

基本网守呼叫准入控制的配置

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简介

本文档提供基本网守呼叫准入控制的示例配置。

先决条件

要求

在网关能够从网守获取正确的地址解析之前，需要满足几个条件。当涉及低速链路时，每个VoIP解决方案都需要验证几个重要点。

在尝试此配置前，请保证您符合这些要求：

- 所有网关都应注册到相应的网守
- 所有网守都应具有正确的拨号方案，以便他们可以决定呼叫的路由。
- 准入控制可配置为限制某些区域之间的呼叫号码。

由于前两点在“配置”部分中考虑，因此我们将重点介绍“背景信息”部分的[准入](#)控制。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 三台Cisco 2600路由器。
- Cisco IOS[®]软件版本12.2.8.5 ENTERPRISE PLUS/H323 MCM。

本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

规则

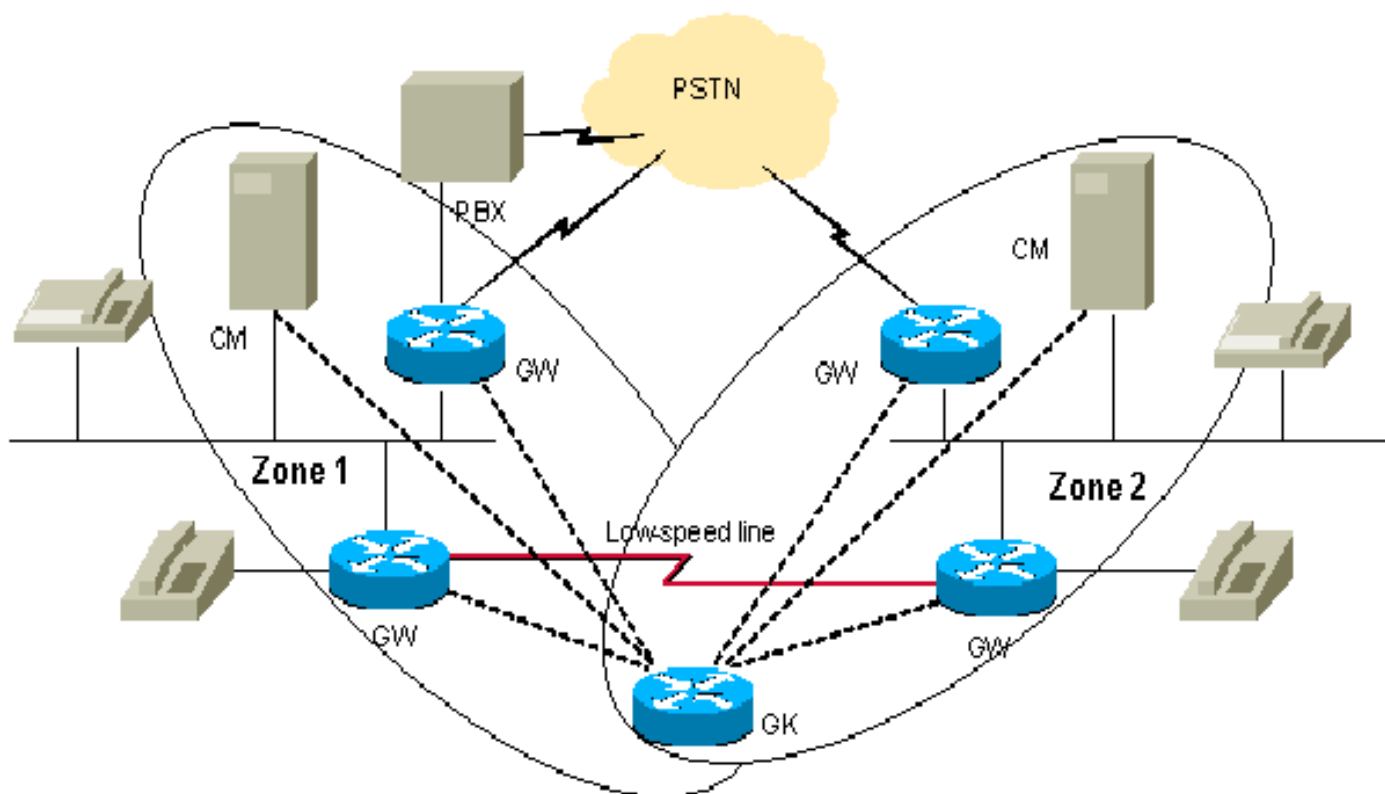
有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

背景信息

此配置示例研究具有两区域拓扑的VoIP网络，该拓扑由一个网守管理，两个区域中有三个网关。本文档旨在提供一个简单的准入控制配置示例，该配置将策略应用于区域之间和区域内的呼叫数。本文档包括有关已配置功能、设计指南以及基本验证和故障排除策略的技术背景信息。

注意：在此配置中，四台路由器位于同一LAN中。然而，在您的实际结构中，所有设备可以在您网络的不同部分中使用。

通常，实际网络中存在多个高优先级流量源。区分所有这些条件是一项复杂的任务，因为这些条件数量众多且易于忽略。然而，在现实生活中经常发生的几种常见情况值得考虑。当提供流量优先级的路由器本身不是此类流量的源时，准入控制就成为问题。典型的拓扑包括通过一对路由器提供的链路连接的两个站点的多个语音网关。另一种拓扑涉及两个站点的Cisco CallManager和IP电话，以及PSTN或PBX网关。在这两种情况下，我们都有来自链路两端的多个语音流量源。



有时，如果语音流量超出优先级队列的已配置带宽，则语音质量可能会出现问题。这是因为在上述设计中，发起流量的路由器和Cisco CallManager/ IP电话没有集中管理呼叫准入。在这种情况下，超过带宽的数据包将被丢弃。

有多种方法可避免此场景。最简单的解决方案是配置低延迟队列(LLQ)中的语音带宽，以接受来自所

有来源的最大呼叫数。如果没有语音流量，则会向数据流授予未使用的带宽。当链路的总带宽高于最大呼叫数所需的带宽时，可以执行此操作。

更明智的方法是对来自链路两端的语音流量的每个源应用限制。执行此操作时，来自所有站点的汇总带宽不会超过站点间链路实际带宽的75%。要应用这些限制，请在VoIP拨号对等体配置下使用**max-conn**命令。如果我们假设只有一个中心站点有Cisco CallManager，我们可以使用其功能来限制到分支站点的呼叫数，而无需CallManager。通过此方法，我们可以管理语音流量源能够超订用链路的情况。此方法的缺点是对授予源的带宽使用不灵活。此方法不允许某些网关发出额外呼叫，即使此时有可用的空闲带宽。

最灵活的方法是使用单独的实体进行集中呼叫准入控制：网守。网守帮助将两个站点与两个Cisco CallManager（或CallManager集群）绑定。

注意：使用网守并不总是意味着购买新的独立路由器。根据呼叫数和路由器负载，您可以在现有路由器中的一台路由器上配置网守，并将相应的Cisco IOS功能设置为Enterprise/PLUS/H323。这有助于管理小型分支机构，并仅允许中心站点中的专用网守。

网守方法应谨慎考虑，以免给路由器增加负载。此外，您应检查拓扑是否允许将网守置于这样的位置，以避免关键链路上的额外流量。

一般建议使用单独的思科路由器作为您网络中的专用网守，编号与您的拓扑相符。

请考虑上述拓扑。在这里，您可以将所有设备放入由单个网守管理的两个本地区域。这样，您可以在每个区域拥有大量呼叫，但会限制它们之间的呼叫数。在我们的测试示例中，我们将两个区域之间的带宽限制为一个呼叫，并允许其中一个呼叫中最多两个（数量较大）呼叫。

有关此的更多详细信息，请参阅[VoIP呼叫准入控制](#)。

要完成任务，请使用Cisco高性能网守中描述的[bandwidth（网守）命令](#)

bandwidth (gatekeeper) 命令

要指定H.323流量的最大聚合带宽，请使用**bandwidth** 网守配置命令。要禁用该功能，请使用此命令的no形式。

注意：此命令允许您通过来自区域的单个链路限制带宽。如果拓扑允许您通过多条路径从一个区域到另一个区域进行呼叫，则链路很容易超订用。请考虑以下拓扑：两个区域通过两条路径连接，每条路径仅允许一个呼叫。如果带宽受到一个呼叫的限制，则不会使用第二条路径。但是，如果带宽受两个呼叫的限制，其中一个链路可能超订用。因此，此命令可应用于只有一条路径通往所有其他区域的区域。“中心辐射型”拓扑是个例外。虽然集线器有多条路径，但它不会超订用链路，因为每条链路的分支处的呼叫数将受到限制。

bandwidth {interzone |总计 | session} {default | zone zone-name} bandwidth-size

no bandwidth {interzone |总计 | session} {default | zone zone-name} bandwidth-size

语法说明

下表对语法进行了说明：

语法	描述
----	----

interzone	指定从区域到任何其他区域的H.323流量的总带宽量。
总数	指定区域中允许的H.323流量的总带宽量。
会话	指定区域中会话允许的最大带宽。
默认	指定所有区域的默认值。
区域 zone-name	指定特定区域。命名特定区域。
带宽大小	最大带宽.对于 区间 和 总数 ，范围为1到10,000,000 kbps。对于 session ，范围为1到5,000 kbps。

默认设置

无

命令模式

网守配置

命令历史记录

下表对命令历史记录进行了说明：

版本	修改
12.1(3)XI	引入此指令。
12.1(5)XM	不使用zone gatekeeper命令， bandwidth 命令就可以识别。
12.2(2)T	此命令已集成到Cisco IOS软件版本12.2(2)T。
12.2(2)XB1	此命令在Cisco AS5850通用网关上实施。

使用指南

在以前的Cisco IOS软件版本中，bandwidth命令的功能是通过使用zone gatekeeper命令获得的。

Examples

以下示例将区域的最大带宽配置为5,000 kbps:

```
Router(config)# gatekeeper
Router(config-gk)# bandwidth total default 5000
```

相关命令

[bandwidth remote](#) — 指定此网守和任何其他网守之间H.323流量的总带宽。

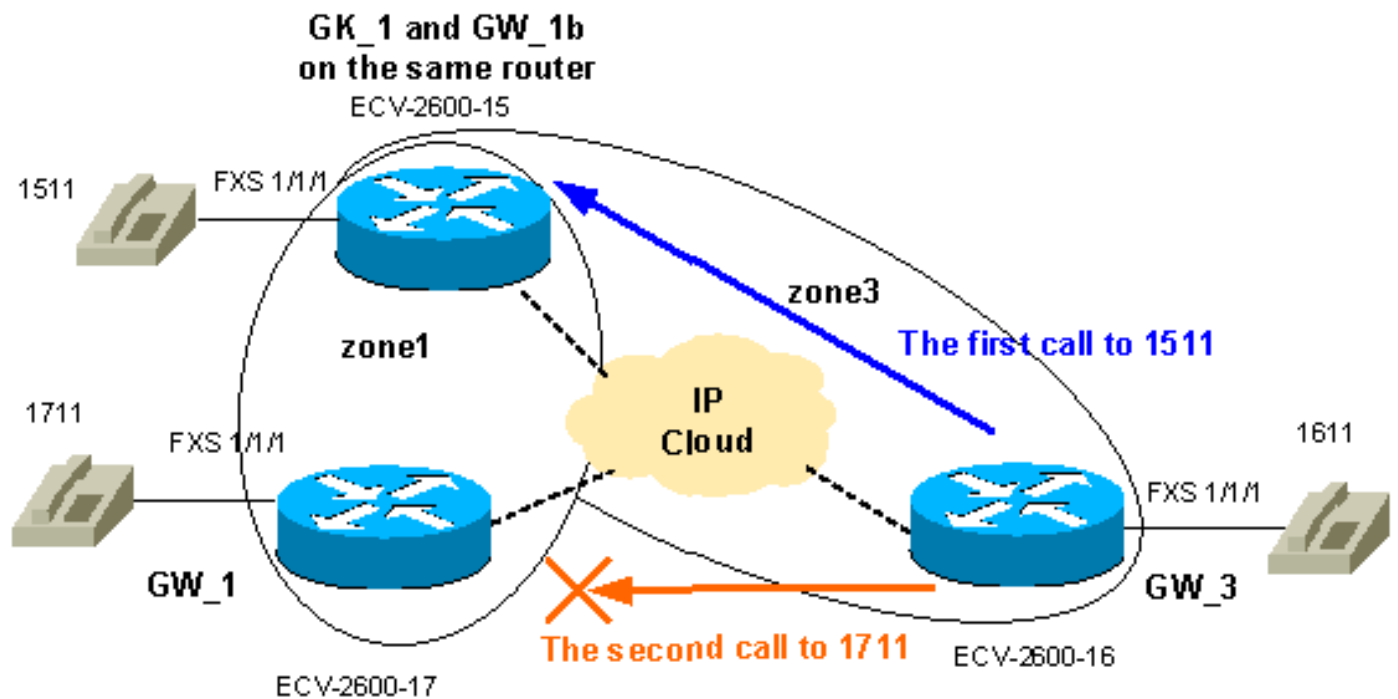
配置

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

目标是将区域1和区域3之间的可用带宽限制为一个呼叫，并允许区域1中更多的呼叫（本例中最多两个）。因此，我们将满足典型呼叫准入任务的一般要求。注册、准入和状态协议(RAS)消息在H225呼叫建立消息之前。然后H4245协商，它实际上定义了双方的能力。因此，呼叫的实际带宽是在呼叫准入阶段和RAS消息交换之后定义的。因此，网守将每个呼叫视为64kb的呼叫。因此，语音呼叫区域之间带宽限制的增加应以64kb的增量完成。

注意：GW_3配置在与网守相同的路由器上，以说明低端分支机构的这种可能性。

注意：验证网守和网关配置是排除GK-GW故障的重要部分。因此，为简化对配置的了解，删除了所有不相关的配置命令。

GW_1 ECV-2600-17

```
IOS (tm) C2600 Software (C2600-JSX-M), Version 12.2(7a),  
RELEASE SOFTWARE (fc1)  
!  
hostname ECV-2610-17  
!  
!
```

```
interface Ethernet0/0
 ip address 10.52.218.49 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id gk-zone1.test.com ipaddr
10.52.218.47 1718
 h323-gateway voip h323-id gw_1
 h323-gateway voip tech-prefix 1#
 h323-gateway voip bind srcaddr 10.52.218.49
!
voice-port 1/1/0
!
voice-port 1/1/1
!
!
dial-peer voice 1 voip
 destination-pattern ....
 session target ras
!
dial-peer voice 2 pots
 destination-pattern 1711
 port 1/1/1
 no register e164
!
gateway
!
end
```

GW_2 ECV-2600-16

```
!
hostname ECV-2610-16
!
!
interface Ethernet0/0
 ip address 10.52.218.48 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id gk-zone3.test.com ipaddr
10.52.218.47 1718
 h323-gateway voip h323-id gw_3
 h323-gateway voip tech-prefix 1#
 h323-gateway voip bind srcaddr 10.52.218.48
!
!
voice-port 1/1/0
!
voice-port 1/1/1
!
!
dial-peer voice 1 voip
 destination-pattern ....
 session target ras
!
dial-peer voice 2 pots
 destination-pattern 1611
 port 1/1/1
 no register e164
!
gateway
!
!
end
```

GK_1 ECV-2600-15

```

hostname ECV-2610-15
!
boot system tftp c2600-jsx-mz.122-7a.bin 10.52.218.2
!
interface Ethernet0/0
 ip address 10.52.218.47 255.255.255.0
 half-duplex
 h323-gateway voip interface
 h323-gateway voip id gk-zone1.test.com ipaddr
10.52.218.47 1718
 h323-gateway voip h323-id gw_1b
 h323-gateway voip tech-prefix 1#
 h323-gateway voip bind srcaddr 10.52.218.47
!
!
voice-port 1/1/0
!
voice-port 1/1/1
!
!
dial-peer voice 6 pots
 destination-pattern 1511
 port 1/1/1
 no register e164
!
!
dial-peer voice 5 voip
 destination-pattern ....
 session target ras
!
gateway
!
!
gatekeeper
 zone local gk-zone1.test.com test.com 10.52.218.47
 zone local gk-zone3.test.com test.com
 zone prefix gk-zone1.test.com 15.. gw-priority 10 gw_1b
 zone prefix gk-zone3.test.com 16.. gw-priority 10 gw_3
 zone prefix gk-zone1.test.com 17.. gw-priority 10 gw_1
 gw-type-prefix 1#* default-technology
bandwidth interzone zone gk-zone1.test.com 64
!--- Applies the restriction between gk-zone1, and all
!--- other zones to 64bk. That allows one call only.
bandwidth total zone gk-zone1.test.com 128
!--- Applies the restriction to the total number of
calls in zone1, !--- and allows two call in the gk-
zone1. no shutdown
!
end

ECV-2610-15#

```

验证

本部分所提供的信息可用于确认您的配置是否正常工作。

[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 gateway** - 显示网关注册状态。
- **show gatekeeper endpoints** — 列出注册到网守的所有网关。
- **show gatekeeper zone prefix** - 显示网守上配置的所有区域前缀。
- **show gatekeeper call** - 显示网守处理的所有活动呼叫。

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 h225 asn1** — 显示H225 (RAS和Q931呼叫建立) 消息。
- **debug cch323 h225** — 显示H225呼叫设置消息。

以下是一些有用的链接：

- [VoIP 呼叫故障排除和调试 - 基础知识](#)
- [VoIP Debug 命令](#)
- [Cisco IOS语音、视频和传真命令参考，版本12.2](#)

show 和 debug 输出示例

!--- First step is to check the gateway registrations. !--- On the first gateway:

```
ECV-2610-17#show gateway
Gateway gw_1 is registered to Gatekeeper gk-zone1.test.com
```

```
Alias list (CLI configured)
```

```
H323-ID gw_1
```

```
Alias list (last RCF)
```

```
H323-ID gw_1
```

```
H323 resource thresholding is Disabled
```

```
ECV-2610-17#
```

!--- And on the second Gateway: ECV-2610-16#show gateway

```
Gateway gw_3 is registered to Gatekeeper gk-zone3.test.com
```

```
Alias list (CLI configured)
```

```
H323-ID gw_3
```

```
Alias list (last RCF)
```

```
H323-ID gw_3
```

```
H323 resource thresholding is Disabled
```

```
ECV-2610-16#-----
```

!--- The same on the third Gateway: ECV-2610-15#show gateway

```
Gateway gw_1b is registered to Gatekeeper gk-zone1.test.com
```


Alias list (CLI configured)

H323-ID gw_1b

Alias list (last RCF)

H323-ID gw_1b

H323 resource thresholding is Disabled

ECV-2610-15#-----

!--- And on the corresponding Gatekeeper: ECV-2610-15#show gatekeeper end

GATEKEEPER ENDPOINT REGISTRATION

=====

CallSignalAddr	Port	RASignalAddr	Port	Zone Name	Type
10.52.218.47	1720	10.52.218.47	58841	gk-zone1.test.com	VOIP-GW
H323-ID: gw_1b					
10.52.218.48	1720	10.52.218.48	59067	gk-zone3.test.com	VOIP-GW
H323-ID: gw_3					
10.52.218.49	1720	10.52.218.49	52887	gk-zone1.test.com	VOIP-GW
H323-ID: gw_1					

Total number of active registrations = 3

ECV-2610-15#

!--- To check the dial plan on the Gatekeeper:

ECV-2610-15#show gatekeeper zone pre

ZONE PREFIX TABLE

=====

GK-NAME E164-PREFIX

- gk-zone1.test.com 15..
- gk-zone3.test.com 16..
- gk-zone1.test.com 17..

ECV-2610-15#

!--- All configured prefixes should be seen in the zone list. -----

----- !--- To check the zone status on the Gatekeeper: !-- The output shows one permitted interzone call.

ECV-2610-15#show gatekeeper zone st

GATEKEEPER ZONES

=====

GK name	Domain Name	RAS Address	PORT	FLAGS
gk-zone1.test.com	10.52.218.47	1719	LS	

!--- The output shows the bandwidth restrictions for this zone. gk-zone1.test.com

10.52.218.47 1719 LS

BANDWIDTH INFORMATION (kbps) :

Maximum total bandwidth : 128

Current total bandwidth : 64

Maximum interzone bandwidth : 64

Current interzone bandwidth : 64

Maximum session bandwidth :

Total number of concurrent calls : 1

SUBNET ATTRIBUTES :

All Other Subnets : (Enabled)

PROXY USAGE CONFIGURATION :

Inbound Calls from all other zones :

to terminals in local zone gk-zone1.test.com : use proxy

to gateways in local zone gk-zone1.test.com : do not use proxy

to MCUs in local zone gk-zone1.test.com : do not use proxy

Outbound Calls to all other zones :

from terminals in local zone gk-zone1.test.com : use proxy

from gateways in local zone gk-zone1.test.com : do not use proxy
from MCUs in local zone gk-zone1.test.com : do not use proxy

!--- There are no bandwidth restrictions for this zone. gk-zone3.test.com 10.52.218.47 1719
LS

BANDWIDTH INFORMATION (kbps) :

Maximum total bandwidth :
Current total bandwidth : 64

Maximum interzone bandwidth :
Current interzone bandwidth : 64

Maximum session bandwidth :

Total number of concurrent calls : 1

SUBNET ATTRIBUTES :

All Other Subnets : (Enabled)

PROXY USAGE CONFIGURATION :

Inbound Calls from all other zones :

to terminals in local zone gk-zone3.test.com : use proxy
to gateways in local zone gk-zone3.test.com : do not use proxy
to MCUs in local zone gk-zone3.test.com : do not use proxy

Outbound Calls to all other zones :

from terminals in local zone gk-zone3.test.com : use proxy
from gateways in local zone gk-zone3.test.com : do not use proxy
from MCUs in local zone gk-zone3.test.com : do not use proxy

ECV-2610-15#

ECV-2610-15#**show gatekeeper call**
Total number of active calls = 1.

GATEKEEPER CALL INFO
=====

LocalCallID	Age(secs)	BW			
5-0	1	64 (Kbps)			
Endpt(s): Alias	E.164Addr	CallSignalAddr	Port	RASSignalAddr	Port
src EP: gw_3	1611	10.52.218.48	1720	10.52.218.48	59067
dst EP: gw_1b	1511	10.52.218.47	1720	10.52.218.47	58841

ECV-2610-15#

!--- The output shows that we reach maximum number of calls for gk-zone1. ECV-2610-15# ECV-2610-15#
show gatekeeper zone st

GATEKEEPER ZONES
=====

GK name	Domain Name	RAS Address	PORT	FLAGS
gk-zone1.test	test.com	10.52.218.47	1719	LS

BANDWIDTH INFORMATION (kbps) :

Maximum total bandwidth : 128
Current total bandwidth : 128

Maximum interzone bandwidth : 64
Current interzone bandwidth : 64

Maximum session bandwidth :

Total number of concurrent calls : 2

SUBNET ATTRIBUTES :

All Other Subnets : (Enabled)

PROXY USAGE CONFIGURATION :

Inbound Calls from all other zones :

to terminals in local zone gk-zone1.test.com : use proxy
to gateways in local zone gk-zone1.test.com : do not use proxy
to MCUs in local zone gk-zone1.test.com : do not use proxy

Outbound Calls to all other zones :

from terminals in local zone gk-zone1.test.com : use proxy
from gateways in local zone gk-zone1.test.com : do not use proxy
from MCUs in local zone gk-zone1.test.com : do not use proxy

gk-zone3.tes test.com 10.52.218.47 1719 LS

BANDWIDTH INFORMATION (kbps) :

Maximum total bandwidth :

Current total bandwidth : 64

Maximum interzone bandwidth :

Current interzone bandwidth : 64

Maximum session bandwidth :

Total number of concurrent calls : 1

SUBNET ATTRIBUTES :

All Other Subnets : (Enabled)

PROXY USAGE CONFIGURATION :

Inbound Calls from all other zones :

to terminals in local zone gk-zone3.test.com : use proxy

to gateways in local zone gk-zone3.test.com : do not use proxy

to MCUs in local zone gk-zone3.test.com : do not use proxy

Outbound Calls to all other zones :

from terminals in local zone gk-zone3.test.com : use proxy

from gateways in local zone gk-zone3.test.com : do not use proxy

from MCUs in local zone gk-zone3.test.com : do not use proxy

gk-zone2.tes test.com 10.52.218.46 1719 RS

ECV-2610-15#

ECV-2610-15#show gatekeeper call

Total number of active calls = 2.

GATEKEEPER CALL INFO

=====

LocalCallID	Age(secs)	BW			
20-33504	49	64 (kbps)			
Endpt(s): Alias	E.164Addr	CallSignalAddr	Port	RASSignalAddr	Port
src EP: gw_3	1611	10.52.218.48	1720	10.52.218.48	49762
dst EP: gw_1b	1510	10.52.218.47	1720	10.52.218.47	52344
LocalCallID	Age(secs)	BW			
21-22720 36		64 (Kbps)			
Endpt(s): Alias	E.164Addr	CallSignalAddr	Port	RASSignalAddr	Port
src EP: gw_1	1711	10.52.218.49	1720	10.52.218.49	54114
dst EP: gw_1b	1511	10.52.218.47	1720	10.52.218.47	52344

ECV-2610-15#

!--- The conversation between the gateway and gatekeeper consists of !--- an exchange of RAS messages. !--- We start call to 1511 from GW_3. ECV-2610-16#deb h225 asn1

H.225 ASN1 Messages debugging is on

ECV-2610-16#

*Mar 1 14:22:20.972: RAS OUTGOING PDU ::=

value RasMessage ::= admissionRequest :

```
{
  requestSeqNum 970
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"8262B76400000019"}
  destinationInfo
  {
    e164 : "1511"
  }
  srcInfo
  {
    h323-ID : {"gw_3"}
  }
}
```

```
bandWidth 640
callReferenceValue 23
nonStandardData
{
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
  }
  data '000000'H
  }
  conferenceID '00000000000000000000000000000000'H
  activeMC FALSE
  answerCall FALSE
  canMapAlias TRUE
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  willSupplyUUIEs FALSE
  }
}
```

```
*Mar 1 14:22:20.992: RAS OUTGOING ENCODE BUFFER ::= 27 8803C900 F0003800 32003600
32004200 37003600 34003000 30003000 30003000 30003100 39010180 48440140 03006700
77005F00 33400280 001740B5 00001203 00000000 00000000 00000000 00000000 00000004
E0200180 11000000 00000000 00000000 00000000 00000100
```

```
*Mar 1 14:22:21.008:
```

```
*Mar 1 14:22:21.073: RAS INCOMING ENCODE BUFFER ::= 2B 0003C940 0280000A 34DA2F06
B800EF14 00C00100 020000
```

```
*Mar 1 14:22:21.077:
```

```
*Mar 1 14:22:21.081: RAS INCOMING PDU ::=
```

```
!--- The GW_3 gets permission to proceed with that call. value RasMessage ::= admissionConfirm :
```

```
{
  requestSeqNum 970
  bandWidth 640
  callModel direct : NULL
  destCallSignalAddress ipAddress :
{
  ip '0A34DA2F'H
  port 1720
  }
  irrFrequency 240
  willRespondToIRR FALSE
  uuiesRequested
{
  setup FALSE
  callProceeding FALSE
  connect FALSE
  alerting FALSE
  information FALSE
  releaseComplete FALSE
  facility FALSE
  progress FALSE
  empty FALSE
  }
}
```

```
!--- The Call setup message from GW_3 follows. *Mar 1 14:22:21.105: H225.0 OUTGOING PDU ::=
```

```
value H323_UserInformation ::=
```

```
{
  h323-uu-pdu
```

```

{
  h323-message-body setup :
  {
    protocolIdentifier { 0 0 8 2250 0 2 }
    sourceAddress
  {
    h323-ID : {"gw_3"}
  }
    sourceInfo
  {
    gateway
  {
    protocol
  {
    voice :
  {
    supportedPrefixes
  {
    {
    prefix e164 : "1#"
    }
    }
    }
    }
    }
    mc FALSE
    undefinedNode FALSE
  }
    activeMC FALSE
    conferenceID '00000000000000000000000000000000'H
    conferenceGoal create : NULL
    callType pointToPoint : NULL
    sourceCallSignalAddress ipAddress :
  {
    ip '0A34DA30'H
    port 11018
  }
    callIdentifier
  {
    guid '00000000000000000000000000000000'H
  }
    fastStart
  {
    '0000000D4001800A040001000A34DA3041C5'H,
    '400000060401004D40018011140001000A34DA30...'H
  }
    mediaWaitForConnect FALSE
    canOverlapSend FALSE
  }
    h245Tunneling FALSE
  }
}

```

```

*Mar 1 14:22:21.141: H225.0 OUTGOING ENCODE BUFFER::= 20
  A0060008 914A0002 01400300
67007700 5F003308 80013C05 04010020 40000000 00000000 00000000 00000000 00000045
1C07000A 34DA302B 0A110000 00000000 00000000 00000000 00000032 02120000 000D4001
800A0400 01000A34 DA3041C5 1D400000 06040100 4D400180 11140001 000A34DA 3041C400
0A34DA30 41C50100 01000680 0100
*Mar 1 14:22:21.161:
*Mar 1 14:22:21.417: H225.0 INCOMING ENCODE BUFFER::= 21
  80060008 914A0002 00048811
00000000 00000000 00000000 00000000 00390219 0000000D 40018011 14000100 0A34DA2F

```

486E000A 34DA2F48 6F1D4000 00060401 004D4001 80111400 01000A34 DA3041C4 000A34DA
2F486F06 800100

*Mar 1 14:22:21.429:

*Mar 1 14:22:21.429: **H225.0 INCOMING PDU** ::=

```
!--- The GW_3 gets Call Proceeding from GW_1b. value H323_UserInformation ::= { h323-uu-pdu {
h323-message-body callProceeding :
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  destinationInfo
{
  mc FALSE
  undefinedNode FALSE
  }
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  fastStart
{
  '0000000D40018011140001000A34DA2F486E000A...'H,
  '400000060401004D40018011140001000A34DA30...'H
  }
  }
  h245Tunneling FALSE
  }
  }
```

*Mar 1 14:22:21.617: H225.0 INCOMING ENCODE BUFFER::= 28

001A0006 0008914A 00020000
00000000 00000000 00000000 00000000 06A00100 120140B5 0000120B 60011000 011E041E
028188

*Mar 1 14:22:21.626:

*Mar 1 14:22:21.626: **H225.0 INCOMING PDU** ::=

```
!--- The GW_3 gets Call Progress from GW_1b. value H323_UserInformation ::= { h323-uu-pdu {
h323-message-body progress :
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  destinationInfo
{
  mc FALSE
  undefinedNode FALSE
  }
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  }
  h245Tunneling FALSE
  nonStandardControl
{
  {
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
  }
  data '60011000011E041E028188'
  }
  }
  }
```

```

*Mar 1 14:22:21.642: H225 NONSTD INCOMING ENCODE BUFFER ::= 60
01100001 1E041E02 8188
*Mar 1 14:22:21.646:
*Mar 1 14:22:21.646: H225 NONSTD INCOMING PDU ::=
!--- The GW_3 get some facility messages from GW_1b. value H323_UU_NonStdInfo ::= { version 16
protoParam qsigNonStdInfo :
{
 iei 30
rawMesg '1E028188'H
}
}

*Mar 1 14:22:22.831: %SYS-3-MGDTIMER: Running timer, init, timer = 81F1AC08.
-Process= "Virtual Exec", ipl= 0, pid= 61
-Traceback= 803250A4 80325214 80325318 80EB12C0
80EB17DC 802A65F0 802B5080 8033D818
*Mar 1 14:22:22.835: H225 NONSTD OUTGOING PDU ::=

value ARQnonStandardInfo ::=
{
  sourceAlias
{
}
  sourceExtAlias
{
}
}

*Mar 1 14:22:22.839: H225 NONSTD OUTGOING ENCODE
BUFFER ::= 00 0000
*Mar 1 14:22:22.839:
*Mar 1 14:22:22.839: RAS OUTGOING PDU ::=
!--- The GW_3 starts the second Call to 1711 now we send RAS message to GK. value RasMessage ::=
admissionRequest :
{
  requestSeqNum 971
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"8262B76400000019"}
  destinationInfo
{
  e164 : "1711"
}
  srcInfo
{
  h323-ID : {"gw_3"}
}
  bandwidth 640
  callReferenceValue 24
  nonStandardData
{
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
}
}
}

```

```
data '000000'H
}
conferenceID '00000000000000000000000000000000'H
activeMC FALSE
answerCall FALSE
canMapAlias TRUE
callIdentifier
{
guid '00000000000000000000000000000000'H
}
willSupplyUUIEs FALSE
}
```

```
*Mar 1 14:22:22.860: RAS OUTGOING ENCODE BUFFER ::= 27 8803CA00 F0003800 32003600
32004200 37003600 34003000 30003000 30003000 30003100 39010180 4A440140 03006700
77005F00 33400280 001840B5 00001203 00000000 00000000 00000000 00000000 00000004
E0200180 11000000 00000000 00000000 00000000 00000100
```

```
*Mar 1 14:22:22.876:
```

```
*Mar 1 14:22:22.940: RAS INCOMING ENCODE BUFFER ::= 2B 0003CA40 0280000A 34DA3106
B800EF14 00C00100 020000
```

```
*Mar 1 14:22:22.944:
```

```
*Mar 1 14:22:22.944: RAS INCOMING PDU ::=
```

```
!--- The GW_3 gets permission to proceed as there are no restrictions on zone3. value RasMessage
::= admissionConfirm :
```

```
{
requestSeqNum 971
bandWidth 640
callModel direct : NULL
destCallSignalAddress ipAddress :
{
ip '0A34DA31'H
port 1720
}
irrFrequency 240
willRespondToIRR FALSE
uuiesRequested
{
setup FALSE
callProceeding FALSE
connect FALSE
alerting FALSE
information FALSE
releaseComplete FALSE
facility FALSE
progress FALSE
empty FALSE
}
}
```

```
*Mar 1 14:22:22.972: H225.0 OUTGOING PDU ::=
```

```
!--- The GW_3 sends setup message to GW_1. value H323_UserInformation ::= { h323-uu-pdu { h323-
message-body setup :
```

```
{
protocolIdentifier { 0 0 8 2250 0 2 }
sourceAddress
{
h323-ID : {"gw_3"}
}
sourceInfo
{
```



```

gateway
{
  protocol
  {
    voice :
    {
      supportedPrefixes
      {
        {
          prefix e164 : "1#"
        }
      }
    }
  }
  mc FALSE
  undefinedNode FALSE
}
activeMC FALSE
conferenceID '00000000000000000000000000000000'H
conferenceGoal create : NULL
callType pointToPoint : NULL
sourceCallSignalAddress ipAddress :
{
  ip '0A34DA30'H
  port 11019
}
callIdentifier
{
  guid '00000000000000000000000000000000'H
}
fastStart
{
  '0000000D4001800A040001000A34DA30402F'H,
  '400000060401004D40018011140001000A34DA30...'H
}
mediaWaitForConnect FALSE
canOverlapSend FALSE
}
h245Tunneling FALSE
}
}

```

```

*Mar 1 14:22:23.008: H225.0 OUTGOING ENCODE BUFFER::= 20
A0060008 914A0002 01400300

```

```

67007700 5F003308 80013C05 04010020 40000000 00000000 00000000 00000000 00000045
1C07000A 34DA302B 0B110000 00000000 00000000 00000000 00000032 02120000 000D4001
800A0400 01000A34 DA30402F 1D400000 06040100 4D400180 11140001 000A34DA 30402E00
0A34DA30 402F0100 01000680 0100

```

```

*Mar 1 14:22:23.028:

```

```

*Mar 1 14:22:23.220: H225.0 INCOMING ENCODE BUFFER::= 25
80060008 914A0002 01110000
00000000 00000000 00000000 00000006 800100

```

```

*Mar 1 14:22:23.224:

```

```

*Mar 1 14:22:23.224: H225.0 INCOMING PDU ::=

```

```

!--- The GW_1 replies with Release Complete message after asking GK !--- for permission to
accept that call. !--- When the permission is denied, we set bandwidth limit. value

```

```

H323_UserInformation ::= { h323-uu-pdu { h323-message-body releaseComplete :

```

```

{
  protocolIdentifier { 0 0 8 2250 0 2 }
  callIdentifier
}

```

```
guid '00000000000000000000000000000000'H
}
}
h245Tunneling FALSE
}
}
```

```
*Mar 1 14:22:23.236: RAS OUTGOING PDU ::=
!--- The GW_3 notifies GK that the call does not exist anymore. value RasMessage ::=
disengageRequest :
```

```
{
  requestSeqNum 972
  endpointIdentifier {"8262B76400000019"}
  conferenceID '00000000000000000000000000000000'H
  callReferenceValue 24
  disengageReason normalDrop : NULL
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  answeredCall FALSE
}
```

```
*Mar 1 14:22:23.248: RAS OUTGOING ENCODE BUFFER ::= 3E 03CB1E00 38003200 36003200
42003700 36003400 30003000 30003000 30003000 31003900 00000000 00000000 00000000
00000000 18216111 00000000 00000000 00000000 00000000 000100
```

```
*Mar 1 14:22:23.256:
```

```
*Mar 1 14:22:23.288: RAS INCOMING ENCODE BUFFER ::= 40
03CB
```

```
*Mar 1 14:22:23.288:
```

```
*Mar 1 14:22:23.288: RAS INCOMING PDU ::=
!--- The GK confirms that message. value RasMessage ::= disengageConfirm :
```

```
{
  requestSeqNum 972
}
```

```
ECV-2610-16#u all
```

```
All possible debugging has been turned off
```

```
ECV-2610-16#
```

```
-----
!--- The incoming RAS message to the GK from GW_3. ECV-2610-15#debug h225 asn1
```

```
H.225 ASN1 Messages debugging is on
```

```
ECV-2610-15#
```

```
*Mar 11 21:54:28.313: RAS INCOMING PDU ::=
```

```
value RasMessage ::= admissionRequest :
```

```
{
  requestSeqNum 970
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"8262B76400000019"}
  destinationInfo
{
  e164 : "1511"
  }
  srcInfo
```

```
{
h323-ID : {"gw_3"}
}
bandWidth 640
callReferenceValue 23
nonStandardData
{
nonStandardIdentifier h221NonStandard :
{
t35CountryCode 181
t35Extension 0
manufacturerCode 18
}
data '000000'H
}
conferenceID '00000000000000000000000000000000'H
activeMC FALSE
answerCall FALSE
canMapAlias TRUE
callIdentifier
{
guid '00000000000000000000000000000000'H
}
willSupplyUUIEs FALSE
}
```

```
*Mar 11 21:54:28.334: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 0000
*Mar 11 21:54:28.334:
*Mar 11 21:54:28.334: H225 NONSTD INCOMING PDU ::=
```

```
value ARQnonStandardInfo ::=
{
sourceAlias
{
}
sourceExtAlias
{
}
}
```

```
!--- The outgoing RAS message fro GK to GW_3 with permission to start call. *Mar 11
21:54:28.338: RAS OUTGOING PDU ::=
```

```
value RasMessage ::= admissionConfirm :
{
requestSeqNum 970
bandWidth 640
callModel direct : NULL
destCallSignalAddress ipAddress :
{
ip '0A34DA2F'H
port 1720
}
irrFrequency 240
willRespondToIRR FALSE
uuiesRequested
{
setup FALSE
callProceeding FALSE
connect FALSE
alerting FALSE
information FALSE
}
```

```
releaseComplete FALSE
facility FALSE
progress FALSE
empty FALSE
}
}
```

```
*Mar 11 21:54:28.350: RAS OUTGOING ENCODE BUFFER ::= 2B 0003C940 0280000A 34DA2F06
B800EF14 00C00100 020000
```

```
*Mar 11 21:54:28.354:
```

```
*Mar 11 21:54:28.446: H225.0 INCOMING ENCODE BUFFER ::= 20
A0060008 914A0002 01400300
```

```
67007700 5F003308 80013C05 04010020 40000000 00000000 00000000 00000000 00000045
1C07000A 34DA302B 0A110000 00000000 00000000 00000000 00000032 02120000 000D4001
800A0400 01000A34 DA3041C5 1D400000 06040100 4D400180 11140001 000A34DA 3041C400
0A34DA30 41C50100 01000680 0100
```

```
*Mar 11 21:54:28.466:
```

```
*Mar 11 21:54:28.470: H225.0 INCOMING PDU ::=
```

```
!--- The incoming H323(Q931) message from GW_3 to GW_1b on the same router as GK. value
```

```
H323_UserInformation ::= { h323-uu-pdu { h323-message-body setup :
```

```
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  sourceAddress
  {
    h323-ID : {"gw_3"}
  }
  sourceInfo
  {
    gateway
  {
    protocol
  {
    voice :
  {
    supportedPrefixes
  {
    {
    prefix e164 : "1#"
    }
    }
    }
    }
    }
    mc FALSE
    undefinedNode FALSE
  }
  activeMC FALSE
  conferenceID '00000000000000000000000000000000'H
  conferenceGoal create : NULL
  callType pointToPoint : NULL
  sourceCallSignalAddress ipAddress :
  {
    ip '0A34DA30'H
    port 11018
  }
  callIdentifier
  {
    guid '00000000000000000000000000000000'H
  }
  fastStart
  {
    '0000000D4001800A040001000A34DA3041C5'H,
```

```
'400000060401004D40018011140001000A34DA30...'H
}
mediaWaitForConnect FALSE
canOverlapSend FALSE
}
h245Tunneling FALSE
}
}
```

```
*Mar 11 21:54:28.514: H225 NONSTD OUTGOING PDU ::=
value ARQnonStandardInfo ::=
{
  sourceAlias
{
  }
  sourceExtAlias
{
  }
}
```

```
*Mar 11 21:54:28.518: H225 NONSTD OUTGOING ENCODE BUFFER ::= 00 0000
```

```
*Mar 11 21:54:28.518:
```

```
*Mar 11 21:54:28.518: RAS OUTGOING PDU ::=
```

```
!--- The GW_1b asks GK if it can accept call from GW_3. value RasMessage ::= admissionRequest :
{
  requestSeqNum 1347
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"82717F5C0000001B"}
  destinationInfo
{
  e164 : "1511"
  }
  srcInfo
{
  h323-ID : {"gw_3"}
  }
  srcCallSignalAddress ipAddress :
{
  ip '0A34DA30'H
  port 11018
  }
  bandwidth 640
  callReferenceValue 29
  nonStandardData
{
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
  }
  data '000000'H
  }
  conferenceID '00000000000000000000000000000000'H
  activeMC FALSE
  answerCall TRUE
  canMapAlias TRUE
  callIdentifier
{
  guid '00000000000000000000000000000000'H
```


*Mar 11 21:54:28.606: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 0000

*Mar 11 21:54:28.606:

*Mar 11 21:54:28.606: H225 NONSTD INCOMING PDU ::=

value ARQnonStandardInfo ::=

```
{
  sourceAlias
{
  }
  sourceExtAlias
{
  }
}
```

*Mar 11 21:54:28.610: **RAS OUTGOING PDU** ::=

!--- The GK grants the permission to GW_1b. !--- This is a message in the GK debug outgoing

value RasMessage ::= **admissionConfirm** :

```
{
  requestSeqNum 1347
  bandwidth 640
  callModel direct : NULL
  destCallSignalAddress ipAddress :
{
  ip '0A34DA2F'H
  port 1720
  }
  irrFrequency 240
  willRespondToIRR FALSE
  uuiesRequested
{
  setup FALSE
  callProceeding FALSE
  connect FALSE
  alerting FALSE
  information FALSE
  releaseComplete FALSE
  facility FALSE
  progress FALSE
  empty FALSE
  }
}
```

*Mar 11 21:54:28.622: RAS OUTGOING ENCODE BUFFER ::= 2B 00054240 0280000A 34DA2F06
B800EF14 00C00100 020000

*Mar 11 21:54:28.626:

*Mar 11 21:54:28.630: RAS INCOMING ENCODE BUFFER ::= 2B 00054240 0280000A 34DA2F06
B800EF14 00C00100 020000

*Mar 11 21:54:28.634:

*Mar 11 21:54:28.634: **RAS INCOMING PDU** ::=

!--- The GK grants the permission to GW_1b. !--- This is a message in the GW_1b debug incoming.

value RasMessage ::= **admissionConfirm** :

```
{
  requestSeqNum 1347
  bandwidth 640
  callModel direct : NULL
  destCallSignalAddress ipAddress :
{
  ip '0A34DA2F'H
  port 1720
  }
  irrFrequency 240
```

```
willRespondToIRR FALSE
uuiesRequested
{
  setup FALSE
  callProceeding FALSE
  connect FALSE
  alerting FALSE
  information FALSE
  releaseComplete FALSE
  facility FALSE
  progress FALSE
  empty FALSE
}
}
```

```
*Mar 11 21:54:28.654: %SYS-3-MGDTIMER: Timer has parent, timer link, timer =
820AE990.
```

```
-Process= "CC-API_VCM", ipl= 6, pid= 93
```

```
-Traceback= 80325850 8032A720 80E74850 8033D818
```

```
*Mar 11 21:54:28.666: H225.0 OUTGOING PDU ::=
```

```
!--- The GW_1b replies to GW_3 setup message. value H323_UserInformation ::= { h323-uu-pdu {
h323-message-body callProceeding :
```

```
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  destinationInfo
{
  mc FALSE
  undefinedNode FALSE
}
  callIdentifier
{
  guid '00000000000000000000000000000000'H
}
  fastStart
{
  '0000000D40018011140001000A34DA2F486E000A...'H,
  '400000060401004D40018011140001000A34DA30...'H
}
}
  h245Tunneling FALSE
}
}
```

```
*Mar 11 21:54:28.682: H225.0 OUTGOING ENCODE BUFFER::= 21 80060008 914A0002 00048811
00000000 00000000 00000000 00000000 00390219 0000000D 40018011 14000100 0A34DA2F
486E000A 34DA2F48 6F1D4000 00060401 004D4001 80111400 01000A34 DA3041C4 000A34DA
2F486F06 800100
```

```
*Mar 11 21:54:28.694:
```

```
*Mar 11 21:54:28.710: H225 NONSTD OUTGOING PDU ::=
```

```
value H323_UU_NonStdInfo ::=
{
  version 16
  protoParam qsigNonStdInfo :
{
  iei 30
  rawMesg '1E028188'H
}
}
```


*Mar 11 21:54:28.714: H225 NONSTD OUTGOING ENCODE BUFFER::= 60 01100001 1E041E02 8188

*Mar 11 21:54:28.714:

*Mar 11 21:54:28.714: **H225.0 OUTGOING PDU** ::=

!--- The GW_1b replies to GW_3 setup message and sends second message. value

H323_UserInformation ::= { h323-uu-pdu { h323-message-body **progress** :

```
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  destinationInfo
{
  mc FALSE
  undefinedNode FALSE
}
  callIdentifier
{
  guid '00000000000000000000000000000000'H
}
}
  h245Tunneling FALSE
  nonStandardControl
{
  {
    nonStandardIdentifier h221NonStandard :
  {
    t35CountryCode 181
    t35Extension 0
    manufacturerCode 18
  }
  data '60011000011E041E028188'H
}
}
}
```

*Mar 11 21:54:28.734: H225.0 OUTGOING ENCODE BUFFER::= 28 001A0006 0008914A 00020000

00000000 00000000 00000000 00000000 06A00100 120140B5 0000120B 60011000 011E041E

028188

*Mar 11 21:54:28.742:

*Mar 11 21:54:30.161: RAS INCOMING ENCODE BUFFER::= 27 8803CA00 F0003800 32003600

32004200 37003600 34003000 30003000 30003000 30003100 39010180 4A440140 03006700

77005F00 33400280 001840B5 00001203 00000000 00000000 00000000 00000000 00000004

E0200180 11000000 00000000 00000000 00000000 00000100

*Mar 11 21:54:30.177:

*Mar 11 21:54:30.181: **RAS INCOMING PDU** ::=

!--- The GK gets ARQ from GW_3 for the second call. value RasMessage ::= **admissionRequest**:

```
{
  requestSeqNum 971
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"8262B76400000019"}
  destinationInfo
{
  e164 : "1711"
}
  srcInfo
{
  h323-ID : {"gw_3"}
}
  bandwidth 640
  callReferenceValue 24
  nonStandardData
{
```

```
nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
}
data '000000'H
}
conferenceID '00000000000000000000000000000000'H
activeMC FALSE
answerCall FALSE
canMapAlias TRUE
callIdentifier
{
  guid '00000000000000000000000000000000'H
}
willSupplyUUIEs FALSE
}
```

```
*Mar 11 21:54:30.197: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 0000
*Mar 11 21:54:30.201:
*Mar 11 21:54:30.201: H225 NONSTD INCOMING PDU ::=
```

```
value ARQnonStandardInfo ::=
{
  sourceAlias
{
}
  sourceExtAlias
{
}
}
```

```
*Mar 11 21:54:30.205: RAS OUTGOING PDU ::=
!--- The GK grants permission to GW_3, as there are no restrictions for zone3. value RasMessage
::= admissionConfirm :
{
  requestSeqNum 971
  bandwidth 640
  callModel direct : NULL
  destCallSignalAddress ipAddress :
{
  ip '0A34DA31'H
!--- The hexadecimal number is 10.52.218.49, IP of GW_1. port 1720 } irrFrequency 240
willRespondToIRR FALSE uuiEsRequested { setup FALSE callProceeding FALSE connect FALSE alerting
FALSE information FALSE releaseComplete FALSE facility FALSE progress FALSE empty FALSE } } *Mar
11 21:54:30.217: RAS OUTGOING ENCODE BUFFER ::= 2B 0003CA40 0280000A 34DA3106 B800EF14 00C00100
020000 *Mar 11 21:54:30.221: *Mar 11 21:54:30.429: RAS INCOMING ENCODE BUFFER ::= 27 98045F00
F0003800 32003300 38003600 30004400 34003000 30003000 30003000 30003100 41010180 4A440140
03006700 77005F00 33000A34 DA302B0B 40028000 2840B500 00120300 00000000 00000000 00000000
00000000 000044E0 20018011 00000000 00000000 00000000 00000000 000100 *Mar 11 21:54:30.445: *Mar
11 21:54:30.445: RAS INCOMING PDU ::=
!--- The incoming request from GW_1 asks for permission to accept call from GW_3. value
RasMessage ::= admissionRequest :
{
  requestSeqNum 1120
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"823860D40000001A"}
  destinationInfo
```

```
{
  e164 : "1711"
}
srcInfo
{
  h323-ID : {"gw_3"}
}
srcCallSignalAddress ipAddress :
{
  ip '0A34DA30'H
  port 11019
}
bandWidth 640
callReferenceValue 40
nonStandardData
{
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
}
  data '000000'H
}
  conferenceID '00000000000000000000000000000000'H
  activeMC FALSE
  answerCall TRUE
  canMapAlias TRUE
  callIdentifier
{
  guid '00000000000000000000000000000000'H
}
  willSupplyUUIEs FALSE
}
```

*Mar 11 21:54:30.469: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 0000

*Mar 11 21:54:30.469:

*Mar 11 21:54:30.469: H225 NONSTD INCOMING PDU ::=

value ARQnonStandardInfo ::=

```
{
  sourceAlias
{
}
  sourceExtAlias
{
}
}
```

!--- The GK does not allow the call to come through, and replies with ARJ. *Mar 11
21:54:30.473: **RAS OUTGOING PDU** ::=

value RasMessage ::= **admissionReject** :

```
{
  requestSeqNum 1120
  rejectReason requestDenied : NULL
}
```

*Mar 11 21:54:30.477: RAS OUTGOING ENCODE BUFFER ::= 2C 045F20

*Mar 11 21:54:30.477:

*Mar 11 21:54:30.541: RAS INCOMING ENCODE BUFFER ::= 3E 03CB1E00 38003200 36003200

42003700 36003400 30003000 30003000 30003000 31003900 00000000 00000000 00000000
00000000 18216111 00000000 00000000 00000000 00000000 000100

*Mar 11 21:54:30.553:

*Mar 11 21:54:30.557: **RAS INCOMING PDU** ::=

!-- The GW_3 notifies GK that call does not exist anymore. value RasMessage ::=

disengageRequest :

```
{
  requestSeqNum 972
  endpointIdentifier {"8262B76400000019"}
  conferenceID '00000000000000000000000000000000'H
  callReferenceValue 24
  disengageReason normalDrop : NULL
  callIdentifier
{
  guid '00000000000000000000000000000000'H
}
  answeredCall FALSE
}
```

*Mar 11 21:54:30.565: RAS OUTGOING PDU ::=

!-- The GK confirms the message from GW_3

value RasMessage ::= disengageConfirm :

```
{
  requestSeqNum 972
}
```

!-- The call setup from GW_1 perspective. ECV-2610-17#**deb h225 asn1**

H.225 ASN1 Messages debugging is on

ECV-2610-17#

*Mar 2 22:55:40: **H225.0 INCOMING ENCODE BUFFER**::= 20 A0060008 914A0002 01400300
67007700 5F003308 80013C05 04010020 40000000 00000000 00000000 00000000 00000045
1C07000A 34DA302B 0B110000 00000000 00000000 00000000 00000032 02120000 000D4001
800A0400 01000A34 DA30402F 1D400000 06040100 4D400180 11140001 000A34DA 30402E00
0A34DA30 402F0100 01000680 0100

*Mar 2 22:55:40:

*Mar 2 22:55:40: **H225.0 INCOMING PDU** ::=

!-- The GW_1 gets the H323 (Q931) setup message from GW_3. value H323_UserInformation ::= {

h323-uu-pdu { h323-message-body **setup** :

```
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  sourceAddress
```

```
{
  h323-ID : {"gw_3"}
}
```

sourceInfo

```
{
  gateway
```

```
{
  protocol
```

```
{
  voice :
```

```
{
  supportedPrefixes
```

```
{
  {
  prefix e164 : "1#"
}
}
}
}
```

```
}
mc FALSE
undefinedNode FALSE
}
activeMC FALSE
conferenceID '00000000000000000000000000000000'H
conferenceGoal create : NULL
callType pointToPoint : NULL
sourceCallSignalAddress ipAddress :
{
  ip '0A34DA30'H
  port 11019
}
callIdentifier
{
  guid '00000000000000000000000000000000'H
}
fastStart
{
  '0000000D4001800A040001000A34DA30402F'H,
  '400000060401004D40018011140001000A34DA30...'H
}
mediaWaitForConnect FALSE
canOverlapSend FALSE
}
h245Tunneling FALSE
}
}
```

*Mar 2 22:55:40: H225 NONSTD OUTGOING PDU ::=

```
value ARQnonStandardInfo ::=
{
  sourceAlias
{
}
  sourceExtAlias
{
}
}
```

*Mar 2 22:55:40: H225 NONSTD OUTGOING ENCODE BUFFER::= 00 0000

*Mar 2 22:55:40:

*Mar 2 22:55:40: **RAS OUTGOING PDU** ::=

```
!--- The GW_1 asks GK for permission to accept the call. value RasMessage ::= admissionRequest :
{
  requestSeqNum 1120
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"823860D40000001A"}
  destinationInfo
{
  e164 : "1711"
}
  srcInfo
{
  h323-ID : {"gw_3"}
}
  srcCallSignalAddress ipAddress :
{
  ip '0A34DA30'H
```

```
port 11019
}
bandWidth 640
callReferenceValue 40
nonStandardData
{
  nonStandardIdentifier h221NonStandard :
{
  t35CountryCode 181
  t35Extension 0
  manufacturerCode 18
  }
  data '000000'H
  }
  conferenceID '00000000000000000000000000000000'H
  activeMC FALSE
  answerCall TRUE
  canMapAlias TRUE
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  willSupplyUUIEs FALSE
  }
}
```

```
*Mar 2 22:55:40: RAS OUTGOING ENCODE BUFFER::= 27 98045F00 F0003800 32003300
38003600 30004400 34003000 30003000 30003000 30003100 41010180 4A440140 03006700
77005F00 33000A34 DA302B0B 40028000 2840B500 00120300 00000000 00000000 00000000
00000000 000044E0 20018011 00000000 00000000 00000000 00000000 000100
```

```
*Mar 2 22:55:41:
```

```
*Mar 2 22:55:41: RAS INCOMING ENCODE BUFFER::= 2C 045F20
```

```
*Mar 2 22:55:41:
```

```
*Mar 2 22:55:41: RAS INCOMING PDU ::=
```

```
!--- The GK denies permission to accept the call from GW_3 due to bandwidth limit. value
RasMessage ::= admissionReject :
```

```
{
  requestSeqNum 1120
  rejectReason requestDenied : NULL
}
```

```
*Mar 2 22:55:41: H225.0 OUTGOING PDU ::=
```

```
!--- The GW_1 rejects call setup from GW_3. value H323_UserInformation ::= { h323-uu-pdu { h323-
message-body releaseComplete :
```

```
{
  protocolIdentifier { 0 0 8 2250 0 2 }
  callIdentifier
{
  guid '00000000000000000000000000000000'H
  }
  }
  h245Tunneling FALSE
  }
}
```

```
*Mar 2 22:55:41: H225.0 OUTGOING ENCODE BUFFER::= 25 80060008 914A0002 01110000
00000000 00000000 00000000 00000006 800100
```

```
*Mar 2 22:55:41:
```

```
ECV-2610-17#
```

ECV-2610-17#

ECV-2610-17#u all

All possible debugging has been turned off

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