# 使用VCS/Expressway从注册到CUCM的终端拨打 IP地址配置示例

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# 简介

本文档介绍如何通过思科视频通信服务器(VCS)或Cisco Expressway作为解决方案从注册到思科统一通信管理器(CUCM)的终端拨打IP地址。

# 先决条件

## 要求

Cisco 建议您了解以下主题:

- Cisco VCS/Expressway上的邻居区域
- 在Cisco VCS/Expressway上转换和搜索规则
- CUCM上的会话发起协议(SIP)路由模式和SIP中继

**注意:**本文档假设从VCS Control/Expressway-C到VCS Expressway/Expressway-E的穿越区 域处于活动状态,并且互通密钥安装在VCS/Expressway上。

## 使用的组件

本文档中的信息基于以下软件和硬件版本:

• Cisco VCS x8.1及更高版本

• CUCM版本9及更高版本

注意:同一文档可用于Expressway系列部署。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原 始(默认)配置。如果您使用的是真实网络,请确保您已经了解所有命令的潜在影响。

# 背景

CUCM不支持IP地址拨号。如果您想使用IP地址拨号,思科建议使用本文中描述的两个步骤之一。 例如,注册到CUCM的终端通过IP地址拨打H.323终端。

#### 第1项

- •为IP地址添加后缀,使字符串类似于SIP统一资源标识符(URI)。
- •例如,为了拨打IP地址198.51.100.2,用户将拨打198.51.100.2@domain。
- 管理员必须教育用户拨打<IP address>@domain。此域可以是公司内部域或虚拟域。本文档基 于VCS域的使用。

#### 第2项

- •用符号替换点,以便将IP地址转换为字符串。
- •例如,为了拨打IP地址198.51.100.2,用户将拨打198\*51\*100\*2。

**注意:**在这两个选项中,Expressway-E尝试使用H.323协议调用IP地址。如果目标终端不支持 H.323,则必须启用SIP UDP。否则,请禁用SIP UDP。

**注意:**选项2可与IP电话一起使用,也可在您从使用Tandberg Codec(TC)软件的终端的CLI或 Web GUI拨号时使用。当您尝试使用触摸面板或遥控器拨号\*时,这可能不起作用,因为\*自动 转换为。使用这些选项拨号时。

### 配置

**注意**:此配置适用于之前列出的两个选项。

#### CUCM 配置

在CUCM上,管理员必须在端口5060上为VCS配置SIP中继安全配置文件(这假定5060是VCS上通 过TCP指向CUCM的端口)。

**注意:**如果将端口5060 / 5061用于移动和远程访问(MRA),请将其他TCP端口(如5075)用于SIP中继安全配置文件。

在CUCM上选择System > Security > SIP Trunk Security Profile,然后单击Add New。

| Cisco Unified CM Administration                               |                                   | Navigation Cisco Unified CM          | Administration : Go    |
|---------------------------------------------------------------|-----------------------------------|--------------------------------------|------------------------|
| System + Call Routing + Media Resources + Advanced Features + | Device - Application -            | User Management 👻 Bulk Administratio | on ≖ Help <del>-</del> |
| Find and List SIP Trunk Security Profiles                     |                                   |                                      |                        |
| Add New                                                       |                                   |                                      |                        |
| Status                                                        |                                   |                                      |                        |
| (i) 0 records found                                           |                                   |                                      |                        |
|                                                               |                                   |                                      |                        |
| SIP Trunk Security Profile                                    |                                   |                                      | Rows per Page 50 +     |
| Find SIP Trunk Security Profile where Name   begins with      | •                                 | Find Clear Filter 🔶 🛥                |                        |
| No active query. Plea                                         | ase enter your search criteria us | ing the options above.               |                        |
| Add New                                                       |                                   |                                      |                        |

#### 创建SIP中继安全配置文件,如此屏幕截图所示。

| CISCO Unified CM                        | Administration                       | Navigation         Cisco Unified CM Administration         Co           admin         Search Documentation         About         Logout |
|-----------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| System - Call Routing - Media Resource  | s · Advanced Features · Device ·     | Application - User Management - Bulk Administration - Help -                                                                            |
| SIP Trunk Security Profile Configura    | tion                                 | Related Links: Back To Find/List 🗘 Go                                                                                                   |
| 🔚 Save 🗙 Delete 📄 Copy 省 R              | eset 🧷 Apply Config ᆛ Add New        |                                                                                                                                         |
| Status                                  |                                      |                                                                                                                                         |
| i Status: Ready                         |                                      |                                                                                                                                         |
| SIP Trunk Security Profile Information  | on                                   |                                                                                                                                         |
| Name*                                   | Non Secure SIP Trunk Profile For VCS | 5                                                                                                                                       |
| Description                             | Non Secure SIP Trunk Profile authent | ticated by null S                                                                                                                       |
| Device Security Mode                    | Non Secure                           | ÷                                                                                                                                       |
| Incoming Transport Type*                | TCP+UDP                              | :                                                                                                                                       |
| Outgoing Transport Type                 | ТСР                                  | \$                                                                                                                                      |
| Enable Digest Authentication            |                                      |                                                                                                                                         |
| Nonce Validity Time (mins)*             | 600                                  |                                                                                                                                         |
| X.509 Subject Name                      |                                      |                                                                                                                                         |
| Incoming Port*                          | 5060                                 |                                                                                                                                         |
| Enable Application level authorization  |                                      |                                                                                                                                         |
| Accept presence subscription            |                                      |                                                                                                                                         |
| Accept out-of-dialog refer**            |                                      |                                                                                                                                         |
| Accept unsolicited notification         |                                      |                                                                                                                                         |
| Accept replaces header                  |                                      |                                                                                                                                         |
| Transmit security status                |                                      |                                                                                                                                         |
| Allow charging header                   |                                      |                                                                                                                                         |
| SIP V.150 Outbound SDP Offer Filtering* | Use Default Filter                   | :                                                                                                                                       |
| Save Delete Copy Reset                  | Apply Config Add New                 |                                                                                                                                         |

在CUCM上,向VCS Control/Expressway-C添加SIP中继。

选择Device > Trunk,然后单击Add New。

| ahaha      | <b>Cisco Unified CM</b>       | Administration          |            |                   |                           |                         |        | Navi   | igation Cis | to Unified CM Ad | ministration | ÷ 60   |
|------------|-------------------------------|-------------------------|------------|-------------------|---------------------------|-------------------------|--------|--------|-------------|------------------|--------------|--------|
| cisco      | For Cisco Unified Community   | ations Solutions        |            |                   |                           |                         |        | ucmapp | Search      | ocumentation     | About        | Logout |
| System 👻   | Cell Routing 👻 Media Resource | a 👻 Advanced Features 👻 | Device +   | Application +     | User Management 👻         | Bulk Administration 🔻   | Help 🔻 |        |             |                  |              |        |
| Find and I | List Trunks                   |                         |            |                   |                           |                         |        |        |             |                  |              |        |
| 🚽 Add N    | PAG .                         |                         |            |                   |                           |                         |        |        |             |                  |              |        |
| _          |                               |                         |            |                   |                           |                         |        |        |             |                  |              |        |
| Trunks     |                               |                         |            |                   |                           |                         |        |        |             |                  |              |        |
| Find Trunk | s where Device Name           | > begins with           | Select Its | em or enter sear  | Find Clear Filter         | <b>+</b> =              |        |        |             |                  |              |        |
|            |                               |                         | No active  | query. Please ent | er your search onteria us | sing the options above. |        |        |             |                  |              |        |
| Add Nev    |                               |                         |            |                   |                           |                         |        |        |             |                  |              |        |

## 这些中继设置取决于设计。

| System - Call Routing - Media Resources - Advanced Features - Device - A                                                                                                                                                                  | oplication + User Management + Bu | k Administration + Help + |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------|--------------------------------------|
| Trunk Configuration                                                                                                                                                                                                                       |                                   |                           | Related Links: Back To Find/List 🗧 🕻 |
| Eave                                                                                                                                                                                                                                      |                                   |                           |                                      |
| Status<br>Status: Ready                                                                                                                                                                                                                   |                                   |                           |                                      |
| - Device Information                                                                                                                                                                                                                      |                                   |                           |                                      |
| Product: SIP T                                                                                                                                                                                                                            | runk                              |                           |                                      |
| Device Protocol: SUP                                                                                                                                                                                                                      |                                   |                           |                                      |
| Trunk Service Type Noner                                                                                                                                                                                                                  | (Default)                         |                           |                                      |
| Device Name <sup>a</sup> VCS                                                                                                                                                                                                              | trunk                             |                           |                                      |
| Description Trun                                                                                                                                                                                                                          | k to VCS-Control                  |                           |                                      |
| Device Pool " Defi                                                                                                                                                                                                                        | auto                              | •                         |                                      |
| Common Device Configuration < N                                                                                                                                                                                                           | one >                             | +                         |                                      |
| Call Classification*                                                                                                                                                                                                                      | System Default                    | +                         |                                      |
| Nedis Resource Group List                                                                                                                                                                                                                 | one >                             | +                         |                                      |
| Location <sup>2</sup>                                                                                                                                                                                                                     | None                              | +                         |                                      |
| AAR Group                                                                                                                                                                                                                                 | one >                             | +                         |                                      |
| Tunneled Protocol <sup>a</sup>                                                                                                                                                                                                            | e                                 | *                         |                                      |
| QSIG Variant*                                                                                                                                                                                                                             | Changes                           | +                         |                                      |
| ASN.1 ROSE OID Encoding*                                                                                                                                                                                                                  | Changes                           | +                         |                                      |
| Packet Capture Mode*                                                                                                                                                                                                                      |                                   | ;                         |                                      |
| Packet Capture Duration 0                                                                                                                                                                                                                 |                                   |                           |                                      |
| Media Termination Point Required                                                                                                                                                                                                          |                                   |                           |                                      |
| 0                                                                                                                                                                                                                                         |                                   |                           |                                      |
| SIP Information                                                                                                                                                                                                                           |                                   |                           |                                      |
| Destination                                                                                                                                                                                                                               |                                   |                           |                                      |
| Destination Address is an SRV                                                                                                                                                                                                             |                                   |                           |                                      |
| Destination Address Destination Address JP                                                                                                                                                                                                | n Destination Port                | Status                    | itatus Resear Duration               |
| 1* 10.106.93.178                                                                                                                                                                                                                          | 5060                              | up                        | Time Up: 0 day 0 hour 20 minutes 🔳 😑 |
| MTP Preferred Originating Codec* 211ulaw                                                                                                                                                                                                  | 4                                 |                           |                                      |
| BLF Presence Group 4 Standard Presence group                                                                                                                                                                                              | *                                 |                           |                                      |
| SIP Trunk Security Profile* Non Secure SIP Trunk Profile For VCS                                                                                                                                                                          | \$                                |                           |                                      |
| Rerouting Calling Search Space < None >                                                                                                                                                                                                   | \$                                |                           |                                      |
| Cut-Of-Dialog Refer Calling Search Space Chone >                                                                                                                                                                                          |                                   |                           |                                      |
| SUBSCRUBE Calling Search Space < None >                                                                                                                                                                                                   | •                                 |                           |                                      |
| DIP Profile Tor Capo VCS                                                                                                                                                                                                                  | 2 York Details                    |                           |                                      |
| ND PRESERVE                                                                                                                                                                                                                               | *                                 |                           |                                      |
| Normalization Script                                                                                                                                                                                                                      |                                   |                           |                                      |
| C Sable Terre                                                                                                                                                                                                                             |                                   |                           |                                      |
| Parameter Name Parameter Value                                                                                                                                                                                                            |                                   |                           |                                      |
| 1                                                                                                                                                                                                                                         |                                   |                           |                                      |
| Recorde a Referencia                                                                                                                                                                                                                      |                                   |                           |                                      |
| Recording Information                                                                                                                                                                                                                     |                                   |                           |                                      |
| (in the set                                                                                                                                                                                                                               |                                   |                           |                                      |
| None This trunk connects to a recording-enabled gataway                                                                                                                                                                                   |                                   |                           |                                      |
| None     This brunk connects to a recording-enabled gataway     This brunk connects to other duaters with recording-enabled gataways                                                                                                      |                                   |                           |                                      |
| None     This trunk connects to a recording-enabled gataway     This trunk connects to other duaters with recording-enabled gataways                                                                                                      |                                   |                           |                                      |
| None     This brunk connects to a recording-enabled gataway     This brunk connects to other duaters with recording-enabled gataways      Geolocation Configuration      Geolocation                                                      |                                   |                           |                                      |
| None     This brunk connects to a recording-enabled gataway     This brunk connects to other duaters with recording-enabled gataways      Geolocation Configuration     Geolocation Kine > 0     Coolocation Filter   < None > 0          |                                   |                           |                                      |
| None     This trunk connects to a recording-enabled gateway     This trunk connects to other duaters with recording-enabled gateways      Geolocation Configuration      deplocation Riter < None >          Send Geolocation Information |                                   |                           |                                      |



在VCS Control/Expressway-C上创建指向CUCM的邻居区域。

### 选择**Configuration > Zones > Zones**,然**后单**击New以添加区域。

|                              | Configuration /                       | Applications   | Users               | Maintenance |             |            |                                         | ?                               |
|------------------------------|---------------------------------------|----------------|---------------------|-------------|-------------|------------|-----------------------------------------|---------------------------------|
| ones                         |                                       |                |                     |             |             |            | You are here: C                         | onfiguration • Zones • Zo       |
| Name 🔻                       | Туре                                  | Calls          | Bandwidth           | h used      | H323 status | SIP status | Search rule status                      | Actions                         |
| DefaultZone                  | Default zone                          | 0              | 0 kbps              |             | On          | On         |                                         | View/Edit                       |
| ≝<br>些区域设置                   | □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | 0              |                     |             |             |            |                                         |                                 |
| CISCO Cisco Telel            | Presence Video Com                    | munication Ser | ver Control         |             |             |            |                                         | Russ Stor                       |
| reate zone                   | aration Appressors                    | Cools Maillo   | and rece            |             |             |            | You are here: Configu                   | anlien I Zonne I Zonne I Create |
| Configuration                |                                       |                |                     |             |             |            | 101 00 00 00 00 00 00 00 00 00 00 00 00 |                                 |
| Name                         |                                       | • 2            | me lowards CUCM     | 3           |             |            |                                         |                                 |
| Гуро                         |                                       | • •            | leighbor            | :)          | λi .        |            |                                         |                                 |
| top count                    |                                       | <b>*</b> 15    | 0                   |             |             |            |                                         |                                 |
|                              |                                       |                |                     |             |             |            |                                         |                                 |
| 1323                         |                                       |                |                     |             |             |            |                                         |                                 |
| lode                         |                                       |                | <b>a</b> = 1] (j)   |             |             |            |                                         |                                 |
|                              |                                       |                |                     |             |             |            |                                         |                                 |
| ar                           |                                       |                |                     |             |             |            |                                         |                                 |
| lode                         |                                       |                | <b>h</b> 🗊 🛞        |             |             |            |                                         |                                 |
| Port .                       |                                       | * 50           | (j) (da             |             |             |            |                                         |                                 |
| narsport                     |                                       |                | CP :] (j)           |             |             |            |                                         |                                 |
| coepit provied registrations |                                       |                | llow 😳 👔            |             |             |            |                                         |                                 |
| ledia encryption mode        |                                       |                | ulo                 | : 0         |             |            |                                         |                                 |
| CE support                   |                                       |                | a - 1) (j)          |             |             |            |                                         |                                 |
| uttenfication                |                                       |                |                     |             |             |            |                                         |                                 |
|                              |                                       | G              | n ant shark an da   |             |             |            |                                         |                                 |
| Ultranscation policy         |                                       |                | No not chock creden |             |             |            |                                         |                                 |
| ar accretication star mode   |                                       | 6              |                     |             |             |            |                                         |                                 |
| ocation                      |                                       |                |                     |             |             |            |                                         |                                 |
| eer 1 address                |                                       | 11             | 105.93.167          |             | 2           |            |                                         |                                 |
| eer 2 address                |                                       |                |                     |             |             |            |                                         |                                 |
| feer 3 address               |                                       |                |                     |             |             |            |                                         |                                 |
| eer 4 address                |                                       |                |                     |             | 3           |            |                                         |                                 |
|                              |                                       |                |                     |             |             |            |                                         |                                 |
| -per 6 accress               |                                       |                |                     |             |             |            |                                         |                                 |
| eer 6 address                |                                       |                |                     |             | 9           |            |                                         |                                 |

Create zone Cancel

确保在VCS Control / Expressway-C**上将Calls to unknown IP addresses**参数设置为**Indirect**。为此 ,请选择**Configuration > Dial Plan > Configuration**。 CISCO Cisco TelePresence Video Communication Server Control

| Sta | itus       | System       | Configuration | Applications | Users    | Maintenand | nce ? Help. of                                          | Logout     |
|-----|------------|--------------|---------------|--------------|----------|------------|---------------------------------------------------------|------------|
| Di  | al pla     | n configu    | uration       |              |          |            | You are here: Configuration > Dial plan > Configuration | liguration |
| 0   | Configur   | ation        |               |              |          |            |                                                         |            |
|     | Calls to u | nknown IP ad | idresses      |              | Indirect | :0         | ]                                                       |            |
| F   | alback (   | ilies        |               |              |          |            | ()                                                      |            |
| _   |            |              |               |              |          |            |                                                         |            |

Save

## VCS Expressway配置

在Calls to unknown IP addresses下拉列表中,在VCS Expressway/Expressway-E上选择**Direct**。 VCS Expressway/Expressway-E上不需要搜索规则来路由基于IP的呼叫。

#### ահանո

#### CISCO Cisco TelePresence Video Communication Server Expressway

| - | Status System Configuration Applications | Users Maintenance | ? Help. on Logout                                       |
|---|------------------------------------------|-------------------|---------------------------------------------------------|
| 1 | Dial plan configuration                  |                   | You are here: Configuration + Dial plan + Configuration |
| 1 | Configuration                            |                   |                                                         |
|   | Calls to unknown IP addresses            | Direct 0          |                                                         |
|   | Fallback alias                           |                   |                                                         |

#### 选项1 — 向IP地址添加后缀

在CUCM上,添加SIP路由模式,以便将后缀为**vcs.domain**的呼叫发送到VCS Control/Expressway-C中继。

选择Call Routing > SIP Route Pattern, 然后单击Add New。

| ababa                            | Cisco Unified CM Administration                          | Unified CM A  | dministration      | : Go       |              |                     |                     |  |  |  |  |  |
|----------------------------------|----------------------------------------------------------|---------------|--------------------|------------|--------------|---------------------|---------------------|--|--|--|--|--|
| cisco                            | For Cisco Unified Communications Solutions               |               | adm                | in S       | earch Docum  | entation About      | Logout              |  |  |  |  |  |
| System -                         | Call Routing      Media Resources      Advanced Features | Device 👻      | Application +      | User Ma    | anagement 👻  | Bulk Administration | r Help <del>-</del> |  |  |  |  |  |
| Find and List SIP Route Patterns |                                                          |               |                    |            |              |                     |                     |  |  |  |  |  |
| Add New                          |                                                          |               |                    |            |              |                     |                     |  |  |  |  |  |
| Status                           |                                                          |               |                    |            |              |                     |                     |  |  |  |  |  |
| (i) 0 rec                        | ords found                                               |               |                    |            |              |                     |                     |  |  |  |  |  |
| SIP Rou                          | te Pattern                                               |               |                    |            |              | Rows per Page       | 50 :                |  |  |  |  |  |
| Find SIP R                       | oute Pattern where IPv4 Pattern 🗘 begins with 🗧          |               |                    | Find       | Clear Filter | 4                   |                     |  |  |  |  |  |
|                                  | No active query. Please enter you                        | ur search cri | iteria using the o | ptions abo | ve.          |                     |                     |  |  |  |  |  |
| Add Nev                          |                                                          |               |                    |            |              |                     |                     |  |  |  |  |  |

设置SIP路由模式设置,如下所示。

IPV4模式:vcs.domain

| ululu Cisco l             | <b>Unified CM Ad</b>  | ministration        |          | Navigation    | Cisco Unified CM Ad | dministration         | ÷ Go   |
|---------------------------|-----------------------|---------------------|----------|---------------|---------------------|-----------------------|--------|
| CISCO For Cisco U         | Inified Communication | ns Solutions        |          | admi          | in Search Docum     | entation About        | Logout |
| System - Call Routing -   | Media Resources *     | Advanced Features 👻 | Device 👻 | Application 👻 | User Management 👻   | Bulk Administration 👻 | Help 👻 |
| SIP Route Pattern Co      | nfiguration           |                     |          |               | Related Links:      | Back To Find/List     | \$ Go  |
| Save                      |                       |                     |          |               |                     |                       |        |
| Status                    |                       |                     |          |               |                     |                       |        |
| i Status: Ready           |                       |                     |          |               |                     |                       |        |
| Pattern Definition        |                       |                     |          |               |                     |                       |        |
| Pattern Usage*            | Domain Routing        |                     | \$       | 1             |                     |                       |        |
| IPv4 Pattern*             | vcs.domain            |                     |          |               |                     |                       |        |
| IPv6 Pattern              |                       |                     |          | ·             |                     |                       |        |
| Description               |                       |                     |          |               |                     |                       |        |
| Route Partition           | < None >              |                     | \$       |               |                     |                       |        |
| SIP Trunk/Route List*     | VCS_trunk             |                     | ÷) (     | idit)         |                     |                       |        |
| Block Pattern             |                       |                     |          |               |                     |                       |        |
| Calling Party Transfor    | mations               |                     |          |               |                     |                       |        |
| Use Calling Party's E     | xternal Phone Mask    |                     |          |               |                     |                       |        |
| Calling Party Transforma  | ation Mask            |                     |          |               |                     |                       |        |
| Prefix Digits (Outgoing ( | Calls)                |                     |          |               |                     |                       |        |
| Calling Line ID Presenta  | tion* Default         |                     |          | \$            |                     |                       |        |
| Calling Line Name Prese   | entation* Default     |                     |          | ;             |                     |                       |        |
| Connected Party Tran      | sformations           |                     |          |               |                     |                       |        |
| Connected Line ID Prese   | entation* Default     |                     |          | \$            |                     |                       |        |
| Connected Line Name P     | resentation* Default  |                     |          | \$            |                     |                       |        |
| Save                      |                       |                     |          |               |                     |                       |        |

在VCS Control/Expressway-C上,在拨叫IP地址时转换别名的条带域部分。

### 选择Configuration > Dial Plan > Transforms,然后单击New。

| cis    | CO Cise    | co TelePreser | <b>ice</b> Video Con | nmunica  | tion Serv | ver Control |                    |                                    |               |              |
|--------|------------|---------------|----------------------|----------|-----------|-------------|--------------------|------------------------------------|---------------|--------------|
| Status | System     | Configuration | Applications         | Users    | Mainter   | nance       |                    |                                    |               | 2 😁          |
| Trans  | forms      |               |                      |          |           |             |                    | You are here: Configuration        | Dial plan     | Transforms   |
|        | Priority = | State         | Description          |          | Pattern   | Туре        | Behavior           | Replace                            | Actions       | _            |
| New    | Delete     | Disable       | Select all Unse      | lect all |           | T           | Transforms are app | plied in priority order, with 1 be | aing the high | est priority |

如图所示创建转换。

模式字符串:(.\*)\.(.\*)\.(.\*)\.(.\*)@vcs.domain

替换字符串:\1.\2.\3.\4

CISCO Cisco TelePresence Video Communication Server Control

| S  | atus System      | Configuration | Applications | Users          | Maintenance                           |   |        | (?) Help. Or L                                               | buogo   |
|----|------------------|---------------|--------------|----------------|---------------------------------------|---|--------|--------------------------------------------------------------|---------|
| С  | reate transform  | n             |              |                |                                       |   | You an | re here: Configuration > Dial plan > Transforms > Create tra | ensform |
| d. | Configuration    |               |              |                |                                       |   |        |                                                              |         |
|    | Priority         |               |              | 1              |                                       |   |        |                                                              |         |
|    | Description      |               |              | Tmasform       | to strip domain from ip-address calls |   |        | ۲                                                            |         |
|    | Pattern type     |               |              | Regex          | • •                                   |   |        |                                                              |         |
|    | Pattern string   |               |              | (.*)\.(.*)\.(. | ").(.*)@vcs.domain                    | ۲ |        |                                                              |         |
|    | Pattern behavior |               |              | Replace        | • (i)                                 |   |        |                                                              |         |
|    | Replace string   |               |              | \1.\2.\3\.\4   |                                       | ۲ |        |                                                              |         |
|    | State            |               |              | Enabled        | •                                     |   |        |                                                              |         |
|    |                  |               |              |                |                                       |   |        |                                                              |         |

Create transform Cancel

在VCS Control/Expressway-C上,您需要一个搜索规则,在拨打IP地址时将呼叫发送到VCS Expressway/Expressway-E。

选择Configuration > Dial Plan > Search Rules, 然后单击New。

| CISCO Cisco TelePresence Video Communication Server Control                   |          |                |           |        |                         |           |              |                |                  |                |                 |                             |                        |
|-------------------------------------------------------------------------------|----------|----------------|-----------|--------|-------------------------|-----------|--------------|----------------|------------------|----------------|-----------------|-----------------------------|------------------------|
| Status System Configuration Applications Users Maintenance (2) Help. 🕞 Logout |          |                |           |        |                         |           |              |                |                  |                |                 |                             |                        |
| Searc                                                                         | h rule   | s              |           |        |                         |           |              |                |                  | You a          | re here: Conf   | Iguration • Dia             | il plan • Search rules |
|                                                                               | Priority | Rule name      | Protocol  | Source | Authentication required | Mode      | Pattern type | Pattern string | Pattern behavior | On match       | Target          | State                       | Actions                |
| $\odot$                                                                       | 50       | LocalZoneMatch | Any       | Any    | No                      | Any alias |              |                |                  | Continue       | LocaiZone       | <ul> <li>Enabled</li> </ul> | View/Edit   Clone      |
| New                                                                           | Delete   | Enable Disab   | le Select | tal Ur | select all              |           |              |                | Search rules     | are applied in | n priority orde | r, with 1 being             | a the highest priority |

为VCS Expressway/Expressway-E创建此搜索规则。

| Status System Configuration Ap | oplications Users Maintenance | <ol> <li>Help. Ge Logout</li> </ol>                                       |
|--------------------------------|-------------------------------|---------------------------------------------------------------------------|
| Edit search rule               |                               | You are here: Configuration + Dial plan + Search rules + Edit search rule |
| Configuration                  |                               |                                                                           |
| Rule name                      | * Dial IP Address search rule |                                                                           |
| Description                    |                               | 0                                                                         |
| Priority                       | * 10                          |                                                                           |
| Protocol                       | Any ‡                         |                                                                           |
| Source                         | Any :                         |                                                                           |
| Request must be authenticated  | No ‡                          |                                                                           |
| Mode                           | Any IP address 🛟 👔            |                                                                           |
| On successful match            | Stop 🗘 👔                      |                                                                           |
| Target                         | Traversal Client zone B2B     | 0                                                                         |
| State                          | Enabled +                     |                                                                           |

Save Delete Cancel

ababa

#### 选项2 — 将IP地址转换为字符串

在CUCM上添加路由模式以发送模式为!\*!\*!\*!的呼叫到VCS Control/Expressway-C中继。

### 选择Call Routing > Route/Hunt > Route Pattern,然后单击Add New。

| cisco      | Cisco U<br>For Cisco Ur | nified CM A     | dministration       |                 |                  |                         |                  | Navigati<br>adm | ion Ci<br>nin | sco Unified CM Adm<br>Search Document | inistratio<br>ation | n<br>About | : Go<br>Logout |
|------------|-------------------------|-----------------|---------------------|-----------------|------------------|-------------------------|------------------|-----------------|---------------|---------------------------------------|---------------------|------------|----------------|
| System +   | Cell Routing +          | Media Resources | Advanced Features + | Device +        | Application +    | User Managemen          | 👻 🛛 Bulk Admi    | inistration 👻 H | Help 👻        |                                       |                     |            |                |
| Find and   | List Route Pa           | tterns          |                     |                 |                  |                         |                  |                 |               |                                       |                     |            |                |
| 🕂 Add N    | 216                     |                 |                     |                 |                  |                         |                  |                 |               |                                       |                     |            |                |
| Status     | ords found              |                 |                     |                 |                  |                         |                  |                 |               |                                       |                     |            |                |
| Route P    | atterns                 |                 |                     |                 |                  |                         |                  |                 |               |                                       | Rows p              | er Page    | 50 -== )       |
| Find Route | Patterns when           | Pattern         | t begins with       |                 |                  | Find Clear File         | er 🜵 📼           | )               |               |                                       |                     |            |                |
|            |                         |                 | No a                | active query. R | Please enter you | r search oriteria using | the options abov | ie.             |               |                                       |                     |            |                |
| Add Nex    | N                       |                 |                     |                 |                  |                         |                  |                 |               |                                       |                     |            |                |

#### 添加新的路由模式,如下所示。

#### 路由模式:!\*!\*!\*

| alialia Cisco Unifie            | d CM Adı       | ministration                           |                      |             |              |                    | Navigation | Cisco Unified ( | CM Administratio | m         | ÷ Go   |
|---------------------------------|----------------|----------------------------------------|----------------------|-------------|--------------|--------------------|------------|-----------------|------------------|-----------|--------|
| For Cisco Unified Co            | mmunication    | s Solutions                            |                      |             |              |                    | admin      | Search Do       | cumentation      | About     | Logout |
| System - Call Routing - Media   | Resources 👻    | Advanced Features 👻                    | Device - Application |             | lanegement 👻 | Bulk Administratio | an 👻 Help  | •               |                  |           |        |
| Route Pattern Configuration     |                |                                        |                      |             |              |                    |            | Related Li      | nks: Beck To     | Find/List | ÷ Go   |
| Save                            |                |                                        |                      |             |              |                    |            |                 |                  |           |        |
| Status                          |                |                                        |                      |             |              |                    |            |                 |                  |           |        |
| i Status: Ready                 |                |                                        |                      |             |              |                    |            |                 |                  |           |        |
| -Pattern Definition             |                |                                        |                      |             |              |                    |            |                 |                  |           |        |
| Route Pattern *                 |                | 1+1+1+1                                |                      |             |              |                    |            |                 |                  |           |        |
| Route Partition                 |                | < None >                               |                      | +           | ]            |                    |            |                 |                  |           |        |
| Description                     |                |                                        |                      |             |              |                    |            |                 |                  |           |        |
| Numbering Plan                  |                | Not Selected                           |                      | ÷           |              |                    |            |                 |                  |           |        |
| Route Filter                    |                | < None >                               |                      | \$          |              |                    |            |                 |                  |           |        |
| MLPP Precedence*                | 1              | Default                                |                      | 0           | ]            |                    |            |                 |                  |           |        |
| Apply Call Blocking Percentag   | e              |                                        |                      |             |              |                    |            |                 |                  |           |        |
| Resource Priority Namespace Net | work Domain    | < None >                               |                      | \$          | )            |                    |            |                 |                  |           |        |
| Route Class *                   |                | Default                                |                      | ;           | ]            |                    |            |                 |                  |           |        |
| Gateway/Route List*             |                | VCS_trunk                              |                      | ;           | (Edit)       |                    |            |                 |                  |           |        |
| Route Option                    |                | <ul> <li>Route this pattern</li> </ul> |                      |             | ~            |                    |            |                 |                  |           |        |
|                                 |                | Block this pattern                     | No Error             | ;           | i.           |                    |            |                 |                  |           |        |
| Call Classification*            | OffNet         |                                        | \$                   |             |              |                    |            |                 |                  |           |        |
| External Call Control Profile   | < None >       |                                        | •                    |             |              |                    |            |                 |                  |           |        |
| Allow Device Override M Prov    | vide Outside D | lai Tone 🕞 Allow Ove                   | rlap Sending 🕞 Urger | nt Priority |              |                    |            |                 |                  |           |        |
| Mequire Forced Authorization    | Lode           |                                        |                      |             |              |                    |            |                 |                  |           |        |
|                                 | 0              |                                        |                      |             |              |                    |            |                 |                  |           |        |
| Require Client Matter Code      |                |                                        |                      |             |              |                    |            |                 |                  |           |        |

**注意:**那个!\*!\*!\*!处理其他路由模式时可能会造成延迟,因此使用此模式时需要谨慎。一个好 方法是将此路由模式放在单独的分区中,并且仅允许需要拨号IP地址访问此分区的终端。

在VCS Control/Expressway-C上,您需要转换,将别名"\*"修改为""。 拨打IP地址时。

选择Configuration > Dial Plan > Transforms, 然后单击New。

CISCO Cisco TelePresence Video Communication Server Control

| Status | System     | Configuration | Applications      | Users   | Maintenance |      |                       |                           | ? 😁                          |   |
|--------|------------|---------------|-------------------|---------|-------------|------|-----------------------|---------------------------|------------------------------|---|
| Trans  | forms      |               |                   |         |             |      | Ye                    | ou are here: Configurat   | ion • Dial plan • Transform  | s |
| _      | Priority 👻 | State         | Description       | _       | Pattern     | Туре | Behavior              | Replace                   | Actions                      |   |
| New    | Delete     | able Disable  | Select all Unsele | ect all |             |      | Transforms are applie | d in priority order, with | 1 being the highest priority |   |

如图所示创建转换。

模式字符串:(\d\d?\d?)(\\*)(\d\d?\d?)(\\*)(\d\d?\d?)(\\*)(\d\d?\d?)(.\*)

替换字符串:\1.\3.\5.\7

## ululu

| Status System Configuration | oplications Users Maintenance                                     | 209     |
|-----------------------------|-------------------------------------------------------------------|---------|
| Create transform            | You are here: Configuration + Dial plan + Transforms + Create tra | insform |
| Configuration               |                                                                   |         |
| Priority                    | 1                                                                 |         |
| Description                 | Transform to modify * to . for ip-address dialing.                |         |
| Pattern type                | Regex : ()                                                        |         |
| Pattern string              | (/q/q5/q5)(/*)(/q/q5/q5)(/*)(/q/q5/q5)(/*)                        |         |
| Pattern behavior            | Replace : i                                                       |         |
| Replace string              | 111.131.151.17                                                    |         |
| State                       | Enabled :                                                         |         |

Create transform Cancel

在VCS Control/Expressway-C上,您需要一个搜索规则,在拨打IP地址时将呼叫发送到VCS Expressway/Expressway-E。

### 选择Configuration > Dial Plan > Search Rules, 然后单击New。

CISCO Cisco TelePresence Video Communication Server Control

| Status | System                                                        | m Configura    | ation    | Applicatio | ons Users     | Mainte      | nance     |              |                        |                  |               |                 | 3                           | Help. 🖂 Logout       |
|--------|---------------------------------------------------------------|----------------|----------|------------|---------------|-------------|-----------|--------------|------------------------|------------------|---------------|-----------------|-----------------------------|----------------------|
| Searc  | Search rules You are here: Configuration + Dial plan + Search |                |          |            |               |             |           |              | il plan • Search rules |                  |               |                 |                             |                      |
|        | Priority *                                                    | Rule name      | Protocol | Source     | Authenticatio | on required | Mode      | Pattern type | Pattern string         | Pattern behavior | On match      | Target          | State                       | Actions              |
| 0      | 50                                                            | LocalZoneMatch | Any      | Any        | No            |             | Any alias |              |                        |                  | Continue      | LocaiZone       | <ul> <li>Enabled</li> </ul> | View/Edit   Clone    |
| New    | Delete                                                        | Enable Disab   | le Sele  | ct al Ur   | select all    |             |           |              |                        | Search rules     | are applied i | n priority orde | er, with 1 being            | the highest priority |

为VCS Expressway/Expressway-E创建此搜索规则。

| սիսիս |                                                       |
|-------|-------------------------------------------------------|
| CISCO | Cisco TelePresence Video Communication Server Control |

| Status   | System           | Configuration | Applications | Users Maintenance             | ? Help. In Logout                                                         |
|----------|------------------|---------------|--------------|-------------------------------|---------------------------------------------------------------------------|
| Edit s   | earch rule       |               |              |                               | You are here: Configuration + Dial plan + Search rules + Edit search rule |
| Config   | guration         |               |              |                               |                                                                           |
| Rule n   | ame              |               |              | * Dial IP Address search rule |                                                                           |
| Descri   | iption           |               |              | (                             |                                                                           |
| Priority | Y                |               |              | <b>* 10</b>                   |                                                                           |
| Protoc   | ol               |               |              | Any 🗘 👔                       |                                                                           |
| Source   | 0                |               |              | Any :                         |                                                                           |
| Reque    | st must be authe | enticated     |              | No :                          |                                                                           |
| Mode     |                  |               |              | Any IP address 📫              |                                                                           |
| On su    | coessful match   |               |              | Stop 🗧 i                      |                                                                           |
| Target   |                  |               |              | Traversal Client zone B2B     |                                                                           |
| State    |                  |               |              | Enabled +                     |                                                                           |
|          |                  |               |              |                               |                                                                           |

| Save | Delete | Cancel |
|------|--------|--------|
|------|--------|--------|

**注意:**如果SIP UDP模式已启用,VCS Expressway/Expressway-E会首先将SIP呼叫作为本地 呼叫发起。如果目的设备未响应SIP邀请,VCS Expressway/Expressway-E将继续运行SIP UDP呼叫,直到标准呼叫协商超时(约32秒)。 然后,它会作为设计行为回退到H.323互通 呼叫。

# 验证

使用本部分可确认配置能否正常运行。

完成上述步骤后,请以字符串形式拨打IP地址或附加域的IP地址(这取决于您选择的配置选项),并查看到远端的呼叫是否正常。

# 故障排除

本部分提供的信息可用于对配置进行故障排除。

从CUCM收集详细的系统诊断接口/信号分布层(SDI/SDL)日志,并从VCS-Control/Expressway-C和 VCS-Expressway/Expressway-E收集"调试级"诊断日志。如果呼叫在完成之前的配置步骤后不工作 ,请将这些日志提供给思科技术支持中心(TAC)进行分析。