssaSetupPeer cid(5) peer list: tag(1) called number (2001)

\*Mar 1 00:05:10.055: ssaSetupPeer cid(5), destPat(2001), matched(1), prefix(), peer(622FB888), peer->encapType (2)

\*Mar 1 00:05:10.055: ccCallProceeding (callID=0x5, prog\_ind=0x0)

\*Mar 1 00:05:10.059: ccCallSetupRequest (Inbound call = 0x5, outbound peer =1, dest=, params=0x621129C8 mode=0, \*callID=0x6 2112D38, prog\_ind = 3) callingIE\_present 0

\*Mar 1 00:05:10.059: ccCallSetupRequest numbering\_type 0x81

\*Mar 1 00:05:10.059: ccCallSetupRequest encapType 2 clid\_restrict\_disable 1 null\_orig\_clg 1 clid\_transparent 0 callingNumber 1001

\*Mar 1 00:05:10.059: dest pattern 2..., called 2001, digit\_strip 0

\*Mar 1 00:05:10.059: callingNumber=1001, calledNumber=2001, redirectNumber= display\_info= calling\_oct3a=0

\*Mar 1 00:05:10.059: accountNumber=, finalDestFlag=0, guid=3f30.bb8e.14ef.11cc.8008.fdb1.2d0c.c4a5

\*Mar 1 00:05:10.059: peer\_tag=1

**\*Mar 1 00:05:10.059: ccIFCallSetupRequestPrivate: (vdbPtr=0x620BCAF0, dest=, callParams={called=2001,called\_oct3=0x81, calling=1001,calling\_oct3=0x0, calling\_xlated=false, subscriber\_type\_str=RegularLine, fdest=0, voice\_peer\_tag=1},mode=0x0) vdbPtr type = 1**

\*Mar 1 00:05:10.059: ccIFCallSetupRequestPrivate: (vdbPtr=0x620BCAF0, dest=, callParams={called=2001, called\_oct3 0x81, calling=1001,calling\_oct3 0x0, calling\_xlated=false, fdest=0, voice\_peer\_tag=1}, mode=0x0, xltrc=-5)

\*Mar 1 00:05:10.059: ccSaveDialpeerTag (callID=0x5, dialpeer\_tag=0x1)  
\*Mar 1 00:05:10.059: ccCallSetContext (callID=0x6, context=0x61DAD8A0)  
\*Mar 1 00:05:10.059: sess\_appl: ev(53=CC\_EV\_CALL\_REPORT\_DIGITS\_DONE), cid(5), disp(0)  
\*Mar 1 00:05:10.059: cid(5)st(SSA\_CS\_CALL\_SETTING)ev(SSA\_EV\_CALL\_REPORT\_DIGITS\_DONE)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(1)fDest(0)  
\*Mar 1 00:05:10.059: -cid2(6)st2(SSA\_CS\_CALL\_SETTING)oldst2(SSA\_CS\_MAPPING)  
\*Mar 1 00:05:10.059: ssaReportDigitsDone cid(5) peer list: (empty)  
\*Mar 1 00:05:10.059: ssaReportDigitsDone callid=5 Reporting disabled.  
\*Mar 1 00:05:10.063: dsp\_digit\_collect\_off: [3/0/0] packet\_len=8 channel\_id=128 packet\_id=36  
\*Mar 1 00:05:10.063: dsp\_soutput: [3/0/0]  
\*Mar 1 00:05:10.063: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_PROCEEDING]  
\*Mar 1 00:05:10.095: cc\_api\_call\_proceeding(vdbPtr=0x620BCAF0, callID=0x6, prog\_ind=0x0)  
\*Mar 1 00:05:10.099: sess\_appl: ev(21=CC\_EV\_CALL\_PROCEEDING), cid(6), disp(0)  
\*Mar 1 00:05:10.099: cid(6)st(SSA\_CS\_CALL\_SETTING)ev(SSA\_EV\_CALL\_PROCEEDING)  
oldst(SSA\_CS\_MAPPING)cfid(-1)csize(0)in(0)fDest(0)  
\*Mar 1 00:05:10.099: -cid2(5)st2(SSA\_CS\_CALL\_SETTING)oldst2(SSA\_CS\_CALL\_SETTING)  
\*Mar 1 00:05:10.099: ssaCallProc  
\*Mar 1 00:05:10.099: ccGetDialpeerTag (callID=0x5)  
\*Mar 1 00:05:10.099: ssaIgnore cid(6), st(SSA\_CS\_CALL\_SETTING),oldst(1), ev(21)  
\*Mar 1 00:05:10.103: cc\_api\_call\_cut\_progress(vdbPtr=0x620BCAF0, callID=0x6, prog\_ind=0x8, sig\_ind=0x1)  
\*Mar 1 00:05:10.103: sess\_appl: ev(22=CC\_EV\_CALL\_PROGRESS), cid(6), disp(0)  
\*Mar 1 00:05:10.107: cid(6)st(SSA\_CS\_CALL\_SETTING)ev(SSA\_EV\_CALL\_PROGRESS)  
oldst(SSA\_CS\_CALL\_SETTING)cfid(-1)csize(0)in(0)fDest(0)  
\*Mar 1 00:05:10.107: -cid2(5)st2(SSA\_CS\_CALL\_SETTING)oldst2(SSA\_CS\_CALL\_SETTING)  
\*Mar 1 00:05:10.107: ssaCutProgress  
\*Mar 1 00:05:10.107: ccGetDialpeerTag (callID=0x5)  
\*Mar 1 00:05:10.107: ccCallCutProgress (callID=0x5, prog\_ind=0x8, sig\_ind=0x1)  
\*Mar 1 00:05:10.107: **ccConferenceCreate** (confID=0x6211310C, callID1=0x5, callID2=0x6, tag=0x0)  
\*Mar 1 00:05:10.107: cc\_api\_bridge\_done (confID=0x3, srcIF=0x620BCAF0, srcCallID=0x6, dstCallID=0x5, disposition=0, tag=0x0)htsp\_alert\_notify  
\*Mar 1 00:05:10.107: cc\_api\_bridge\_done (confID=0x3, srcIF=0x6217C270, srcCallID=0x5, dstCallID=0x6, disposition=0, tag=0x0)  
\*Mar 1 00:05:10.107: cc\_api\_caps\_ind (dstVdbPtr=0x620BCAF0, dstCallId=0x6, srcCallId=0x5, caps={codec=0x2EBFB, fax\_rate=0x7F, vad=0x3, modem=0x2 codec\_bytes=0, signal\_type=3})  
\*Mar 1 00:05:10.107: cc\_api\_caps\_ind (Playout: mode 1, initial 60,min 40, max 200)  
\*Mar 1 00:05:10.111: cc\_api\_caps\_ind (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2})  
\*Mar 1 00:05:10.111: cc\_api\_caps\_ind (Playout: mode 1, initial 60,min 40, max 200)  
\*Mar 1 00:05:10.111: cc\_api\_caps\_ack (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2, seq\_num\_start=9062})  
\*Mar 1 00:05:10.111: cc\_api\_caps\_ack (dstVdbPtr=0x620BCAF0, dstCallId=0x6, srcCallId=0x5, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2, seq\_num\_start=9062})  
\*Mar 1 00:05:10.111: cc\_api\_voice\_mode\_event , callID=0x5  
\*Mar 1 00:05:10.111: Call Pointer =620005E8  
\*Mar 1 00:05:10.115: cc\_api\_caps\_ind (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2})  
\*Mar 1 00:05:10.115: cc\_api\_caps\_ind (Playout: mode 1, initial 60,min 40, max 200)  
\*Mar 1 00:05:10.115: cc\_api\_caps\_ack (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2, seq\_num\_start=9062})  
\*Mar 1 00:05:10.123: cc\_api\_caps\_ack (dstVdbPtr=0x620BCAF0, dstCallId=0x6, srcCallId=0x5, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2, seq\_num\_start=9062})  
\*Mar 1 00:05:10.123: cc\_api\_voice\_mode\_event , callID=0x5  
\*Mar 1 00:05:10.123: Call Pointer =620005E8  
\*Mar 1 00:05:10.123: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_VOICE\_CUT\_THROUGH]  
\*Mar 1 00:05:10.123: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_VOICE\_CUT\_THROUGH]  
\*Mar 1 00:05:10.123: sess\_appl: ev(29=CC\_EV\_CONF\_CREATE\_DONE), cid(5), disp(0)

\*Mar 1 00:05:10.123: cid(5)st(SSA\_CS\_CONFERENCING\_PROGRESS)ev(SSA\_EV\_CONF\_CREATE\_DONE)  
oldst(SSA\_CS\_CALL\_SETTING)cfid(3)csize(0)in(1)fDest(0)

\*Mar 1 00:05:10.127: -cid2(6)st2(SSA\_CS\_CONFERENCING\_PROGRESS)oldst2(SSA\_CS\_CALL\_SETTING)

\*Mar 1 00:05:10.127: ssaConfCreateDoneAlert

\*Mar 1 00:05:10.127: sess\_appl: ev(51=CC\_EV\_VOICE\_MODE\_DONE), cid(5), disp(0)

\*Mar 1 00:05:10.127: cid(5)st(SSA\_CS\_CONFERENCED\_ALERT)ev(SSA\_EV\_VOICE\_MODE\_DONE)  
oldst(SSA\_CS\_CONFERENCING\_PROGRESS)cfid(3)csize(0)in(1)fDest(0)

\*Mar 1 00:05:10.127: -cid2(6)st2(SSA\_CS\_CONFERENCED\_ALERT)oldst2(SSA\_CS\_CALL\_SETTING)

\*Mar 1 00:05:10.127: ssaIgnore cid(5), st(SSA\_CS\_CONFERENCED\_ALERT),oldst(4), ev(51)

\*Mar 1 00:05:10.127: sess\_appl: ev(51=CC\_EV\_VOICE\_MODE\_DONE), cid(5), disp(2)

\*Mar 1 00:05:10.127: cid(5)st(SSA\_CS\_CONFERENCED\_ALERT)ev(SSA\_EV\_VOICE\_MODE\_DONE)  
oldst(SSA\_CS\_CONFERENCED\_ALERT)cfid(3)csize(0)in(1)fDest(0)

\*Mar 1 00:05:10.127: -cid2(6)st2(SSA\_CS\_CONFERENCED\_ALERT)oldst2(SSA\_CS\_CALL\_SETTING)

\*Mar 1 00:05:10.127: ssaIgnore cid(5), st(SSA\_CS\_CONFERENCED\_ALERT),oldst(4), ev(51)

\*Mar 1 00:05:10.127: cc\_process\_notify\_bridge\_done (event=0x6210BDB8)

\*Mar 1 00:05:10.131: cc\_api\_caps\_ind (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6,  
caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2})

\*Mar 1 00:05:10.131: cc\_api\_caps\_ind (Playout: mode 1, initial 60,min 40, max 200)

\*Mar 1 00:05:10.131: cc\_api\_caps\_ack (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6,  
caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2,  
seq\_num\_start=9063})

\*Mar 1 00:05:10.131: cc\_api\_caps\_ind (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6,  
caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2})

\*Mar 1 00:05:10.131: cc\_api\_caps\_ind (Playout: mode 1, initial 60,min 40, max 200)

\*Mar 1 00:05:10.131: cc\_api\_caps\_ack (dstVdbPtr=0x6217C270, dstCallId=0x5, srcCallId=0x6,  
caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2,  
seq\_num\_start=9063})

\*Mar 1 00:05:10.135: cc\_api\_caps\_ack (dstVdbPtr=0x620BCAF0, dstCallId=0x6, srcCallId=0x5,  
caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20, signal\_type=2,  
seq\_num\_start=9063})

\*Mar 1 00:05:10.135: cc\_api\_voice\_mode\_event , callID=0x5

\*Mar 1 00:05:10.135: Call Pointer =620005E8

**\*Mar 1 00:05:10.135: cc\_api\_caps\_ack (dstVdbPtr=0x620BCAF0, dstCallId=0x6,  
srcCallId=0x5, caps={codec=0x4, fax\_rate=0x2, vad=0x1, modem=0x0 codec\_bytes=20,  
signal\_type=2, seq\_num\_start=9063})**

\*Mar 1 00:05:10.135: cc\_api\_voice\_mode\_event , callID=0x5

\*Mar 1 00:05:10.135: Call Pointer =620005E8

\*Mar 1 00:05:10.135: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_VOICE\_CUT\_THROUGH]

\*Mar 1 00:05:10.135: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_VOICE\_CUT\_THROUGH]

\*Mar 1 00:05:10.135: sess\_appl: ev(51=CC\_EV\_VOICE\_MODE\_DONE), cid(5), disp(0)

\*Mar 1 00:05:10.135: cid(5)st(SSA\_CS\_CONFERENCED\_ALERT)ev(SSA\_EV\_VOICE\_MODE\_DONE)  
oldst(SSA\_CS\_CONFERENCED\_ALERT)cfid(3)csize(0)in(1)fDest(0)

\*Mar 1 00:05:10.135: -cid2(6)st2(SSA\_CS\_CONFERENCED\_ALERT)oldst2(SSA\_CS\_CALL\_SETTING)

\*Mar 1 00:05:10.135: ssaIgnore cid(5), st(SSA\_CS\_CONFERENCED\_ALERT),oldst(4), ev(51)

\*Mar 1 00:05:10.135: sess\_appl: ev(51=CC\_EV\_VOICE\_MODE\_DONE), cid(5), disp(0)

\*Mar 1 00:05:10.135: cid(5)st(SSA\_CS\_CONFERENCED\_ALERT)ev(SSA\_EV\_VOICE\_MODE\_DONE)  
oldst(SSA\_CS\_CONFERENCED\_ALERT)cfid(3)csize(0)in(1)fDest(0)

\*Mar 1 00:05:10.139: -cid2(6)st2(SSA\_CS\_CONFERENCED\_ALERT)oldst2(SSA\_CS\_CALL\_SETTING)

\*Mar 1 00:05:10.139: ssaIgnore cid(5), st(SSA\_CS\_CONFERENCED\_ALERT),oldst(4), ev(51)

\*Mar 1 00:05:18.303: cc\_api\_call\_connected(vdbPtr=0x620BCAF0, callID=0x6), prog\_ind =  
2cc\_api\_call\_connected: setting callEntry->connected to TRUE

\*Mar 1 00:05:18.303: sess\_appl: ev(8=CC\_EV\_CALL\_CONNECTED), cid(6), disp(0)

\*Mar 1 00:05:18.303: cid(6)st(SSA\_CS\_CONFERENCED\_ALERT)ev(SSA\_EV\_CALL\_CONNECTED)  
oldst(SSA\_CS\_CALL\_SETTING)cfid(3)csize(0)in(0)fDest(0)

\*Mar 1 00:05:18.307: -cid2(5)st2(SSA\_CS\_CONFERENCED\_ALERT)oldst2(SSA\_CS\_CONFERENCED\_ALERT)

\*Mar 1 00:05:18.307: ssaConnectAlert

\*Mar 1 00:05:18.307: ccGetDialpeerTag (callID=0x5)

**\*Mar 1 00:05:18.307: ccCallConnect (callID=0x5), prog\_ind = 2ccCallConnect:  
setting callEntry->connected to TRUE**

\*Mar 1 00:05:18.307: ssaFlushPeerTagQueue cid(5) peer list: (empty)htsp\_connect: no\_  
offhook 0

\*Mar 1 00:05:18.307: htsp\_process\_event: [3/0/0, FXSLS\_OFFHOOK, E\_HTSP\_CONNECT]fxsلس



```
offhook_connect
*Mar 1 00:05:18.307: [3/0/0] set signal state = 0x6 timestamp = 0
*Mar 1 00:05:18.307: dsp_set_sig_state: [3/0/0] packet_len=12 channel_id=128 packet_id=39
state=0x6 timestamp=0x0
*Mar 1 00:05:18.307: dsp_soutput: [3/0/0]
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#! call connected
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#! 1001 disconnecting the call
SanJose3640A#
SanJose3640A#
SanJose3640A#
SanJose3640A#
*Mar 1 00:05:57.019: htsp_dsp_message: SEND/RESP_SIG_STATUS: state=0x4 timestamp=16952
systime=35702
*Mar 1 00:05:57.019: htsp_process_event: [3/0/0, FXSLS_CONNECT, E_DSP_SIG_0100]fxspls_
offhook_onhook, HF duration=500
*Mar 1 00:05:57.023: htsp_timer - 500 msec
*Mar 1 00:05:57.523: htsp_process_event: [3/0/0, FXSLS_CONNECT, E_HTSP_EVENT_TIMER]fxspls_
connect_wait_release_req
*Mar 1 00:05:57.523: htsp_timer_stop
*Mar 1 00:05:57.523: cc_api_call_disconnected(vdbPtr=0x6217C270, callID=0x5, cause=0x10)
*Mar 1 00:05:57.523: sess_appl: ev(11=CC_EV_CALL_DISCONNECTED), cid(5), disp(0)
*Mar 1 00:05:57.523: cid(5)st(SSA_CS_ACTIVE)ev(SSA_EV_CALL_DISCONNECTED)
oldst(SSA_CS_CONFERENCED_ALERT)cfid(3)csize(0)in(1)fDest(0)
*Mar 1 00:05:57.523: -cid2(6)st2(SSA_CS_ACTIVE)oldst2(SSA_CS_CONFERENCED_ALERT)
*Mar 1 00:05:57.523: ssa: Disconnected cid(5) state(5) cause(0x10)
*Mar 1 00:05:57.523: ccConferenceDestroy (confID=0x3, tag=0x0)
*Mar 1 00:05:57.523: cc_api_bridge_drop_done (confID=0x3, srcIF=0x620BCAF0, srcCallID=0x6,
dstCallID=0x5, disposition=0 tag=0x0)
*Mar 1 00:05:57.523: cc_api_bridge_drop_done (confID=0x3, srcIF=0x6217C270, srcCallID=0x5,
dstCallID=0x6, disposition=0 tag=0x0)
*Mar 1 00:05:57.523: sess_appl: ev(30=CC_EV_CONF_DESTROY_DONE), cid(5), disp(0)
*Mar 1 00:05:57.523: cid(5)st(SSA_CS_CONF_DESTROYING)ev(SSA_EV_CONF_DESTROY_DONE)
oldst(SSA_CS_ACTIVE)cfid(-1)csize(0)in(1)fDest(0)
*Mar 1 00:05:57.527: -cid2(6)st2(SSA_CS_CONF_DESTROYING)oldst2(SSA_CS_CONFERENCED_ALERT)
*Mar 1 00:05:57.527: ssaConfDestroyDone
*Mar 1 00:05:57.527: ccCallDisconnect (callID=0x5, cause=0x10 tag=0x0)
*Mar 1 00:05:57.527: ccCallDisconnect: existing_cause = 0x0, new_cause = 0x10
*Mar 1 00:05:57.527: ccCallDisconnect (callID=0x6, cause=0x10 tag=0x0)
*Mar 1 00:05:57.527: ccCallDisconnect: existing_cause = 0x0, new_cause = 0x10htsp_release_
req: cause 16, no_onhook 0
*Mar 1 00:05:57.531: htsp_process_event: [3/0/0, FXSLS_WAIT_RELEASE_REQ,
E_HTSP_RELEASE_REQ] fxspls_waitrls_req_rls
*Mar 1 00:05:57.531: [3/0/0] set signal state = 0x4 timestamp = 0
*Mar 1 00:05:57.531: dsp_set_sig_state: [3/0/0] packet_len=12 channel_id=128 packet_id=39
state=0x4 timestamp=0x0
*Mar 1 00:05:57.531: dsp_soutput: [3/0/0]htsp_report_onhook_sig
*Mar 1 00:05:57.531: cc_api_call_feature: (vdbPtr=0x6217C270, callID=0x5,
feature_ind.type=5
*Mar 1 00:05:57.535: cc_api_call_disconnect_done(vdbPtr=0x6217C270, callID=0x5, disp=0,
tag=0x0)
*Mar 1 00:05:57.535: hdsprm_close_cleanup
*Mar 1 00:05:57.535: sess_appl: ev(28=CC_EV_CALL_FEATURE), cid(5), disp(0)
*Mar 1 00:05:57.535: cid(5)st(SSA_CS_DISCONNECTING)ev(SSA_EV_CALL_FEATURE)
oldst(SSA_CS_CONF_DESTROYING)cfid(-1)csize(0)in(1)fDest(0)
*Mar 1 00:05:57.535: -cid2(6)st2(SSA_CS_DISCONNECTING)oldst2(SSA_CS_CONFERENCED_ALERT)
```

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*Mar 1 00:05:57.535: ssaIgnore cid(5), st(SSA_CS_DISCONNECTING),oldst(7), ev(28)
*Mar 1 00:05:57.539: sess_appl: ev(12=CC_EV_CALL_DISCONNECT_DONE), cid(5), disp(0)
*Mar 1 00:05:57.539: cid(5)st(SSA_CS_DISCONNECTING)ev(SSA_EV_CALL_DISCONNECT_DONE)
  oldst(SSA_CS_DISCONNECTING)cfid(-1)csz(0)in(1)fDest(0)
*Mar 1 00:05:57.539: -cid2(6)st2(SSA_CS_DISCONNECTING)oldst2(SSA_CS_CONFERENCED_ALERT)
*Mar 1 00:05:57.539: ssaDisconnectDone
*Mar 1 00:05:57.543: cc_api_icpif: expect factor = 0
*Mar 1 00:05:57.543: g113_calculate_impairment (delay=101,loss=0), Io=0 Iq=0 Idte=0 Idd=0
  Ie=9 Itot=9
*Mar 1 00:05:57.543: cc_api_call_disconnect_done(vdbPtr=0x620BCAF0, callID=0x6, disp=0,
  tag=0x0)
*Mar 1 00:05:57.547: sess_appl: ev(12=CC_EV_CALL_DISCONNECT_DONE), cid(6), disp(0)
*Mar 1 00:05:57.547: cid(6)st(SSA_CS_DISCONNECTING)ev(SSA_EV_CALL_DISCONNECT_DONE)
  oldst(SSA_CS_CONFERENCED_ALERT)cfid(-1)csz(1)in(0)fDest(0)
*Mar 1 00:05:57.547: ssaDisconnectDone
SanJose3640A#
```

SanJose3640A#

## 相关信息

- [带有服务质量控制 \( LLQ/IP RTP 优先级、LFI、cRTP \) 的 VoIP-over-PPP](#)
- [带有服务质量控制 \( 分段、流量整形、LLQ/IP RTP 优先级 \) 的 基于帧中继的VoIP](#)
- [帧中继到 ATM 与LLQ、PPP LFI 和cRTP 互工作的 VoIP QoS](#)
- [了解 Cisco IOS 平台上的拨号对等体和呼叫线路](#)
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