

Configuração básica de gateway para gatekeeper da Cisco de duas zonas

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[Introduction](#)

Este documento estuda uma rede VoIP com uma topologia da duas zonas controladas por dois gatekeepers Cisco com o um gateway Cisco em cada zona. O objetivo deste original 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](#)

[Conventions](#)

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

[Prerequisites](#)

Não existem requisitos específicos para este documento.

Componentes Utilizados

Essas configurações foram testadas com este equipamento:

- Quatro Cisco 2600s com Cisco IOS® Software Release 12.2.8.5 ENTERPRISE PLUS/H323 MCM

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. All of the devices used in this document started with a cleared (default) configuration. 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.

Observação: para encontrar informações adicionais sobre os comandos usados neste documento, use a [ferramenta Command Lookup Tool](#) (somente clientes [registrados](#)).

Requisitos gerais para a configuração do gateway para o gatekeeper

Há várias condições a serem atendidas para que o Gateway possa obter a resolução correta de endereços do Gatekeeper.

Há dois pontos importantes a serem verificados:

- Todos os gateways devem ser registrados em gatekeepers correspondentes.
- Todos os Gatekeepers devem ter o plano de discagem correto.

Registro

O registro bem-sucedido é a primeira etapa obrigatória. Estes fatores adicionais devem ser tidos em conta:

- Se o Gateway tiver interfaces FXS (Foreign Exchange Station) e, em seguida, nos correspondentes de discagem POTS (Plain Old Telephone Service), adicione o comando **no register e164**. Isso evita o problema com o registro do Gateway descrito na ID de bug da Cisco [CSCdw60626](#) (somente clientes [registrados](#)). Em vez de registro direto de porta FXS com números e164, 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 chamadas, também é desejável um registro confiável.

Para obter mais informações sobre problemas de registro de Gateway para Gatekeeper, consulte [Troubleshooting de Problemas de Registro de Gatekeeper](#).

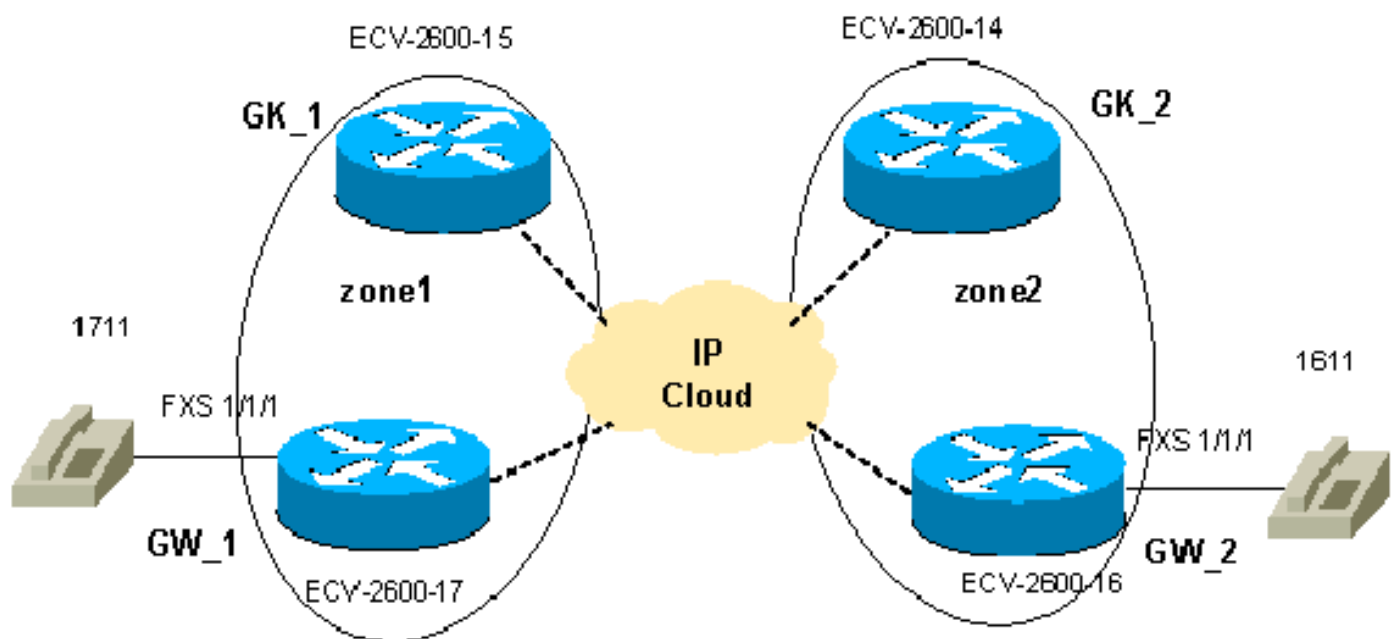
Roteamento de chamada

- Para roteamento de chamadas confiável, todos os gateways devem ser registrados com algum prefixo de tecnologia. A finalidade do prefixo de tecnologia é distinguir entre diferentes tipos de chamadas e os tipos correspondentes de gateways. Assim, embora seja possível usar o prefixo de tecnologia para decisões de roteamento, a melhor prática é usar o prefixo de tecnologia para distinguir o tipo de chamada e rota com base nos prefixos de zona. Com essa abordagem, todos os Gateways 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.
- Vincule a sinalização H.323 a um endereço IP específico no Cisco IOS Gateway ou roteador. Quando o Cisco IOS Gateway tem várias interfaces IP ativas, algumas das mensagens H.323 podem ser originadas de um endereço IP e outras partes dele podem referenciar um endereço de origem diferente. O comando **h323-gateway voip bind srcaddr** é necessário se a interface de loopback for usada para identificar o Gateway ou se houver um firewall e servidores de contabilidade na rede. Este comando foi introduzido no Cisco IOS Software Release 12.1.2T e está documentado em [Configuração do Suporte H.323 para Interfaces Virtuais](#).

Para obter mais informações sobre o roteamento de chamadas do Gatekeeper, consulte [Entendendo o Roteamento de Chamadas do Gatekeeper 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 do Gateway é uma parte importante da solução de problemas de Gateway para Gatekeeper. Para simplificar a compreensão das configurações, todos os comandos de configuração 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 (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
```

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.](#)

Observação: antes de tentar qualquer comando **debug**, consulte [Informações Importantes sobre Comandos de Depuração](#). Para obter mais informações sobre os comandos abaixo, consulte a seção [Comandos de Troubleshooting](#) deste documento.

- **show gateway** — Exibe o status de registro do Gateway.
- **show gatekeeper endpoints** — Exibe todos os Gateways registrados no Gatekeeper.
- **show gatekeeper zone prefix** — Exibe todos os prefixos de zona configurados no Gatekeeper.
- **show gatekeeper call** — Mostra as chamadas ativas processadas pelo Gatekeeper.
- **debug h225 asn1** — Exibe mensagens H225 (Registration, Admission, and Status [RAS] e Q931 call setup).
- **debug cch323 h225** — Exibe mensagens de configuração de chamada H225.
- [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](#)

[Troubleshoot](#)

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

[Comandos para Troubleshooting](#)

Para solucionar problemas, verifique vários pontos vitais:

- Todos os gateways devem ser registrados com os Gatekeepers correspondentes.
- Os gateways devem ter o plano de discagem correto (peers de discagem configurados).
- Os gatekeepers devem ter o plano de discagem correto (prefixos de zona configurados).

As etapas descritas em [Noções Básicas sobre Troubleshooting e Depuração de Chamadas VoIP](#) complementam a saída dos comandos **debug** e **show** relacionados à interação Gateway-to-Gatekeeper e devem ser usadas para destacar os problemas de voz relacionados a outros subsistemas do Cisco IOS. As saídas de exemplo dos comandos **show** destacam as etapas acima e a saída **debug** mostra a sequência de mensagens RAS e H225 em todos os quatro roteadores.

Observação: o comando **debug h225 asn1** gera uma saída muito grande, portanto, deve ser usado com muito cuidado. Algumas saídas desnecessárias foram excluídas dos comandos **debug** abaixo.

Observação: antes de emitir comandos **debug**, consulte [Informações Importantes sobre Comandos Debug](#).

```
!--- 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 DisabledECV-2610-17#
-----
!--- And on the corresponding GK. ?? ECV-2610-15#show
gatek en
      GATEKEEPER ENDPOINT REGISTRATION
      =====
CallSignalAddr Port RASignalAddrPort 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 RASignalAddr 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 gw-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
    }
  }
}

```



```
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 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
}
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 asn1
```

```
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 asn1
```

```
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

RASignalAddr 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
  }
  willSupplyUUIEs 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
}
}
}
}

```

```
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.
```

Informações Relacionadas

- [Como compreender 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](#)
- [Configuração dos gatekeepers H.323](#)
- [Troubleshooting e Entendendo o Gerenciamento de Largura de Banda do Cisco Gatekeeper](#)
- [Configuração do suporte H.323 para interfaces virtuais](#)
- [Suporte à Tecnologia de Voz](#)
- [Suporte aos produtos de Voz e Comunicações Unificadas](#)
- [Troubleshooting da Telefonia IP Cisco](#)
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