

了解 Cisco 网守带宽管理与故障排除

目录

[简介](#)

[带宽管理操作概述](#)

[如何在Cisco网守上配置带宽管理功能](#)

[用于显示带宽信息的网守show命令](#)

[带宽相关的 RAS 消息 \(BRQ/BCF/BRJ\)](#)

[用于报告带宽状态的 RAS 消息](#)

[BRQ 是如何从网关被触发以通知网守减少呼叫带宽](#)

[Examples](#)

[相关信息](#)

简介

本文档假设读者熟悉Cisco IOS®软件网守和网守对网关H.225注册、准入和状态(RAS)消息的基本理解。有关详细信息，请参阅[了解 H.323 网守](#)。

根据H.323建议，Cisco IOS网守应支持以下H.225 RAS带宽管理消息：

- 带宽请求(BRQ)
- 带宽拒绝(BRJ)
- 带宽确认(BCF)消息

此概念可以基于带宽管理。它也可以是一个空函数，接受所有带宽更改请求。换句话说，如果网守允许或拒绝请求或仅忽略请求，则可以使用这些消息管理带宽。

带宽管理操作概述

由于带宽限制，思科网守可以拒绝来自终端的呼叫。如果网守确定网络上没有足够的可用带宽来支持呼叫，则可能会发生这种情况。当终端请求额外带宽或报告用于呼叫的带宽变化时，此功能也在活动呼叫期间运行。

思科网守维护所有活动呼叫的记录，以便管理其区域中的带宽资源。在集群配置中，网守更新协议(GUP)通告指示消息每隔设置的时间间隔交换一次，并传送有关该区域的带宽利用率的信息。此GUP消息交换允许备用网守正确管理单个区域的带宽，即使网守位于单独的物理设备中。

当您决定是否有足够的带宽来接受呼叫准入请求(ARQ)时，Cisco网守使用以下公式计算可用带宽：

$$\text{Available_bandwidth} = (\text{total_allocated_bandwidth}) - (\text{bandwidth_used_locally}) - (\text{bandwidth_used_by_all_alternates}).$$

如果可用带宽足以用于呼叫，则返回准入确认(ACF)，否则返回准入拒绝(ARJ)。

当语音网关向Cisco网守请求带宽时，应考虑编解码器、第2层封装和压缩功能，如压缩RTP [cRTP]。有时，在呼叫建立时未定义这些功能，在这种情况下，在呼叫建立后可以向网守发出带宽更改请求，以调整呼叫使用的带宽量。

注意：自Cisco IOS软件版本12.2(2)XA起，思科仅实施了编解码器更改时任何带宽更改报告的功能。请参阅部分：[如何从网关触发BRQ以通知网守减少呼叫带宽以获取详细信息](#)。

如何在Cisco网守上配置带宽管理功能

自Cisco IOS软件版本12.3(1)起，可在Cisco网守上配置以下类型的区域带宽限制：

- 本地区域和指定远程区域之间所有H.323流量的最大带宽。如果需要，可以为每个远程区域单独重复此配置。
- 本地区域中单个会话允许的最大带宽，通常用于视频应用，而不是语音
- 所有H.323流量允许到所有远程区域的最大带宽
- 新命令bandwidth check-destination在响应ARQ之前会检查目的终端带宽。此命令在Cisco IOS软件版本12.3(1)中引入。

使用以下命令配置Cisco网守区域带宽：

- **bandwidth {interzone | 总计 | session} {default | zone zone-name}最大带宽**
- **bandwidth remote max-bandwidth**
- **bandwidth check-destination**有关详细信息，[请参阅](#)bandwidth命令。

这些配置的值用于处理ARQ和BRQ。

对于ARQ，Cisco网守从相应的区域计数器和/或远程计数器扣除消息中指定的带宽。如果这导致任何计数器变为负数，则呼叫被拒绝，并且ARJ响应被发送，原因为ARJ_REQ_DENIED。如果呼叫请求超过此带宽，则Cisco网守返回准入拒绝(ARJ)。

当BRQ请求带宽增加时，思科网守根据区域和/或远程验证请求。如果验证失败，则发送BRJ响应，原因是BRJ_INSUFFICIENT_RSC和允许的最大带宽量。

用于显示带宽信息的网守show命令

输入show gatekeeper zone status命令以显示所有区域的带宽信息。

```
gkb-1#show gatekeeper zone status
                                GATEKEEPER ZONES
                                =====
GK name      Domain Name    RAS Address    PORT  FLAGS
-----
gkb-1       domainB.com    172.16.13.41   1719  LS
BANDWIDTH INFORMATION (kbps) :
  Maximum total bandwidth : 512
  Current total bandwidth : 128
  Current total bandwidth (w/ Alt GKs) : 128
  Maximum interzone bandwidth : 512
  Current interzone bandwidth : 128
  Current interzone bandwidth (w/ Alt GKs) : 128
  Maximum session bandwidth : 512
SUBNET ATTRIBUTES :
  All Other Subnets : (Enabled)
```

PROXY USAGE CONFIGURATION :

```
Inbound Calls from all other zones :
  to terminals in local zone gkb-1 : use proxy
  to gateways in local zone gkb-1 : do not use proxy
  to MCUs in local zone gkb-1 : do not use proxy
Outbound Calls to all other zones :
  from terminals in local zone gkb-1 : use proxy
  from gateways in local zone gkb-1 : do not use proxy
  from MCUs in local zone gkb-1 : do not use proxy
```

```
gka-1      domainA.com  172.16.13.35  1719  RS
```

输入命令**show gatekeeper zone cluster**以显示带宽信息 (如果网守是集群的一部分)。

```
gkb-1#show gatekeeper zone cluster
```

```
LOCAL CLUSTER INFORMATION
```

```
=====
```

LOCAL GK NAME	ALT GK NAME	PRI	TOT BW (kbps)	INT BW (kbps)	REM BW (kbps)	LAST ANNOUNCE	ALT GK STATUS
gkb-1	gkb-2	0	0	0	0	22s	CONNECTED

输入命令**show gatekeeper calls**以显示该网守允许的活动呼叫以及每个呼叫使用的带宽。

```
gkb-1#show gatekeeper calls
```

```
Total number of active calls = 1.
```

```
GATEKEEPER CALL INFO
```

```
=====
```

LocalCallID	Age (secs)	BW	
3-63466	9	128 (Kbps)	
Endpt(s): Alias	E.164Addr		
src EP: gwa-1	4085272923		
Endpt(s): Alias	E.164Addr		
dst EP: gwb-1	3653		
CallSignalAddr	Port	RASSignalAddr	Port
172.16.13.23	1720	172.16.13.23	54670

[带宽相关的 RAS 消息 \(BRQ/BCF/BRJ\)](#)

BRQ消息用于请求从Cisco网守更改带宽。这是程序：

1. Cisco网守通过endpointIdentifier验证请求，以便在注册数据库中查找终端。
2. 它通过使用callReferenceValue查找呼叫记录，以便查找与具有相同callReferenceValue的终端关联的呼叫。
3. 如果找到呼叫记录，则会计算带宽变化，然后根据需要从全局区域带宽中添加或删除带宽。它对任何正在使用的代理或网关资源都执行相同操作。
4. BCF或BRJ消息将发回终端，具体取决于成功或失败。

[用于报告带宽状态的 RAS 消息](#)

Information Request Response(IRR)“Non-Standard Data”字段还传送有关网关或代理上当前已使用带宽的信息。

[BRQ 是如何从网关被触发以通知网守减少呼叫带宽](#)

在Cisco H.323网关上的Cisco IOS软件版本12.2(2)XA之前，始终会报告呼叫，以便需要64 kbps的

带宽。这是Cisco G.711编解码器的单向带宽。如果呼叫中的终端选择使用更高效的编解码器，则不会向Cisco网守报告。在符合H.323版本3的Cisco IOS软件版本12.2(2)XA或更高版本的Cisco H.323网关中，报告的带宽是双向的。最初，保留128 kb。如果呼叫中的终端选择更高效的编解码器，则Cisco网守会收到带宽更改通知。

注意：在全局配置模式下使用此命令配置Cisco H.323网关，以便使用在Cisco IOS软件版本12.2(2)XA之前使用的报告带宽行为进行区域带宽管理：

```
Router(config-gateway)#emulate cisco h323 bandwidth
```

Examples

本节介绍以下两个示例：

- [集群拓扑中的带宽管理](#)
- [使用BRQ报告带宽](#)

示例 1：集群拓扑中的带宽管理

请参阅从集群中的Cisco网守捕获的调试。调试显示ARQ和ACF消息，包括呼叫所需的带宽。收到这些消息后，思科网守会更新集群中其他网守关于此带宽更改的信息。

注意：以下命令用于捕获此输出：**debug h225 asn1**、**debug ras**、**debug gatekeeper gup asn1**、**debug gatekeeper gup events**。

```
Mar  2 23:59:26.802:
Mar  2 23:59:26.802: RAS INCOMING PDU ::=

value RasMessage ::= admissionRequest :
!--- ARQ is received. { requestSeqNum 5928 callType pointToPoint : NULL callModel direct : NULL
endpointIdentifier {"6196296800000001"} destinationInfo { e164 : "3653" } srcInfo { e164 :
"4085272923", h323-ID : {"gwa-1"} } srcCallSignalAddress ipAddress : { ip 'AC100D0F'H port 11002
} bandwidth 1280
!--- Intial bandwidth of 128k is requested. callReferenceValue 14 nonStandardData {
nonStandardIdentifier h221NonStandard : { t35CountryCode 181 t35Extension 0 manufacturerCode 18
} data '80000008800180'H } conferenceID 'C8C66C7D168011CC800C8828285B8DF6'H activeMC FALSE
answerCall TRUE canMapAlias TRUE callIdentifier { guid 'C8C66C7D168011CC800D8828285B8DF6'H }
willSupplyUUIEs FALSE } Mar 2 23:59:26.810: ARQ (seq# 5928) rcvd Mar 2 23:59:26.810: H225 NONSTD
INCOMING ENCODE BUFFER::= 80 00000880 0180 Mar 2 23:59:26.810: Mar 2 23:59:26.810: H225 NONSTD
INCOMING PDU ::= value ARQnonStandardInfo ::= { sourceAlias { } sourceExtAlias { }
callingOctet3a 128 } parse_arq_nonstd: ARQ Nonstd decode succeeded, remlen = 129 Mar 2
23:59:26.814: RAS OUTGOING PDU ::= value RasMessage ::= admissionConfirm :
!--- ACF is sent back. { requestSeqNum 5928 bandwidth 1280
!--- BW value is included. callModel direct : NULL destCallSignalAddress ipAddress : { ip
'AC100D17'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 2 23:59:26.818: RAS OUTGOING ENCODE BUFFER::=
2B 00172740 050000AC 100D1706 B800EF1A 00C00100 020000 Mar 2 23:59:26.818: Mar 2 23:59:26.818:
IPSOCK_RAS_sendto: msg length 24 from 172.16.13.41:1719 to 172.16.13.23: 51874 Mar 2
23:59:26.822: RASLib::RASSendACF: ACF (seq# 5928) sent to 172.16.13.23 Mar 2 23:59:36.046: GUP
OUTGOING PDU ::=

value GUP_Information ::=
!--- GUP update message is sent to all gatekeepers in the cluster. { protocolIdentifier { 1 2
840 113548 10 0 0 2 } message announcementIndication : { announcementInterval 30
```

```

endpointCapacity 46142 callCapacity 68793 hostName '676B622D31'H percentMemory 25 percentCPU 0
currentCalls 1
  currentEndpoints 2
  zoneInformation
  {
    {
      gatekeeperIdentifier {"gkb-1"}
      altGKIdentifier {"gkb-2"}
      totalBandwidth 1280
      !--- BW info is included. interzoneBandwidth 1280
      remoteBandwidth 1280
    }
  }
}

```

```

Mar  2 23:59:36.050: GUP OUTGOING ENCODE BUFFER ::= 00 0A2A8648 86F70C0A
00000220 001E40B4 3E80010C B904676
B 622D3132 00010002 01420000 67006B00 62002D00 31080067 006B0062
002D0032 40050040 05004005 00
Mar  2 23:59:36.054:
Mar  2 23:59:36.054: Sending GUP ANNOUNCEMENT INDICATION to 172.16.13.16

```

示例 2：使用BRQ报告带宽

在远程网守的带宽限制为144 kbps的设置中，从思科网守查找调试。您在调试中看到，ARQ请求的初始带宽为128 kbps。呼叫建立后，终端会报告带有BRQ消息的带宽变化和16 kbps中使用的带宽变化，这意味着呼叫是使用Cisco G729编解码器建立的。然后请求另一个呼叫，并得到相同的处理。

请注意，如果第二个呼叫在终端请求更改第一个呼叫的带宽之前到达，则思科网守会拒绝该呼叫，因为 $128+128=256$ kbps且配置的带宽大于144 kbps。

```

!
!
!
gatekeeper
zone local gka-1 domainA.com 172.16.13.35
zone remote gkb-1 domainB.com 172.16.13.41 1719
zone prefix gkb-1 36*
zone prefix gka-1 53*
gw-type-prefix 1#* default-technology
bandwidth remote 144
no shutdown
endpoint ttl 120
!

```

此输出是使用命令debug h225 asn1和debug ras 捕获的:

```

gka-1#show logging
Syslog logging: enabled (0 messages dropped, 0 messages rate-limited, 0
flushes, 0 overruns)
  Console logging: disabled
  Monitor logging: level debugging, 1076 messages logged
  Buffer logging: level debugging, 203860 messages logged
  Logging Exception size (4096 bytes)
  Trap logging: level informational, 66 message lines logged

```

Log Buffer (9999999 bytes):

Mar 14 20:18:06.385: RAS INCOMING ENCODE BUFFER ::= 27 88039700 F0003800
31004600 36004100 38003900 38003000 30003000 30003000 30003000 31010180
69860140 04006700 77006100 2D003140 0500000B 40B50000 12138000 0008A001
800B1249 53444E2D 564F4943 45DA4A9C E21FCF11 CC802093 7822E08B 6308E020
00018011 00DA4A9C E21FCF11 CC802193 7822E08B 630100

Mar 14 20:18:06.401:

Mar 14 20:18:06.405: RAS INCOMING PDU ::=

value RasMessage ::= **admissionRequest** :

!--- ARQ is received. { requestSeqNum 920 callType pointToPoint : NULL callModel direct : NULL
endpointIdentifier {"81F6A89800000001"} destinationInfo { e164 : "3653" } srcInfo { h323-ID :
{"gwa-1"} } **bandwidth 1280**

!--- Intial BW of 128 kpbs is requested. callReferenceValue 11 nonStandardData {
nonStandardIdentifier h221NonStandard : { t35CountryCode 181 t35Extension 0 manufacturerCode 18
} data '80000008A001800B124953444E2D564F494345'H } conferenceID
'DA4A9CE21FCF11CC8020937822E08B63'H activeMC FALSE answerCall FALSE canMapAlias TRUE

callIdentifier { guid 'DA4A9CE21FCF11CC8021937822E08B63'H } willSupplyUUIEs FALSE } Mar 14
20:18:06.425: H225 NONSTD INCOMING ENCODE BUFFER ::= 80 000008A0 01800B12 4953444E 2D564F49 4345

Mar 14 20:18:06.429: Mar 14 20:18:06.429: H225 NONSTD INCOMING PDU ::= value ARQnonStandardInfo
::= { sourceAlias { } sourceExtAlias { } callingOctet3a 128 interfaceSpecificBillingId "ISDN-
VOICE" } Mar 14 20:18:06.433: H225 NONSTD OUTGOING PDU ::= value LRQnonStandardInfo ::= { ttl 6

nonstd-callIdentifier { guid 'DA4A9CE21FCF11CC8021937822E08B63'H } callingOctet3a 128
gatewaySrcInfo { h323-ID : {"gwa-1"} } } Mar 14 20:18:06.437: H225 NONSTD OUTGOING ENCODE
BUFFER ::= 82 86B01100 DA4A9CE2 1FCF11CC 80219378 22E08B63 01800D01 40040067 00770061 002D0031

Mar 14 20:18:06.445: Mar 14 20:18:06.445: RAS OUTGOING PDU ::= value RasMessage ::=
locationRequest : { requestSeqNum 2061 destinationInfo { e164 : "3653" } nonStandardData {
nonStandardIdentifier h221NonStandard : { t35CountryCode 181 t35Extension 0 manufacturerCode 18

} data '8286B01100DA4A9CE21FCF11CC8021937822E08B...'H } replyAddress ipAddress : { ip
'AC100D23'H port 1719 } sourceInfo { h323-ID : {"gka-1"} } canMapAlias TRUE } Mar 14
20:18:06.461: RAS OUTGOING ENCODE BUFFER ::= 4A 80080C01 01806986 40B50000 12258286 B01100DA

4A9CE21F CF11CC80 21937822 E08B6301 800D0140 04006700 77006100 2D003100 AC100D23 06B70B80
0D014004 0067006B 0061002D 00310180 Mar 14 20:18:06.469: Mar 14 20:18:06.473: RAS OUTGOING PDU
::= value RasMessage ::= requestInProgress : { requestSeqNum 920 delay 9000 } Mar 14

20:18:06.473: RAS OUTGOING ENCODE BUFFER ::= 80 05000397 2327 Mar 14 20:18:06.473: Mar 14
20:18:06.477: RAS INCOMING ENCODE BUFFER ::= 4F 080C00AC 100D1706 B800AC10 0D17DC0E 40B50000
12390001 40040067 00770062 002D0031 08006700 6B006200 2D003101 10014004 00670077 0062002D

003100AC 100D1706 B8000000 00000000 00000010 40080880 013C0501 0000 Mar 14 20:18:06.489: Mar 14
20:18:06.489: RAS INCOMING PDU ::= value RasMessage ::= locationConfirm : { requestSeqNum 2061
callSignalAddress ipAddress : { ip 'AC100D17'H port 1720 } rasAddress ipAddress : { ip
'AC100D17'H port 56334 } nonStandardData { nonStandardIdentifier h221NonStandard : {

t35CountryCode 181 t35Extension 0 manufacturerCode 18 } data
'00014004006700770062002D0031080067006B00...'H } destinationType { gateway { protocol { voice :
{ supportedPrefixes { } } } } mc FALSE undefinedNode FALSE } } Mar 14 20:18:06.509: H225 NONSTD

INCOMING ENCODE BUFFER ::= 00 01400400 67007700 62002D00 31080067 006B0062 002D0031 01100140
04006700 77006200 2D003100 AC100D17 06B80000 00000000 00000000 Mar 14 20:18:06.517: Mar 14
20:18:06.521: H225 NONSTD INCOMING PDU ::= value LCFnonStandardInfo ::= { termAlias { h323-ID :

{"gwb-1"} } gkID {"gkb-1"} gateways { { gwType voip : NULL gwAlias { h323-ID : {"gwb-1"} }
sigAddress { ip 'AC100D17'H port 1720 } resources { maxDSPs 0 inUseDSPs 0 maxBChannels 0
inUseBChannels 0 activeCalls 0 bandwidth 0 inuseBandwidth 0 } } } } Mar 14 20:18:06.537: RAS

OUTGOING PDU ::= value RasMessage ::= **admissionConfirm** :
!--- ACF is sent back. { requestSeqNum 920 **bandwidth 1280**
!--- BW is included. callModel direct : NULL destCallSignalAddress ipAddress : { ip 'AC100D17'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 14 20:18:06.549: RAS OUTGOING ENCODE BUFFER ::= 2B 00039740
050000AC 100D1706 B800EF1A 00C00100 020000 Mar 14 20:18:06.553: Mar 14 20:18:06.677: RAS

INCOMING ENCODE BUFFER ::= 32 0003981E 00380031 00460036 00410038 00390038 00300030 00300030
00300030 00300031 DA4A9CE2 1FCF11CC 80209378 22E08B63 000B00A0 15080011 00DA4A9C E21FCF11
CC802193 7822E08B 630100 Mar 14 20:18:06.685: Mar 14 20:18:06.689: RAS INCOMING PDU ::= value

RasMessage ::= **bandwidthRequest** :
!--- BRQ message to request bandwidth to be changed to 16 kpbs. { requestSeqNum 921

```
endpointIdentifier {"81F6A89800000001"} conferenceID 'DA4A9CE21FCF11CC8020937822E08B63'H  
callReferenceValue 11 bandwidth 160
```

```
!--- 16 kpbs is requested. callIdentifier { guid 'DA4A9CE21FCF11CC8021937822E08B63'H }  
answeredCall FALSE } Mar 14 20:18:06.697: RAS OUTGOING PDU ::= value RasMessage ::=
```

```
bandwidthConfirm :
```

```
!--- BCF is sent back approving the bandwidth request change. { requestSeqNum 921 bandwidth 160  
}
```

```
Mar 14 20:18:06.697: RAS OUTGOING ENCODE BUFFER ::= 34 039800A0
```

```
Mar 14 20:18:06.701:
```

```
Mar 14 20:18:12.066: RAS INCOMING ENCODE BUFFER ::= 0E 40039906 0008914A  
00030000 0100AC10 0D0FE511 00040067 006B0061 002D0031 00B50000 12288F00  
0002003B 0180211E 00380031 00460036 00410038 00390038 00300030 00300030  
00300030 00300031 01000180
```

```
Mar 14 20:18:12.074:
```

```
Mar 14 20:18:12.078: RAS INCOMING PDU ::=
```

```
value RasMessage ::= registrationRequest :
```

```
{  
  requestSeqNum 922  
  protocolIdentifier { 0 0 8 2250 0 3 }  
  discoveryComplete FALSE  
  callSignalAddress  
  {  
  }  
  rasAddress  
  {  
    ipAddress :  
    {  
      ip 'AC100D0F'H  
      port 58641  
    }  
  }  
  terminalType  
  {  
    mc FALSE  
    undefinedNode FALSE  
  }  
  gatekeeperIdentifier {"gka-1"}  
  endpointVendor  
  {  
    vendor  
    {  
      t35CountryCode 181  
      t35Extension 0  
      manufacturerCode 18  
    }  
  }  
  timeToLive 60  
  keepAlive TRUE  
  endpointIdentifier {"81F6A89800000001"}  
  willSupplyUUIEs FALSE  
  maintainConnection TRUE  
}
```

```
Mar 14 20:18:12.098: RAS OUTGOING PDU ::=
```

```
value RasMessage ::= registrationConfirm :
```

```
{  
  requestSeqNum 922
```



```

protocolIdentifier { 0 0 8 2250 0 3 }
callSignalAddress
{
}
gatekeeperIdentifier {"gka-1"}
endpointIdentifier {"81F6A89800000001"}
alternateGatekeeper
{
}
timeToLive 60
willRespondToIRR FALSE
maintainConnection TRUE
}

```

```

Mar 14 20:18:12.106: RAS OUTGOING ENCODE BUFFER ::= 12 40039906 0008914A
00030008 0067006B 0061002D 00311E00 38003100 46003600 41003800 39003800
30003000 30003000 30003000 3000310F 8A010002 003B0100 0180

```

```

Mar 14 20:18:12.114:

```

```

Mar 14 20:18:14.586: RAS INCOMING ENCODE BUFFER ::= 5A C0039A08 80013C05
04010020 40078000 38003100 46003600 41003800 39003800 30003000 30003000
30003000 30003100 AC100D0F E5110100 AC100D0F 06B80140 04006700 77006100
2D003101 C100B500 00120570 2BA39307 000BDA4A 9CE21FCF 11CC8020 937822E0
8B630000 A003C000 1100DA4A 9CE21FCF 11CC8021 937822E0 8B630E20 0100

```

```

Mar 14 20:18:14.602:

```

```

Mar 14 20:18:14.602: RAS INCOMING PDU ::=

```

```

value RasMessage ::= infoRequestResponse :

```

```

!--- IRR message is received and it includes the bandwidth used on the gateway. { requestSeqNum
923 endpointType { gateway { protocol { voice : { supportedPrefixes { { prefix e164 : "1#" } } } }
} } mc FALSE undefinedNode FALSE } endpointIdentifier {"81F6A89800000001"} rasAddress ipAddress
: { ip 'AC100D0F'H port 58641 } callSignalAddress { ipAddress : { ip 'AC100D0F'H port 1720 } }
endpointAlias { h323-ID : {"gwa-1"} } perCallInfo { { nonStandardData { nonStandardIdentifier
h221NonStandard : { t35CountryCode 181 t35Extension 0 manufacturerCode 18 } data '702BA39307'H }
callReferenceValue 11 conferenceID 'DA4A9CE21FCF11CC8020937822E08B63'H h245 { } callSignaling {
} callType pointToPoint : NULL bandwidth 160
    callModel direct : NULL
    callIdentifier
    {
        guid 'DA4A9CE21FCF11CC8021937822E08B63'H
    }
}
}
needResponse FALSE
}

```

```

Mar 14 20:18:14.646: H225 NONSTD INCOMING ENCODE BUFFER ::= 70 2BA39307

```

```

Mar 14 20:18:14.646:

```

```

Mar 14 20:18:14.646: H225 NONSTD INCOMING PDU ::=

```

```

value IRRperCallnonStandardInfo ::=

```

```

{
    startTime 732140295
}

```

```

Mar 14 20:18:28.008: RAS INCOMING ENCODE BUFFER ::= 27 88039B00 F0003800
31004600 36004100 38003900 38003000 30003000 30003000 30003000 31010180
69860140 04006700 77006100 2D003140 0500000C 40B50000 12030000 00000000
00000000 00000000 00000000 0008E020 00018011 00000000 00000000 00000000

```


00000000 000100
Mar 14 20:18:28.024:
Mar 14 20:18:28.024: RAS INCOMING PDU ::=

```
value RasMessage ::= admissionRequest :
{
  requestSeqNum 924
  callType pointToPoint : NULL
  callModel direct : NULL
  endpointIdentifier {"81F6A89800000001"}
  destinationInfo
  {
    e164 : "3653"
  }
  srcInfo
  {
    h323-ID : {"gwa-1"}
  }
  bandwidth 1280
  callReferenceValue 12
  nonStandardData
  {
    nonStandardIdentifier h221NonStandard :
    {
      t35CountryCode 181
      t35Extension 0
      manufacturerCode 18
    }
    data '000000'H
  }
  conferenceID '00000000000000000000000000000000'H
  activeMC FALSE
  answerCall FALSE
  canMapAlias TRUE
  callIdentifier
  {
    guid '00000000000000000000000000000000'H
  }
  willSupplyUUIEs FALSE
}
```

Mar 14 20:18:28.044: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 0000
Mar 14 20:18:28.044:
Mar 14 20:18:28.044: H225 NONSTD INCOMING PDU ::=

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

Mar 14 20:18:28.048: H225 NONSTD OUTGOING PDU ::=

```
value LRQnonStandardInfo ::=
{
  ttl 6
}
```

```
nonstd-callIdentifier
{
  guid '00000000000000000000000000000000'H
}
gatewaySrcInfo
{
  h323-ID : {"gwa-1"}
}
}
```

Mar 14 20:18:28.056: H225 NONSTD OUTGOING ENCODE BUFFER::= 82 86901100
00000000 00000000 00000000 00000000 0D014004 00670077 0061002D 0031

Mar 14 20:18:28.060:

Mar 14 20:18:28.060: RAS OUTGOING PDU ::=

value RasMessage ::= locationRequest :

```
{
  requestSeqNum 2062
  destinationInfo
  {
    e164 : "3653"
  }
  nonStandardData
  {
    nonStandardIdentifier h221NonStandard :
    {
      t35CountryCode 181
      t35Extension 0
      manufacturerCode 18
    }
    data '828690110000000000000000000000000000000000000000...'H
  }
  replyAddress ipAddress :
  {
    ip 'AC100D23'H
    port 1719
  }
  sourceInfo
  {
    h323-ID : {"gka-1"}
  }
  canMapAlias TRUE
}
```

Mar 14 20:18:28.076: RAS OUTGOING ENCODE BUFFER::= 4A 80080D01 01806986
40B50000 12238286 90110000 00000000 00000000 00000000 0000000D 01400400
67007700 61002D00 3100AC10 0D2306B7 0B800D01 40040067 006B0061 002D0031
0180

Mar 14 20:18:28.084:

Mar 14 20:18:28.088: RAS OUTGOING PDU ::=

value RasMessage ::= requestInProgress :

```
{
  requestSeqNum 924
  delay 9000
}
```

Mar 14 20:18:28.088: RAS OUTGOING ENCODE BUFFER::= 80 0500039B 2327

```
Mar 14 20:18:28.088:
Mar 14 20:18:28.097: RAS INCOMING ENCODE BUFFER ::= 4F 080D00AC 100D1706
B800AC10 0D17DC0E 40B50000 12390001 40040067 00770062 002D0031 08006700
6B006200 2D003101 10014004 00670077 0062002D 003100AC 100D1706 B8000000
00000000 00000010 40080880 013C0501 0000
Mar 14 20:18:28.105:
Mar 14 20:18:28.109: RAS INCOMING PDU ::=
```

```
value RasMessage ::= locationConfirm :
{
  requestSeqNum 2062
  callSignalAddress ipAddress :
  {
    ip 'AC100D17'H
    port 1720
  }
  rasAddress ipAddress :
  {
    ip 'AC100D17'H
    port 56334
  }
  nonStandardData
  {
    nonStandardIdentifier h221NonStandard :
    {
      t35CountryCode 181
      t35Extension 0
      manufacturerCode 18
    }
    data '00014004006700770062002D0031080067006B00...'H
  }
  destinationType
  {
    gateway
    {
      protocol
      {
        voice :
        {
          supportedPrefixes
          {
            }
          }
        }
      }
    }
    mc FALSE
    undefinedNode FALSE
  }
}
```

```
Mar 14 20:18:28.129: H225 NONSTD INCOMING ENCODE BUFFER ::= 00 01400400
67007700 62002D00 31080067 006B0062 002D0031 01100140 04006700 77006200
2D003100 AC100D17 06B80000 00000000 00000000
Mar 14 20:18:28.133:
Mar 14 20:18:28.137: H225 NONSTD INCOMING PDU ::=
```

```
value LCFnonStandardInfo ::=
{
  termAlias
  {
    h323-ID : {"gwb-1"}
  }
}
```

```

gkID {"gkb-1"}
gateways
{
  {
    gwType voip : NULL
    gwAlias
    {
      h323-ID : {"gwb-1"}
    }
    sigAddress
    {
      ip 'AC100D17'H
      port 1720
    }
    resources
    {
      maxDSPs 0
      inUseDSPs 0
      maxBChannels 0
      inUseBChannels 0
      activeCalls 0
      bandwidth 0
      inuseBandwidth 0
    }
  }
}
}

```

Mar 14 20:18:28.153: RAS OUTGOING PDU ::=

```

value RasMessage ::= admissionConfirm :
{
  requestSeqNum 924
  bandwidth 1280
  callModel direct : NULL
  destCallSignalAddress ipAddress :
  {
    ip 'AC100D17'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 14 20:18:28.169: RAS OUTGOING ENCODE BUFFER ::= 2B 00039B40 050000AC
100D1706 B800EF1A 00C00100 020000
Mar 14 20:18:28.169:

```
Mar 14 20:18:28.289: RAS INCOMING ENCODE BUFFER ::= 32 00039C1E 00380031
00460036 00410038 00390038 00300030 00300030 00300030 00300031 00000000
00000000 00000000 00000000 000C00A0 15080011 00000000 00000000 00000000
00000000 000100
```

```
Mar 14 20:18:28.301:
```

```
Mar 14 20:18:28.301: RAS INCOMING PDU ::=
```

```
value RasMessage ::= bandwidthRequest :
{
  requestSeqNum 925
  endpointIdentifier {"81F6A89800000001"}
  conferenceID '00000000000000000000000000000000'H
  callReferenceValue 12
  bandwidth 160
  callIdentifier
  {
    guid '00000000000000000000000000000000'H
  }
  answeredCall FALSE
}
```

```
Mar 14 20:18:28.309: RAS OUTGOING PDU ::=
```

```
value RasMessage ::= bandwidthConfirm :
{
  requestSeqNum 925
  bandwidth 160
}
```

```
Mar 14 20:18:28.313: RAS OUTGOING ENCODE BUFFER ::= 34 039C00A0
```

```
Mar 14 20:18:28.313:
```

[相关信息](#)

- [VoIP呼叫准入控制](#)
- [Cisco高性能网守](#)
- [思科H.323可扩展性和互操作性增强](#)
- [带有网守的 VoIP](#)
- [语音技术支持](#)
- [语音和统一通信产品支持](#)
- [Cisco IP 电话故障排除](#)
- [技术支持和文档 - Cisco Systems](#)