

# 基本的两区域Cisco网关到网守配置

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## 简介

本文档介绍包含一个双区域拓扑的 VoIP 网络，该拓扑由两个 Cisco 网守管理，并且每个区域中包含一个 Cisco 网关。本文的目的是提供能够让用户避免一些已知问题的基本配置，并为基于网守的网络创建可靠基础。本文档包含已配置功能的背景技术信息、相关设计指南和基本验证与故障排除策略。

特别注意在下面的配置中，四台路由器位于同一个LAN。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。

## 开始使用前

### 规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

### 先决条件

本文档没有任何特定的前提条件。

### 使用的组件

已对该设备进行了以下配置测试：

- 有Cisco IOS软件版本12.2.8.5 ENTERPRISE PLUS/H323 MCM的四Cisco 2600

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。如果您使用的是真实网络，请确保您在使用任何命令前已经了解其潜在影响。

## 配置

本部分提供有关如何配置本文档所述功能的信息。

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

### [网关到网守配置的一般要求](#)

在网关从网守获得正确的地址解析之前，必须满足几个条件。

要验证如下两个重要方面：

- 所有网关都应注册到相应的网守。
- 所有网守都应有正确的拨号计划。

## 注册

成功注册是第一个必需步骤。还应考虑以下附加因素：

- 如果网关具有局外交换站 (FXS) 接口，则在普通旧式电话服务 (POTS) 拨号对等体上，添加 **no register e164** 命令。这可避免 Cisco Bug ID [CSCdw60626](#)（[仅限注册用户](#)）中说明的网关注册问题。不是使用 e164 编号进行直接 FXS 的端口注册，可以为网关添加区域前缀并基于区域前缀做出路由决定。
- 通常，首选为网关定义技术前缀。虽然技术前缀的出现主要影响呼叫路由，但是它也适于可靠的注册。

有关网关到网守注册问题的详细信息，请参阅[排除网守注册问题](#)。

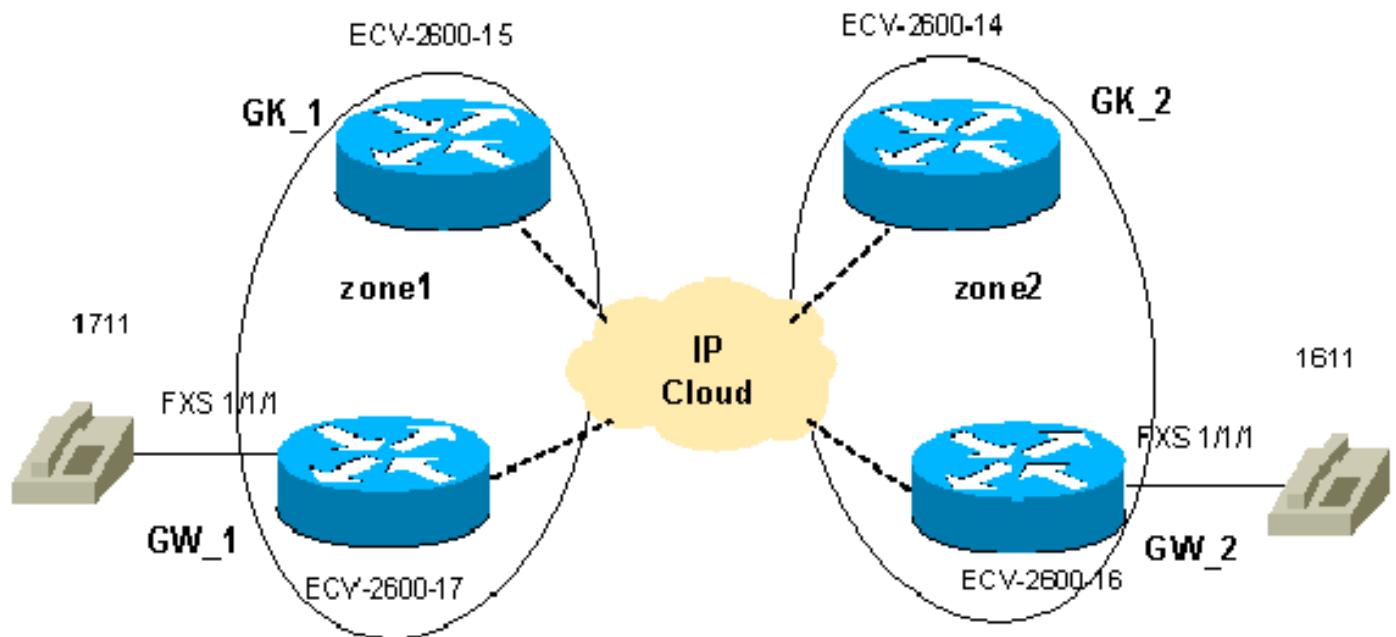
## 呼叫路由

- 为了实现可靠呼叫路由，应使用某种技术前缀注册所有网关。技术前缀的目的是区分不同类型的呼叫和网关的对应类型。因此，尽管有可能将技术前缀用于路由决策，但更好的做法是使用技术前缀并根据区域前缀，来区分呼叫和路由类型。通过此方法，所有 VoIP 网关都可以配置为具有相同技术前缀（例如 1#\*，如本文档中提供的示例所示）。
- 首选显式为区域前缀配置主网关。
- 将 H.323 信令绑定到 Cisco IOS 网关或路由器上的特定 IP 地址。当 Cisco IOS 网关有多个被激活的 IP 接口时，某些 H.323 消息可能源自某个 IP 地址，而其他 H.323 消息则可能参考不同的源地址。如果回环接口可用于识别网关，或者网络中有一个防火墙和记帐服务器，**h323-gateway voip bind srcaddr** 命令则是必要的。此命令已引入 Cisco IOS 软件版本 12.1.2T，[为虚拟接口配置 H.323 支持](#) 中进行了相应介绍。

有关网守呼叫路由的详细信息，请参阅[了解 Cisco IOS H.323 网守呼叫路由](#)。

## 网络图

本文档使用下图所示的网络设置。



## 配置

本文档使用以下配置。

网守和网关的配置的验证对于排除网关到网守的问题故障非常重要。为了简化对配置的了解，已删除所有无关配置命令。

- [GW 1 - ECV-2600-17](#)
- [GW 2 - ECV-2600-16](#)
- [GK 1 ECV-2600-15](#)
- [GK 2 ECV-2600-14](#)

### GW 1 - ECV-2600-17

```
IOS (tm) C2600 Software (C2600-JSX-M), Version 12.2(7a),  
RELEASE SOFTWARE (fcl)  
!  
hostname ECV-2610-17  
!  
!  
interface Ethernet0/0  
 ip address 10.52.218.49 255.255.255.0 h323-gateway voip  
 interface !---- This command enables VoIP GW functions  
 on the interface. h323-gateway voip id gk-zone1.test.com  
 ipaddr 10.52.218.47 1718 !---- This command defines the  
 GK this GW works with. h323-gateway voip h323-id gw 1 !-  
 --- This command defines the GW alias for the GK. h323-  
 gateway voip tech-prefix 1# !---- It is desirable to  
 have tech prefix on the GW for !---- reliable  
 registration and call routing. h323-gateway voip bind  
 srcaddr 10.52.218.49 !---- This command is not necessary  
 in this simple topology, !---- but for complex networks,  
 it is recommended to use it. ?? ! voice-port 1/1/0 !  
 voice-port 1/1/1 ! ! dial-peer voice 1 voip destination-  
 pattern 16.. session target ras !---- All IP addresses  
 for the destination pattern 16.. should !---- be  
 resolved through the requests to the GK. ! dial-peer
```

```
voice 2 pots destination-pattern 1711 port 1/1/1 no
register e164 !---- This command prevents registration
of this number with !---- the GK. The GW is registered
with the GK with this alias only. ! 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-zone2.test.com ipaddr
10.52.218.46 1718 h323-gateway voip h323-id gw 2 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 17..
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
↓
interface Ethernet0/0
 ip address 10.52.218.47 255.255.255.0 ! gatekeeper zone
local gk-zone1.test.com test.com 10.52.218.47 !---- This
command defines the local zone. The GK name and !----
zone name have the same meaning. zone remote gk-
zone2.test.com test.com 10.52.218.46 1719 !---- This
command defines the name of the remote GK (zone). zone
prefix gk-zone2.test.com 16.. !---- This command
explicitly defines the number length with !---- the
number of dots. zone prefix gk-zone1.test.com 17.. gw-
priority 10 gw 1 !---- This command explicitly defines
which GW handles !---- calls for 17.. numbers that could
be done for the !---- local zones only. gw-type-prefix
1#* default-technology !---- This command defines the
default technology prefix !---- that is necessary for
routing decisions. no shutdown !--- This command turns
the service up. ! end
```

## GK 2 ECV-2600-14

```
↓
hostname ECV-2610-14
↓
interface Ethernet0/0
 ip address 10.52.218.46 255.255.255.0 ! gatekeeper zone
local gk-zone2.test.com test.com 10.52.218.46 zone
remote gk-zone1.test.com test.com 10.52.218.47 1719 zone
prefix gk-zone2.test.com 16.. gw-priority 10 gw 2 zone
prefix gk-zone1.test.com 17.. gw-type-prefix 1#*
default-technology no shutdown ! end
```

## 验证

本部分提供的信息可帮助您确认您的配置是否可正常运行。

[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：**在尝试执行任何 **debug** 命令之前，请参阅[有关 Debug 命令的重要信息](#)。有关下面的命令的详细信息，请参阅本文档的[故障排除命令](#)部分。

- **show gateway** - 显示网关注册状态。
- **show gatekeeper endpoints** - 显示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。
- **debug h225 asn1** - 显示 H225 (注册、准入和状态 [RAS] 以及 Q931 呼叫设置) 消息。
- **debug cch323 h225** - 显示 H225 呼叫设置消息。
- [VoIP 呼叫故障排除和调试基础](#)
- [VoIP Debug 命令](#)
- [Cisco IOS 语音、视频和传真命令参考，版本 12.2](#)

## [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](#)

要排除故障，请检查以下几个重要方面：

- 所有网关都已注册到相应网守。
- 网关应具有正确的拨号计划 (配置了拨号对等体)。
- 网守应具有正确的拨号计划 (配置了区域前缀)。

[故障排除和调试 VoIP 呼叫基础中描述的操作步骤](#)，补充了网关与网守交互作用相关的调试和显示命令的输出，应当被用作解决与其他 Cisco IOS 子系统相关的语音问题。**show** 命令的示例输出突出显示了以上步骤，而 **debug** 输出则显示了您的所有 4 台路由器上的 RAS 和 H225 消息的顺序。

**注意：** **debug h225 asn1** 命令会生成大量输出，因此应谨慎使用。某些不必要的输出已从下面的 **debug** 命令中删除。

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

```
!--- Check the GW registration on the GW. 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 corresponding GK. ?? ECV-2610-15#show gatek en
GATEKEEPER ENDPOINT REGISTRATION
===== CallSignalAddr Port
RASSignalAddrPort Zone Name Type F -----
----- -- 10.52.218.49 1720
10.52.218.4951194 gk-zone1.test.com VOIP-GW H323-ID:
gw_1 Total number of active registrations = 1 ECV-2610-
15# -----
----- ?? !--- The same for the second GW. ECV-2610-
16#show gateway Gateway gw_2 is registered to Gatekeeper
gk-zone2.test.com ?? Alias list (CLI configured) H323-ID
gw_2 Alias list (last RCF) H323-ID gw_2 ?? H323 resource
thresholding is Disabled ECV-2610-16# -----
```

```

-----?? !--- And
the second corresponding GK. ECV-2610-14#show gatek en
GATEKEEPER ENDPOINT REGISTRATION
===== CallSignalAddr Port
RASSignalAddr Port Zone Name Type F -----
- - - - - 10.52.218.48
1720 10.52.218.48 52080 gk-zone2.test.com VOIP-GW H323-
ID: gw_2 Total number of active registrations = 1 ??
ECV-2610-14# -----
!--- To check the dial plan on the
GKs: ?? ECV-2610-15#show gatek zone pr ZONE PREFIX TABLE
===== GK-NAME E164-PREFIX -----
- gk-zone2.test.com 16.. gk-zone1.test.com 17..?? ECV-
2610-15# ECV-2610-15# !--- All configured prefixes
should be seen in the zone list. -----
-----?? !--- To check
the dial plan on the GKs: ECV-2610-14# ECV-2610-14#show
gatek zone pr ZONE PREFIX TABLE ===== GK-
NAME E164-PREFIX ----- gk-zone2.test.com
16.. gk-zone1.test.com 17..?? ECV-2610-14# -----
-----?? ECV-
2610-15#show gatekeeper call Total number of active
calls = 1. GATEKEEPER CALL INFO =====
LocalCallIDAge(secs) BW 5-0 1 64(Kbps) Endpt(s): Alias
E.164Addr CallSignalAddr Port RASSignalAddr Port src EP:
gw_2 1611 10.52.218.48 1720 10.52.218.48 59067 dst EP:
gw_1 1711 10.52.218.49 1720 10.52.218.49 58841?? ECV-
2610-15# -----
-----?? !--- The conversation between the
GW and the GK consists of !--- exchange RAS messages.
Here are two messages that show !--- successful
registration of the GW to the GK. ECV-2610-17# ECV-2610-
17#debug h225 asn1 H.225 ASN1 Messages debugging is on
ECV-2610-17# *Mar 2 07:45:53: RAS OUTGOING PDU ::= !---
The GW sends a RAS registration request message to the
GK. value RasMessage ::= registrationRequest : {
requestSeqNum 93 protocolIdentifier { 0 0 8 2250 0 2 }
discoveryComplete FALSE callSignalAddress { } rasAddress
{ ipAddress : { ip '0A34DA31'H port 57733 } }
terminalType { mc FALSE undefinedNode FALSE }
gatekeeperIdentifier { "gk-zone1.test.com" }
endpointVendor { vendor { t35CountryCode 181
t35Extension 0 manufacturerCode 18 } } timeToLive 60
keepAlive TRUE endpointIdentifier {"8215266C0000000F"}
willSupplyUUIES FALSE } *Mar 2 07:45:53: *Mar 2
07:45:53: RAS INCOMING PDU ::= !--- The GK accepts the
registration request and replies with !--- a
confirmation. value RasMessage ::= registrationConfirm :
{ requestSeqNum 93 protocolIdentifier { 0 0 8 2250 0 2 }
callSignalAddress { } gatekeeperIdentifier { "gk-
zone1.test.com" } endpointIdentifier {"8215266C0000000F"}
timeToLive 60 willRespondToIRR FALSE }?? -----
-----?? !---
The incoming H225 call setup message from the remote GW.
!--- The example is the debug cch323 h225 command. ECV-
2610-17# debug cch323 h225 *Mar 2 07:46:03:
cch323_h225_receiver: received msg of type
SETUPIND_CHOSEN *Mar 2 07:46:03: cch323_h225_setup_ind:
callingNumber[] calledNumber[1711] *Mar 2 07:46:03:
cch323_h225_setup_ind--calling IE NOT present *Mar 2
07:46:03:=====PI in cch323_h225_setup_ind = 0?? *Mar
2 07:46:03: Receive: infoXCap 0?? *Mar 2 07:46:03:
Receive infoXCap ccb 0?? *Mar 2 07:46:03: src address =
10.52.218.49 of SETUPIND_CHOSEN *Mar 2 07:46:03: dest

```

```

address = 10.52.218.47 of SETUPIND_CHOSEN?? *Mar 2
07:46:03: cch323_run_h225_sm: received event
H225_EVENT_FAST_SETUP_IND while at state H225_IDLE??
*Mar 2 07:46:03: cch323_run_h225_sm: Setup ccb
0x821FCE98 callID 0xFFFFFFFF *Mar 2 07:46:03:
cch323_h225_act_fastStartSetupInd: codec match = 1 *Mar
2 07:46:03: cch323_rtp_set_non_rtp_call: Non-RTP call
end *Mar 2 07:46:03: H.225 SM: changing from H225_IDLE
state to H225_REQ_WAIT_FOR_ARQ state for callID
FFFFFFFF?? -----
----- !--- Now the example of the debug
h225 asn1 !--- command from all four routers. !--- The
messages are sent from the originating GW. ECV-2610-
16#debug h225 asn1 H.225 ASN1 Messages debugging is on
ECV-2610-16# !--- The GW_2 initiates a call to 1711
phone located on GW_1. !--- Here is the messages that
show the process on GW_2:?? *Mar 2 14:28:08.824: RAS
OUTGOING PDU ::= !--- The GW_2 asks gk-zone2 to resolve
the e164 number 1711 to IP !--- address. value
RasMessage ::= admissionRequest : { requestSeqNum 3091
callType pointToPoint : NULL callModel direct : NULL
endpointIdentifier {"8217FB5000000001"} destinationInfo
{ e164 : "1711" } srcInfo { e164 : "1611", h323-ID :
{"gw_2"} } bandwidth 640 callReferenceValue 8
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '80000008200A1046585320312F312F31'H }
conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
activeMC FALSE answerCall FALSE canMapAlias TRUE
callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } willSupplyUUIEs
FALSE } ?? *Mar 2 14:28:08.960: RAS INCOMING PDU ::= !--
- The gk-zone2 notifies GW_2 that the request is in
progress as it !--- is forwarded to the other gk-zone1
and is not processed locally. ?? value RasMessage ::=
requestInProgress : { !--- Note the sequence numbers in
the request equal the number in !--- the reply.
requestSeqNum 3091 delay 9000 } ?? *Mar 2 14:28:09.169:
RAS INCOMING PDU ::= !--- The gk-zone2 grants permission
to start call and resolves the !--- e164 number 1711 to
IP address of GW_1. value RasMessage ::=
admissionConfirm : { !--- The sequence numbers in the
request equal the number in the reply. requestSeqNum
3091 bandwidth 640 callModel direct : NULL
destCallSignalAddress ipAddress : { ip '0A34DA31'H !---
The IP address 10.52.218.49 of GW_1. port 1720 }
irrFrequency 240 destinationInfo { e164 : "1711" }
willRespondToIRR FALSE uuiEsRequested { setup FALSE
callProceeding FALSE connect FALSE alerting FALSE
information FALSE releaseComplete FALSE facility FALSE
progress FALSE empty FALSE } } *Mar 2 14:28:09.193: H225
NONSTD OUTGOING PDU ::= value H323_UU_NonStdInfo ::= {
version 0 progIndParam progIndIEinfo : { progIndIE
'00000003'H } } *Mar 2 14:28:09.197: H225.0 OUTGOING PDU
::= !--- The GW_2 now can place H323 (q931) call setup
message directly !--- to GW_1. value
H323_UserInformation ::= { h323-uu-pdu { h323-message-
body setup : { protocolIdentifier { 0 0 8 2250 0 2 }
sourceAddress { h323-ID : {"gw_2"} } sourceInfo {
gateway { protocol { voice : { supportedPrefixes {?? {
prefix e164 : "1#" } } } } } mc FALSE undefinedNode
FALSE } destinationAddress { e164 : "1711" } activeMC
FALSE conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
conferenceGoal create : NULL callType pointToPoint :

```



```
NULL sourceCallSignalAddress ipAddress : { ip
'0A34DA30'H port 11001 } callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } fastStart {
'0000000D4001800A040001000A34DA3043F3'H,
'400000060401004D40018011140001000A34DA30...'H }
mediaWaitForConnect FALSE canOverlapSend FALSE }
h245Tunneling FALSE nonStandardControl {?? {
nonStandardIdentifier h221NonStandard : { t35CountryCode
181 t35Extension 0 manufacturerCode 18 } data
'C00100028006000400000003'H } } } *Mar 2 14:28:09.573:
H225.0 INCOMING PDU ::= !--- The GW_1 replies with an
H323 (q931) callProceeding 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
'F748749F163011CC801DC5F8EEB46E69'H } fastStart {
'0000000D40018011140001000A34DA314942000A...'H,
'400000060401004D40018011140001000A34DA30...'H } }
h245Tunneling FALSE } } } *Mar 2 14:28:09.766: H225.0
INCOMING PDU ::= !--- The GW_1 sends an H323 (q931) call
Progress 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
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE nonStandardControl { ??{ nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0
manufacturerCode 18 } data '60011000011E041E028188'H } }
} } } *Mar 2 14:28:11.801: H225.0 INCOMING PDU ::= !-
-- The GW_1 sends an H323 (q931) call CONNECT message.
The call is !--- now active. value H323_UserInformation
::= { h323-uu-pdu { h323-message-body connect : {
protocolIdentifier { 0 0 8 2250 0 2 } destinationInfo {
gateway { protocol { voice : { supportedPrefixes { ??{
prefix e164 : "1#" } } } } } mc FALSE undefinedNode
FALSE } conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE nonStandardControl {?? { nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0
manufacturerCode 18 } data 'C00100028006000400000002'H }
} } } } *Mar 2 14:28:11.909: show call active voice Total
call-legs: 2 ??GENERIC: SetupTime=13848499 ms Index=1
PeerAddress=1611 PeerSubAddress= PeerId=2 PeerIfIndex=11
LogicalIfIndex=8 ConnectTime=13849192
CallDuration=00:00:19 CallState=4 !--- This means the
call is active. CallOrigin=2 ChargedUnits=0 InfoType=2
TransmitPackets=442 TransmitBytes=8840
ReceivePackets=1104 ReceiveBytes=22080 !--- This shows
that there is two-way voice for this call leg. !--- 0
values a problem. TELE: !--- The call is outgoing and
started from the PSTN. That is why !--- TELE: is first
in the output. ConnectionId=[0xF748749F 0x163011CC
0x801CC5F8 0xE6B46E69] IncomingConnectionId=[0xF748749F
0x163011CC 0x801CC5F8 0xE6B46E69] TxDuration=22100 ms
VoiceTxDuration=2209 ms FaxTxDuration=0 ms
CoderTypeRate=g729r8 NoiseLevel=-48 ACOMLevel=2
OutSignalLevel=-57 InSignalLevel=-53 InfoActivity=2
ERLLevel=16 SessionTarget= ImgPages=0 GENERIC:
SetupTime=13848887 ms Index=1 PeerAddress=1711
PeerSubAddress= PeerId=1PeerIf Index=13 LogicalIfIndex=0
ConnectTime=13849185 CallDuration=00:00:20 CallState=4
CallOrigin=1 ChargedUnits=0 InfoType=2
```



```
TransmitPackets=1038 TransmitBytes=20760
ReceivePackets=488 ReceiveBytes=9760 VOIP:
ConnectionId[0xF748749F 0x163011CC 0x801CC5F8
0xEEB46E69] IncomingConnectionId[0xF748749F 0x163011CC
0x801CC5F8 0xEEB46E69]
RemoteIPAddress=10.52.218.49RemoteUDPPort=18754 !--- The
signaling and RTP stream IP addresses.
RemoteSignallingIPAddress=10.52.218.49
RemoteSignallingPort=1720
RemoteMediaIPAddress=10.52.218.49 RemoteMediaPort=18754
RoundTripDelay=5 ms SelectedQoS=best-effort
tx_DtmfRelay=inband-voice FastConnect=TRUE Separate H245
Connection=FALSE H245 Tunneling=FALSE
SessionProtocol=cisco SessionTarget=ras
OnTimeRvPlayout=6630 GapFillWithSilence=0 ms
GapFillWithPrediction=0 ms GapFillWithInterpolation=0 ms
GapFillWithRedundancy=0 ms HiWaterPlayoutDelay=70 ms
LoWaterPlayoutDelay=50 ms ReceiveDelay=50 ms
LostPackets=0 EarlyPackets=0 LatePackets=0 !--- The DSP
statistics. VAD = enabled CoderTypeRate=g729r8
CodecBytes=20Total call-legs: 2 ECV-2610-16# ECV-2610-
16# u all All possible debugging has been turned off !---
- The following messages shows the call disconnect !---
process at the GW_2. ECV-2610-16#deb h225 asn1 H.225
ASN1 Messages debugging is on: *Mar 2 14:29:52.017:
H225.0 INCOMING PDU ::= !--- The GW_1 sends H323 (q931)
Release complete message. value H323_UserInformation ::=
{ h323-uu-pdu { h323-message-body releaseComplete : {
protocolIdentifier { 0 0 8 2250 0 2 } callIdentifier {
guid 'F748749F163011CC801DC5F8EEB46E69'H } }
h245Tunneling FALSE } } *Mar 2 14:29:52.025: H225.0
OUTGOING PDU ::= !--- The GW_2 replies with the H323
(q931) releaseComplete !--- message. value
H323_UserInformation ::= { h323-uu-pdu { h323-message-
body releaseComplete : { protocolIdentifier { 0 0 8 2250
0 2 } callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE } } *Mar 2 14:29:52.041: RAS OUTGOING PDU ::= !---
The GW_2 notifies GK-2 that the call is complete. value
RasMessage ::= disengageRequest : { requestSeqNum 3095
endpointIdentifier {"8217FB5000000001"} conferenceID
'F748749F163011CC801CC5F8EEB46E69'H callReferenceValue 8
disengageReason normalDrop : NULL callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } answeredCall FALSE
} *Mar 2 14:29:52.090: RAS INCOMING PDU ::= !--- The GK-
2 confirms the message. value RasMessage ::=
disengageConfirm : { requestSeqNum 3095 } u all All
possible debugging has been turned off -----
----- !--- The
debug output from the GK-2. ECV-2610-14#debug h225 asn1
H.225 ASN1 Messages debugging is on ECV-2610-14# Mar 2
14:28:20.952: Mar 2 14:28:20.952: RAS INCOMING PDU ::=
!--- The GW_2 asks permission to place the call. !---
Now it is incoming RAS PDU as it is on the GK-2, but the
!--- same sequence number. value RasMessage ::=
admissionRequest : { requestSeqNum 3091 callType
pointToPoint : NULL callModel direct : NULL
endpointIdentifier {"8217FB5000000001"} destinationInfo
{ e164 : "1711" } srcInfo { e164 : "1611", h323-ID:
{"gw_2"} } bandwidth 640 callReferenceValue 8
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '80000008200A1046585320312F312F31'H }
conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
```

```
activeMC FALSE answerCall FALSE canMapAlias TRUE
callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } willSupplyUIEs
FALSE }?? Mar 2 14:28:20.992: RAS OUTGOING PDU ::= !---
The GK-2 asks GK-1 to resolve the Number for the remote
!--- zone. value RasMessage ::= locationRequest : {
requestSeqNum 1026 destinationInfo { e164 : "1711" }
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '8284901100F748749F163011CC801DC5F8EEB46E...'H
} replyAddress ipAddress : { ip '0A34DA2E'H port 1719 }
sourceInfo { h323-ID : {"gk-zone2.test.com"} }
canMapAlias TRUE } Mar 2 14:28:21.024: RAS OUTGOING PDU
::= !--- The GK-2 notifies GW_2 that the call is
processing. value RasMessage ::= requestInProgress : {
requestSeqNum 3091 delay 9000 } Mar 2 14:28:21.157: Mar
2 14:28:21.157: RAS INCOMING PDU ::= !--- The GK-1
replies to GK-2 with the permission. value RasMessage
::= locationConfirm : { requestSeqNum 1026
callSignalAddress ipAddress : { ip'0A34DA31'H port 1720
} rasAddress ipAddress : { ip '0A34DA31'H port 55679 }
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '0001400300670077005F0031200067006B002D00...'H
} destinationInfo { e164 : "1711" } destinationType {
gateway { protocol { voice : { supportedPrefixes { } } }
} mc FALSE undefinedNode FALSE } } Mar 2 14:28:21.209:
RAS OUTGOING PDU::= !--- The GK-2 replies to GW_2 with
the permission to place !--- the call. value RasMessage
::= admissionConfirm : { requestSeqNum 3091 bandwidth
640 callModel direct : NULL destCallSignalAddress
ipAddress : { ip '0A34DA31'H port 1720 } irrFrequency
240 destinationInfo { e164 : "1711" } willRespondToIRR
FALSE uiesRequested { setup FALSE callProceeding FALSE
connect FALSE alerting FALSE information FALSE
releaseComplete FALSE facility FALSE progress FALSE
empty FALSE } } ECV-2610-14#u all All possible debugging
has been turned off ECV-2610-14#debug h225 asnl H.225
ASN1 Messages debugging is on Mar 2 14:30:04.145: RAS
INCOMING PDU ::= !--- The GK-2 gets notification from
GW_2 that the call !--- has ended. value RasMessage ::=
disengageRequest : { requestSeqNum 3095
endpointIdentifier {"8217FB5000000001"} conferenceID
'F748749F163011CC801CC5F8EEB46E69'H callReferenceValue 8
disengageReason normalDrop : NULL callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } answeredCall FALSE
} Mar 2 14:30:04.157: RAS OUTGOING PDU ::= value
RasMessage ::= disengageConfirm : { requestSeqNum 3095 }
ECV-2610-14#u all All possible debugging has been turned
off ECV-2610-14# -----
----- !--- The debug output from the GK-2.
ECV-2610-15#ECV-2610-15#debug h225 asnl H.225 ASN1
Messages debugging is on *Mar 2 14:28:14.690: *Mar 2
14:28:14.694: RAS INCOMING PDU ::= !--- The request from
the GK-2. value RasMessage ::= locationRequest : {
requestSeqNum 1026 destinationInfo { e164 : "1711" }
nonStandardData { nonStandardIdentifier h221NonStandard:
{ t35CountryCode 181 t35Extension 0 manufacturerCode 18
} data '8284901100F748749F163011CC801DC5F8EEB46E...'H }
replyAddress ipAddress : { ip '0A34DA2E'H port 1719 }
sourceInfo { h323-ID : {"gk-zone2.test.com"} }
canMapAlias TRUE } *Mar 2 14:28:14.754: RAS OUTGOING PDU
::= !--- The reply from the GK-1 to GK-2. value
RasMessage ::= locationConfirm : { requestSeqNum 1026
```

```

callSignalAddress ipAddress : { ip '0A34DA31'H port 1720
} rasAddress ipAddress : { ip '0A34DA31'H port 55679 }
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '0001400300670077005F0031200067006B002D00...'H
} destinationInfo { e164 : "1711" } destinationType {
gateway { protocol { voice : { supportedPrefixes { } } } }
} mc FALSE undefinedNode FALSE } } *Mar 2 14:28:15.159:
RAS INCOMING PDU ::= !--- The GW_1 asks GK-1 for
permission to accept the call. value RasMessage ::=
admissionRequest : { requestSeqNum 101 callType
pointToPoint : NULL callModel direct : NULL
endpointIdentifier {"8261828000000003"} destinationInfo
{ e164 : "1711" } srcInfo { e164 : "1611", h323-ID:
{"gw_2"} } srcCallSignalAddress ipAddress: { ip
'0A34DA30'H port 1100 } bandwidth 640 callReferenceValue
7 nonStandardData { nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0
manufacturerCode 18 } data
'80000008200A1046585320312F312F31'H } conferenceID
'F748749F163011CC801CC5F8EEB46E69'H activeMC FALSE
answerCall TRUE canMapAlias TRUE callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } willSupplyUIEs
FALSE } *Mar 2 14:28:15.191: RAS OUTGOING PDU ::= !---
The permission is granted. value RasMessage ::=
admissionConfirm : { requestSeqNum 101 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 } } ECV-2610-15# ECV-2610-
15#show gatek call Total number of active calls = 1.
GATEKEEPER CALL INFO ===== LocalCallID
Age(secs) BW 7-63391 33 64(Kbps) Endpt(s): Alias
E.164Addr CallSignalAddr Port RASSignalAddr Port src EP:
gw_2 1611 10.52.218.48 1720 10.52.218.48 59067 dst EP:
gw_1 1711 10.52.218.49 1720 10.52.218.49 58841 ECV-2610-
15#ECV-2610-15#u all All possible debugging has been
turned off ECV-2610-15#debug h225 asn1 H.225 ASN1
Messages debugging is on *Mar 2 14:29:57.767: RAS
INCOMING PDU ::= !--- The GK-1 gets notification from
GW_1 that the call has ended. value RasMessage ::=
disengageRequest : { requestSeqNum 105
endpointIdentifier {"8261828000000003"} conferenceID
'F748749F163011CC801CC5F8EEB46E69'H callReferenceValue 7
disengageReason normalDrop : NULL callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } answeredCall TRUE
} *Mar 2 14:29:57.779: RAS OUTGOING PDU ::= !--- The GK-
1 confirms the message. value RasMessage ::=
disengageConfirm : { requestSeqNum 105 } ECV-2610-15#u
all All possible debugging has been turned off !--- The
debugs must always be turned off when the collection !--
- is completed. -----
----- !--- The debugs at the terminating
gateway GW_1. ECV-2610-17# ECV-2610-17#debug h225 asn1
H.225 ASN1 Messages debugging is on *Mar 1 11:02:27:
*Mar 1 11:02:27: H225.0 INCOMING PDU ::= !--- The first
message is the H225 call setup from GW_2. value
H323_UserInformation ::= { h323-uu-pdu { h323-message-
body setup : { protocolIdentifier { 0 0 8 2250 0 2 }
sourceAddress { h323-ID : {"gw_2"} } sourceInfo {
gateway { protocol { voice : { supportedPrefixes {?? {
prefix e164 : "1#" } } } } } mc FALSE undefinedNode

```

```

FALSE } destinationAddress { e164 : "1711" } activeMC
FALSE conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
conferenceGoal create : NULL callType pointToPoint :
NULL sourceCallSignalAddress ipAddress : { ip
'0A34DA30'H port 11001 } callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } fastStart {
'0000000D4001800A040001000A34DA3043F3'H,
'400000060401004D40018011140001000A34DA30...'H }
mediaWaitForConnect FALSE canOverlapSend FALSE }
h245Tunneling FALSE nonStandardControl { ?? {
nonStandardIdentifier h221NonStandard : { t35CountryCode
181 t35Extension 0 manufacturerCode 18 } data
'000100028006000400000003'H } } } *Mar 1 11:02:27: RAS
OUTGOING PDU ::= !--- The GW_1 asks GK-1 for permission
to accept the call. value RasMessage::= admissionRequest
: { requestSeqNum 101 callType pointToPoint : NULL
callModel direct : NULL endpointIdentifier
{"8261828000000003"} destinationInfo { e164: "1711" }
srcInfo { e164 : "1611", h323-ID : {"gw_2"} }
srcCallSignalAddress ipAddress: { ip '0A34DA30'H port
11001 } bandwidth 640 callReferenceValue 7
nonStandardData { nonStandardIdentifier h221NonStandard
: { t35CountryCode 181 t35Extension 0 manufacturerCode
18 } data '80000008200A1046585320312F312F31'H }
conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
activeMC FALSE answerCall TRUE canMapAlias TRUE
callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } willSupplyUIEs
FALSE } *Mar 1 11:02:27: *Mar 1 11:02:27: RAS INCOMING
PDU ::= !--- The permission is granted. value RasMessage
::= admissionConfirm: { requestSeqNum 101 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 11:02:27: H225.0
OUTGOING PDU ::= !--- The GW_1 replies to the GW-2 with
the callProceeding 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
'F748749F163011CC801DC5F8EEB46E69'H } fastStart {
'0000000D40018011140001000A34DA314942000A...'H,
'400000060401004D40018011140001000A34DA30...'H } }
h245Tunneling FALSE } } *Mar 1 11:02:27: H225.0 OUTGOING
PDU ::= !--- The call Progress follows. value
H323_UserInformation::= { h323-uu-pdu { h323-message-
body progress: { protocolIdentifier { 0 0 8 2250 0 2 }
destinationInfo { mc FALSE undefinedNode FALSE }
callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE nonStandardControl { ?? { nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0
manufacturerCode 18 } data '60011000011E041E028188'H } }
} } ?? *Mar 1 11:02:29: H225.0 OUTGOING PDU ::= !--- The
GW_1 accepts the call. value H323_UserInformation ::= {
h323-uu-pdu { h323-message-body connect : {
protocolIdentifier { 0 0 8 2250 0 2 } destinationInfo {
gateway { protocol { voice : { supportedPrefixes {?? {
prefix e164 : "1#" } } } } } mc FALSE undefinedNode
FALSE } conferenceID 'F748749F163011CC801CC5F8EEB46E69'H
callIdentifier { guid

```

```
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE nonStandardControl { ??{ nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0
manufacturerCode 18 } data 'C00100028006000400000002'H }
} } } ECV-2610-17#u all All possible debugging has been
turned off ECV-2610-17# ECV-2610-17#debug h225 asn1
H.225 ASN1 Messages debugging is on ECV-2610-17# *Mar 1
11:04:10: H225.0 OUTGOING PDU ::= !--- The GW_1 drops
the call. value H323_UserInformation ::= { h323-uu-pdu {
h323-message-body releaseComplete : { protocolIdentifier
{ 0 0 8 2250 0 2 } callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } } h245Tunneling
FALSE } } ??*Mar 1 11:04:10: RAS OUTGOING PDU ::= !---
The GW_1 notifies GK-1 that the call has ended. value
RasMessage ::= disengageRequest : { requestSeqNum 105
endpointIdentifier {"8261828000000003"} conferenceID
'F748749F163011CC801CC5F8EEB46E69'H callReferenceValue 7
disengageReason normalDrop : NULL callIdentifier { guid
'F748749F163011CC801DC5F8EEB46E69'H } answeredCall TRUE
} *Mar 1 11:04:10: H225.0 INCOMING PDU ::= !--- The GW_2
drops the call from its side. value H323_UserInformation
::= { h323-uu-pdu { h323-message-body releaseComplete :
{ protocolIdentifier { 0 0 8 2250 0 2 } callIdentifier {
guid 'F748749F163011CC801DC5F8EEB46E69'H } }
h245Tunneling FALSE } } *Mar 1 11:04:10: RAS INCOMING
PDU ::= !--- The GK-1 confirms the message. value
RasMessage ::= disengageConfirm : { requestSeqNum 105 }
u all All possible debugging has been turned off !---
The debugs must always be turned off when the collection
!--- is completed.
```

## 相关信息

- [了解 H.323 网守](#)
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