

# Configuração básica do Gateway para gatekeeper de Cisco de duas zonas

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## [Introdução](#)

Este documento estuda uma rede VoIP com uma topologia de duas zonas controladas por dois gatekeepers Cisco com um gateway Cisco em cada zona. O objetivo deste documento é fornecer uma configuração básica que permita que o usuário evite alguns problemas comuns e crie uma base confiável para uma rede baseada em gatekeepers. Este documento inclui informações técnicas de fundo sobre recursos configurados, diretrizes de projeto e verificação básica e estratégias de Troubleshooting.

É importante observar que na configuração abaixo os quatro roteadores estão localizados na mesma LAN. No entanto, em sua real topologia, todos os dispositivos podem estar em partes diferentes de sua rede.

## [Antes de Começar](#)

### [Convenções](#)

Para obter mais informações sobre convenções de documento, consulte as [Convenções de dicas técnicas Cisco](#).

### [Pré-requisitos](#)

Não existem requisitos específicos para este documento.

## Componentes Utilizados

Estas configurações foram testadas com este equipamento:

- Quatro Cisco 2600s com EMPRESA PLUS/H323 MCM de 12.2.8.5 da liberação do Cisco IOS  
® Software

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. Todos os dispositivos utilizados neste documento foram iniciados com uma configuração (padrão) inicial. Se você trabalhar em uma rede ativa, certifique-se de que entende o impacto potencial de qualquer comando antes de utilizá-lo.

## Configurar

Nesta seção, você encontrará informações para configurar os recursos descritos neste documento.

**Nota:** Para localizar informações adicionais sobre os comandos usados neste documento, utilize a Ferramenta Command Lookup (somente clientes [registrados](#)).

## Requisitos gerais para a configuração do Gateway para gatekeeper

Há diversas circunstâncias a ser encontradas antes que o gateway possa obter o address resolution correto do porteiro.

Há dois pontos importantes a ser verificados, como segue:

- Todos os gateways devem ser registrados aos porteiros correspondentes.
- Todos os porteiros devem ter o dial plan correto.

## Registro

O registro bem-sucedido é a primeira etapa imperativa. Estes fatores adicionais devem ser levados em consideração:

- Se o gateway tem relações da estação de câmbio internacional (FXO), a seguir no dial peers do serviço de telefonia tradicional (POTS), adicionar o **comando no register e164**. Isto evita o problema com o registro de gateway descrito na identificação de bug Cisco [CSCdw60626](#) ([clientes registrados somente](#)). Em vez da porta direta FXS o registro com e164 numera, é possível adicionar um prefixo de zona para o gateway e basear as decisões de roteamento nos prefixos de zona.
- Geralmente, é preferível definir um prefixo de tecnologia para o gateway. Embora a presença dos prefixos de tecnologia afete predominantemente o roteamento de chamada, é igualmente desejável para o registro confiável.

Para obter mais informações sobre as edições do registro do Gateway para gatekeeper, refira [pesquisando defeitos problemas de registro de gatekeeper](#).

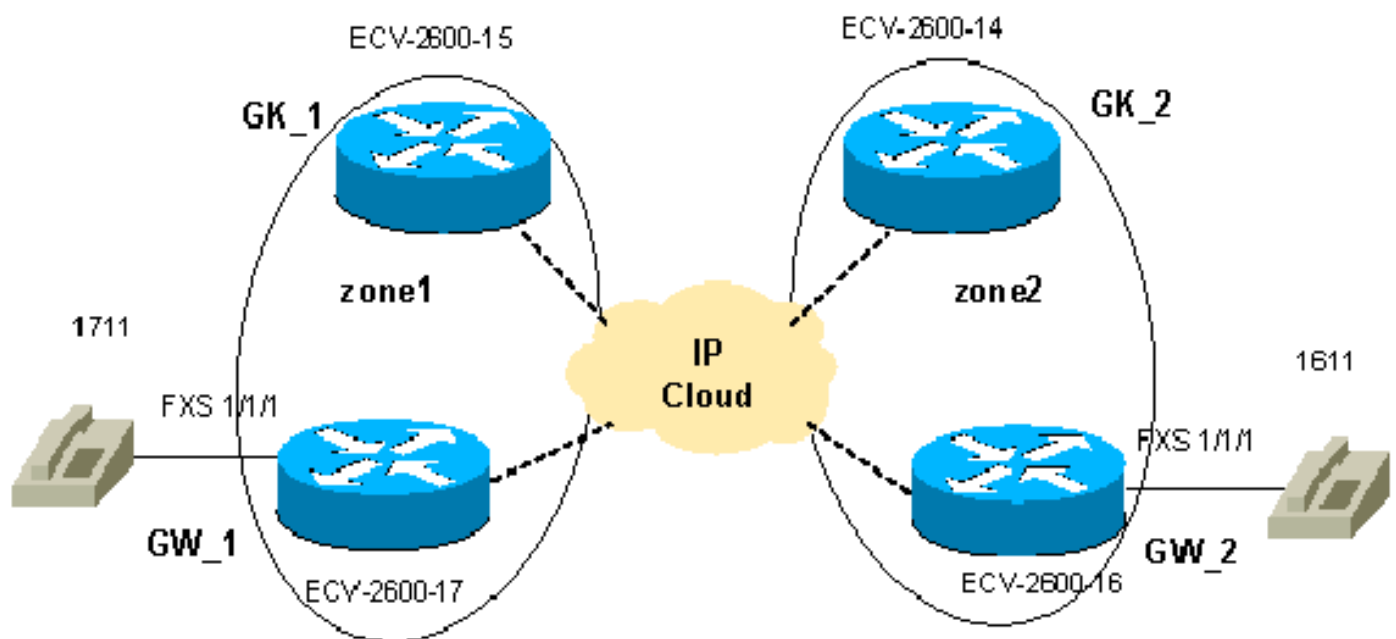
## Roteamento de chamada

- Para o roteamento de chamada seguro, todos os gateways devem ser registrados com algum prefixo de tecnologia. A finalidade do prefixo de tecnologia é distinguir entre tipos diferentes de tipos dos atendimentos e da correspondência de gateways. Assim, embora seja possível usar o prefixo de tecnologia para decisões de roteamento, a prática melhor é usar o prefixo de tecnologia para distinguir o tipo de atendimento e de rota baseados nos prefixos de zona. Com esta aproximação, todos os Gateway VoIP podem ser configurados com o mesmo prefixo de tecnologia (por exemplo 1#\*, como no exemplo apresentado neste documento).
- É preferível configurar explicitamente o gateway principal para o prefixo de zona.
- Ligue H.323 que sinaliza a um endereço IP de Um ou Mais Servidores Cisco ICM NT específico no Cisco IOS gateway ou no roteador. Quando o Cisco IOS gateway tem interfaces IP ativas múltiplas, algumas das mensagens de H.323 podem ser originado de um endereço IP de Um ou Mais Servidores Cisco ICM NT, e outras partes dele podem prover um endereço de origem diferente. O comando **h323-gateway voip bind srcaddr** é necessário se a interface de loopback é usada para identificar o gateway, ou há um Firewall e servidores de contabilidade na rede. Este comando foi introduzido no Cisco IOS Software Release 12.1.2T e é documentado em [configurar o Suporte para interfaces virtuais H.323](#).

Para obter mais informações sobre do roteamento de chamada de gatekeeper, refira [compreendendo o roteamento de chamada de gatekeeper de H.323 do Cisco IOS](#).

## Diagrama de Rede

Este documento utiliza a instalação de rede mostrada no diagrama abaixo.



## Configurações

Este documento utiliza estas configurações.

A verificação das configurações do gatekeeper e gateway é uma parte importante de problemas do Gateway para gatekeeper do Troubleshooting. Para simplificar a compreensão das configurações, todos os comandos configuration não relacionados foram removidos.

- [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 (fc1)
!
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
```

## Verificar

Esta seção fornece informações que você pode usar para confirmar se sua configuração funciona adequadamente.

A [Output Interpreter Tool \(somente clientes registrados\)](#) oferece suporte a determinados comandos show, o que permite exibir uma análise da saída do comando show.

**Nota:** Antes que você tente todos os **comandos debug**, refira a [informação importante em comandos Debug](#). Para obter mais informações sobre dos comandos abaixo, veja a seção de [comandos de Troubleshooting](#) deste documento.

- **gateway da mostra** — Indica o status de registro de gateway.
- **mostre valores-limite do porteiro** — Indica todos os gateways registrados ao porteiro.
- **mostre o prefixo da zona de gatekeeper** — Indica todos os prefixos de zona configurados no porteiro.
- **show gatekeeper call** — Mostra as chamadas ativa processadas pelo porteiro.
- **debugar o asn1 h225** — Mensagens de H225 dos indicadores ([RAS] do registro, da admissão, e do estado e configuração de chamada Q931).
- **debug cch323 h225** — Mensagens de configuração de chamada de H225 dos indicadores.
- [Conceitos Básicos de Troubleshooting e Depuração de Chamadas VoIP](#)
- [Comandos de debug VoIP](#)
- [Referência aos Comandos de Fax, Vídeo e Voz do Cisco IOS, Versão 12.2](#)

## Troubleshooting

Esta seção fornece informações que podem ser usadas para o troubleshooting da sua configuração.

### [Comandos para Troubleshooting](#)

Para pesquisar defeitos, verifique diversos pontos vitais:

- Todos os gateways devem ser registrados com os porteiros correspondentes.
- Os gateways devem ter o Plano de discagem correto (dial peers configurado).
- Os porteiros devem ter o Plano de discagem correto (prefixos de zona configurados).

As etapas descritas nos [Conceitos Básicos de Troubleshooting e Debugging de Chamada VoIP](#) complementam a saída dos **comandos debug and show** relativos à interação do Gateway para gatekeeper e devem ser usadas para destacar os problemas da Voz relativos a outros subsistemas do Cisco IOS. Os exemplos de saída dos **comandos show** destacam as etapas acima, e o **resultado do debug** mostra a sequência do RAS e mensagens de H225 em todos os quatro Roteadores.

**Nota:** O comando **debug h225 asn1** gere uma saída muito grande, assim que deve ser usada com grande cuidado. Alguma saída desnecessária foi suprimida dos **comandos debug** abaixo.

**Nota:** [Antes de emitir comandos de depuração, consulte Informações Importantes sobre Comandos de Depuração.](#)

```

!--- 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"}
willSupplyUIUES 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 } willSupplyUIEs
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 0xEEB46E69] IncomingConnectionId=[0xF748749F
0x163011CC 0x801CC5F8 0xEEB46E69] 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 asnl 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 asnl
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 } willSupplyUUIEs
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 uuiesRequested { 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 } willSupplyUUIES
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
'C00100028006000400000003'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 asnl
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.
```

## Informações Relacionadas

- [Entendendo Gatekeepers H.323](#)
- [Troubleshooting de Problemas com Registro de Gatekeeper](#)
- [Entendendo o Cisco IOS H.323 Gatekeeper Call Routing](#)
- [Gatekeeper de alto desempenho Cisco](#)
- [Configurando gateways H.323](#)
- [Configurando gatekeepers H.323](#)
- [Troubleshooting e Entendendo o Gerenciamento de Largura de Banda do Cisco Gatekeeper](#)
- [Configurando o suporte H.323 para interfaces virtuais](#)
- [Suporte à Tecnologia de Voz](#)
- [Suporte ao Produto de Voz e Comunicações Unificadas](#)
- [Troubleshooting da Telefonia IP Cisco](#)
- [Suporte Técnico e Documentação - Cisco Systems](#)