使用来电显示(Caller ID)的 ISDN 认证和回叫

目录

简介

根据呼叫方ID的验证通过验证根据正在拨号位置的不仅用户ID和密码，而且远程客户端提供更加巨大的安全。

先决条件

要求

本文档没有任何特定的前提条件。

使用的组件

本文档不限于特定的软件和硬件版本。

规则

有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

背景信息

本文在Dialer Profile接口首先解释**dialer caller命令的**不同的含义(除其回拨的使用外)，当使用而不是拨号循环组接口。

在后一种情况下，它是过滤命令类似于ISDN接口的**ISDN呼叫程序**。在前面的情况中，它是提供一机制绑定呼入呼叫到根据主叫方编号的正确拨号配置文件在流入Q.931设置信息被提交的命令。如果物理接口为PPP认证，配置疏忽匹配提供的呼叫方号用在拨号配置文件的一个拨号主叫号码不一定导致呼叫拒绝如不能连接。您能也匹配提交主机名以已配置的拨号程序远程名值绑定根据此基本类型。这是因为绑定根据提供的呼叫方号不是成功的捆绑的唯一的可能的标准。关于约束和拨号配置文件的更多信息参考的拨号程序配置文件的配置与故障排除。

从Cisco IOS软件版本12.0(7)T及以上版本，从的物理接口的删除PPP认证能筛选根据主叫方编号独自地的呼叫。在这类情况下，呼叫路由器找不到一个匹配的dialer caller值拒绝如不能连接。如果要正确验证这些呼叫，您能使用PAP或CHAP配置在拨号接口的PPP认证。

初始呼叫拒绝(没回答)与回叫选项被添加到主叫身份验证。然而，回拨启动到呼叫号码建立联系。您能使用回拨为：

- 巩固和电话计费集中化
- 在长途电话的节省成本
- 访问控制

此配置示例说明使用**dialer caller number [callback]命令**配置呼叫方ID过滤和或者启用拨号配置文件DDR的ISDN Caller ID Callback。您能也使用此命令传统DDR。此命令配置Cisco IOS软件接受或拒绝根据主叫方的PSTN编号的ISDN呼叫。例如， **dialer caller 1234命令**允许路由器接受ISDN呼叫用呼叫号码1234。

注意： 此配置要求Telco通行证呼叫方id到路由器或接入服务器。呼叫没有接受，如果启用呼叫方ID过滤，但是没有呼叫方ID信息通过对路由器。

参考配置ISDN Caller ID Callback关于前提条件和其他可选功能的更多信息可用与ISDN呼叫程序ID验证和回拨。

配置

本部分提供有关如何配置本文档所述功能的信息。

注意： 有关本文档所用命令的详细信息，请使用命令查找工具（仅限注册用户）。

注意： 这些配置被删节显示仅相关信息。

网络图

本文档使用以下网络设置：

配置

本文档使用以下配置：

- 路由器 1
- 路由器 2
- 路由器 3

在对路由器1.路由器1的此方案，路由器2和3两启动DDR呼叫验证两路由器根据来电显示路由器独自地的2和3 1配置对回叫路由器2，但是不对回叫路由器3。

提示： 选择配置的适当的部分配置呼叫方ID过滤或主叫ID回叫功能，但是不是两个。例如，图表显示回拨需要路由器配置2和路由器1。然而，请选择仅拨号接口配置关联与Router2 (在interface dialer 1)清楚地被标记，因为路由器1执行两任务。

路由器 1

```
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname Router1
!
isdn switch-type basic-net3
!
interface Loopback0
ip address 10.0.0.1 255.255.255.0
!
interface BRI0
no ip address
dialer pool-member 1
!--- BRI 0 is a member of dialer pool 1 which is defined
!--- under interface Dialer 1. isdn switch-type basic-
net3 ! interface Dialer1 !--- DDR dialer interface to
call Router 2. description for Router2 ip unnumbered
Loopback0 encapsulation ppp dialer pool 1 !--- Interface
BRI 0 is a member of dialer pool 1. dialer enable-
timeout 2 !--- The time (in seconds) to wait before
initiating callback. dialer string 6121 !--- This number
is used to call back Router 2. dialer caller 6121
callback !--- Permits calls from 6121 and initiates
callback !--- to the same number. dialer-group 1 !---
Use dialer-list 1 to define interesting traffic. !
interface Dialer2 !--- This interface is used to
authenticate calls from Router 3. !--- (Callback is NOT
initiated to Router 3.) description for Router3 ip
unnumbered Loopback0 encapsulation ppp dialer pool 1 !--
- Interface BRI 0 is a member of dialer pool 1. dialer
caller 6101 !--- Permit calls from number 6101. dialer-
group 1 !--- Use dialer-list 1 to define interesting
traffic. ! dialer-list 1 protocol ip permit !--- Define
IP as interesting traffic.
```

路由器 2

```
version 12.1
service timestamps debug datetime msec
service timestamps log datetime ms
!
hostname Router2
!
isdn switch-type basic-net3
!
interface BRI0
no ip address
encapsulation ppp
dialer pool-member 1
isdn switch-type basic-net3
!
```

```
interface Dialer1
ip address 10.0.0.2 255.255.255.0
encapsulation ppp
dialer pool 1
dialer string 6122
!--- The number to dial for Router 1 !--- (which
initiates a callback). dialer caller 6122 !--- Accept
calls from 6122 (Router 1). dialer-group 1 no cdp enable
! dialer-list 1 protocol ip permit
```

路由器 3

```
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname Router3
!
isdn switch-type basic-net3
!
interface BRI0
no ip address
encapsulation ppp
dialer pool-member 1
isdn switch-type basic-net3
!
interface Dialer1
ip address 10.0.0.3 255.255.255.0
dialer pool 1
encapsulation ppp
dialer string 6122
!--- The number to dial for Router 1. dialer-group 1 no
cdp enable ! dialer-list 1 protocol ip permit
```

注意： 客户端路由器拨号在多数回拨情形的回拨服务器。两路由器然后协商回拨参数。服务器断开呼叫并且启动回拨。在初始呼叫断开和回拨之间时的间隔期间主叫方也许发出少量连续呼出到服务器，当等待服务器呼叫上一步。这是普通的DDR行为，因为客户端检测初始呼叫失败和不知道回拨进展中。

发出**dialer redial命令**在主叫方为了防止客户端恒定拨号回拨服务器。这抑制另外的呼出呼叫到服务器，当等待回拨时。呼叫被抑制，直到预定义的计时器超时。例如，客户端在启动重拨号前等15秒，如果拨号器重拨间隔时间是15秒。回拨完成，并且客户端不必须在该时间内再拨号。

参考配置重拨定时器在回呼拨号尝试失败以后关于实现**dialer redial的更多信息**。

验证

使用本部分可确认配置能否正常运行。

命令输出解释程序（仅限注册用户）(OIT) 支持某些 **show** 命令。使用 OIT 可查看对 show 命令输出的分析。

显示命令

确定请**显示**命令支持OIT，允许您查看show命令输出分析。

- **show isdn active** —在流入和流出的当前ISDN呼叫显示关于当前呼叫的信息并且提供信息。

- show users - 显示路由器上关于有效线路的信息。您能也使用**show caller命令**您的Cisco IOS版本是否支持它。
- **show dialer** —显示为DDR配置的接口的一般诊断信息。

show 输出示例

```
Router1#show isdn active

------------------------------------------------------------------------------
ISDN ACTIVE CALLS
------------------------------------------------------------------------------
Call  Calling   Called    Remote  Seconds Seconds Seconds Charges
Type  Number    Number    Name    Used    Left    Idle    Units/Currency
------------------------------------------------------------------------------
Out             6121      6121       24      96      23      0
In       6101             6101        7     113       6
------------------------------------------------------------------------------
```

注意一流入和一呼出呼叫进展中。呼出呼叫是第6121，对应于Router2。呼入呼叫是从6101，对应于Router3。并且请注意编号识别远程路由器在远程名字名称字段而不是名称，因为PPP认证没有配置。

```
Router1#show user

Line       User       Host(s)              Idle       Location
*  0 con 0                 idle                 00:00:00
BR0:1                    Sync PPP               00:00:33   PPP: 10.0.0.2
BR0:2                    Sync PPP               00:00:15   PPP: 10.0.0.3
Interface  User      Mode                        Idle Peer Address
```

注意一B信道用于连接到Router2，当另一B信道连接到路由器3.验证时IP地址匹配在路由器配置的那些2和3。

故障排除

使用本部分可排除配置故障。

故障排除命令

命令输出解释程序（仅限注册用户）(OIT) 支持某些 **show** 命令。使用 OIT 可查看对 show 命令输出的分析。

注意： 使用 **debug** 命令之前，请参阅有关 Debug 命令的重要信息。

- **debug dialer [events|数据包]**
- **debug isdn event**
- **debug isdn q931**
- **debug ppp协商**—显示关于PPP流量的信息并且交换，当协商PPP组件包括链路控制协议(LCP)、验证和网络控制协议时(NCP)。一个成功的PPP协商协议首先开启LCP状态，然后是鉴权，最后协商NCP。

参考使用show isdn status命令BRI故障排除的，如果遇到ISDN下层问题。

调试输出示例

```
Router1#show debug
     Dial on demand: Dial on demand events debugging is on
     PPP: PPP protocol negotiation debugging is on
     ISDN: ISDN Q931 packets debugging is on
```

此部分显示从路由器1的debug输出并且显示1.路由器1然后启动回拨对Router2的Router2呼叫路由器并且建立连接。

注意： 其中一些debug输出输出行为打印目的分成多条线路。

```
*Mar  1 04:50:34.782: ISDN BR0: RX <-  SETUP pd = 8  callref = 0x0B
*Mar  1 04:50:34.790:         Bearer Capability i = 0x8890
*Mar  1 04:50:34.798:         Channel ID i = 0x89
*Mar  1 04:50:34.802:         Calling Party Number i = 0xA1, '6121
',Plan:ISDN, Type:National
!--- Calling party information is provided by the switch. *Mar 1 04:50:34.818: Called Party
Number i = 0xC1, '6122',Plan:ISDN, Type:Subscriber(local) !--- Called party information is
provided by the switch. *Mar 1 04:50:34.838: ISDN BR0: Event: Received a DATA call from 6121 on
B1at 64 Kb/s *Mar 1 04:50:34.842: BR0:1 DDR: Caller id 6121 matched to profile !--- The ISDN
call (from Router 2) is authenticated. *Mar 1 04:50:34.842: Di1 DDR: Caller id Callback server
starting to 6121 !--- Initiates callback to 6121. *Mar 1 04:50:34.866: ISDN BR0: TX ->
RELEASE_COMP pd = 8 callref = 0x8B *Mar 1 04:50:34.870: Cause i = 0x8095 - Call rejected *Mar 1
04:50:36.778: ISDN BR0: RX <- SETUP pd = 8 callref = 0x0C *Mar 1 04:50:36.786: Bearer Capability
i = 0x8890 *Mar 1 04:50:36.794: Channel ID i = 0x89 *Mar 1 04:50:36.798: Calling Party Number i
= 0xA1, '6121',Plan:ISDN, Type:National *Mar 1 04:50:36.814: Called Party Number i = 0xC1,
'6122',Plan:ISDN, Type:Subscriber(local) *Mar 1 04:50:36.834: ISDN BR0: Event: Received a DATA
call from 6121 on B1at 64 Kb/s *Mar 1 04:50:36.838: BR0:1 DDR: Caller id 6121 matched to profile
*Mar 1 04:50:36.838: Di1 DDR: callback to 6121 already started *Mar 1 04:50:36.862: ISDN BR0: TX
-> RELEASE_COMP pd = 8 callref = 0x8C *Mar 1 04:50:36.866: Cause i = 0x8095 - Call rejected !---
Reject call (then initiate callback). *Mar 1 04:50:36.878: DDR: Callback timer expired !--- The
timer is configured with the dialer enable-timeout command.

*Mar  1 04:50:36.878: Di1 DDR: beginning callback to  6121
*Mar  1 04:50:36.882: BR0 DDR: rotor dialout [priority]
*Mar  1 04:50:36.882: BR0 DDR: Dialing cause Callback return call
!--- The dialing cause is callback. *Mar 1 04:50:36.886: BR0 DDR: Attempting to dial 6121 !---
Dialing 6121 (Router 2). *Mar 1 04:50:36.902: ISDN BR0: TX -> SETUP pd = 8 callref = 0x0E *Mar 1
04:50:36.906: Bearer Capability i = 0x8890 *Mar 1 04:50:36.914: Channel ID i = 0x83 *Mar 1
04:50:36.922: Called Party Number i = 0x80, '6121',Plan:Unknown, Type:Unknown *Mar 1
04:50:36.998: ISDN BR0: RX <- CALL_PROC pd = 8 callref = 0x8E *Mar 1 04:50:37.002: Channel ID i
= 0x89 *Mar 1 04:50:37.402: ISDN BR0: RX <- CONNECT pd = 8 callref = 0x8E *Mar 1 04:50:37.418:
ISDN BR0: TX -> CONNECT_ACK pd = 8 callref = 0x0E *Mar 1 04:50:37.426: %LINK-3-UPDOWN: Interface
BRI0:1, changed state to up !--- The interface is up. *Mar 1 04:50:37.446: DDR: Freeing callback
to 6121 *Mar 1 04:50:37.446: BRI0:1: interface must be fifo queue, force FIFO *Mar 1
04:50:37.450: BR0:1 PPP: Phase is DOWN, Setup *Mar 1 04:50:37.454: BR0:1 PPP: Treating
connection as a callout *Mar 1 04:50:37.454: BR0:1 PPP: Phase is ESTABLISHING, Active Open *Mar
1 04:50:37.462: BR0:1 LCP: O CONFREQ [Closed] id 1 len 10 *Mar 1 04:50:37.462: BR0:1 LCP:
MagicNumber 0xE1288054 (0x0506E1288054) *Mar 1 04:50:37.466: %DIALER-6-BIND: Interface BR0:1
bound to profile Di1 *Mar 1 04:50:37.478: BR0:1 PPP: Treating connection as a callout *Mar 1
04:50:37.486: BR0:1 LCP: I CONFREQ [REQsent] id 2 Len 10 *Mar 1 04:50:37.490: BR0:1 LCP:
MagicNumber 0x000F4499 (0x0506000F4499) *Mar 1 04:50:37.494: BR0:1 LCP: O CONFACK [REQsent] id 2
Len 10 *Mar 1 04:50:37.498: BR0:1 LCP: MagicNumber 0x000F4499 (0x0506000F4499) *Mar 1
04:50:37.502: BR0:1 LCP: I CONFACK [ACKsent] id 1 Len 10 *Mar 1 04:50:37.506: BR0:1 LCP:
MagicNumber 0xE1288054 (0x0506E1288054) *Mar 1 04:50:37.506: BR0:1 LCP: State is Open !--- The
LCP negotiation is complete. *Mar 1 04:50:37.510: BR0:1 PPP: Phase is UP *Mar 1 04:50:37.514:
BR0:1 IPCP: O CONFREQ [Closed] id 1 Len 10 *Mar 1 04:50:37.518: BR0:1 IPCP: Address 10.0.0.1
(0x03060A000001) *Mar 1 04:50:37.522: BR0:1 IPCP: I CONFREQ [REQsent] id 2 Len 10 *Mar 1
04:50:37.526: BR0:1 IPCP: Address 10.0.0.2 (0x03060A000002) *Mar 1 04:50:37.530: BR0:1 IPCP: O
```

CONFACK [REQsent] id 2 Len 10 *Mar 1 04:50:37.534: BR0:1 IPCP: Address 10.0.0.2 (0x03060A000002) *Mar 1 04:50:37.550: BR0:1 IPCP: I CONFACK [ACKsent] id 1 Len 10 *Mar 1 04:50:37.550: BR0:1 IPCP: Address 10.0.0.1 (0x03060A000001) *!--- IPCP address negotiation.* *Mar 1 04:50:37.554: BR0:1 IPCP: State is Open *Mar 1 04:50:37.562: BR0:1 DDR: dialer protocol up *Mar 1 04:50:37.570: Di1 IPCP: Install route to 10.0.0.2 *!--- Route to Router 2 is installed.* *Mar 1 04:50:38.510: %LINEPROTO-5-UPDOWN: Line protocol on InterfaceBRI0:1, changed state to up

在此部分，debug输出显示Router3呼叫路由器1. Router3根据呼叫方id然后验证和连接到路由器1，不用回拨。

*Mar 1 04:50:34.782: ISDN BR0: RX <- SETUP pd = 8 callref = 0x0B
*Mar 1 04:50:34.790: Bearer Capability i = 0x8890
*Mar 1 04:50:34.798: Channel ID i = 0x89
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!--- Calling party information is provided by the switch. *Mar 1 04:50:34.818: Called Party Number i = 0xC1, '6122',Plan:ISDN, Type:Subscriber(local) *!--- Called party information is provided by the switch.* *Mar 1 04:50:34.838: ISDN BR0: Event: Received a DATA call from 6121 on B1at 64 Kb/s *Mar 1 04:50:34.842: BR0:1 DDR: Caller id 6121 matched to profile *!--- The ISDN call (from Router 2) is authenticated.* *Mar 1 04:50:34.842: Di1 DDR: Caller id Callback server starting to 6121 *!--- Initiates callback to 6121.* *Mar 1 04:50:34.866: ISDN BR0: TX -> RELEASE_COMP pd = 8 callref = 0x8B *Mar 1 04:50:34.870: Cause i = 0x8095 - Call rejected *Mar 1 04:50:36.778: ISDN BR0: RX <- SETUP pd = 8 callref = 0x0C *Mar 1 04:50:36.786: Bearer Capability i = 0x8890 *Mar 1 04:50:36.794: Channel ID i = 0x89 *Mar 1 04:50:36.798: Calling Party Number i = 0xA1, '6121',Plan:ISDN, Type:National *Mar 1 04:50:36.814: Called Party Number i = 0xC1, '6122',Plan:ISDN, Type:Subscriber(local) *Mar 1 04:50:36.834: ISDN BR0: Event: Received a DATA call from 6121 on B1at 64 Kb/s *Mar 1 04:50:36.838: BR0:1 DDR: Caller id 6121 matched to profile *Mar 1 04:50:36.838: Di1 DDR: callback to 6121 already started *Mar 1 04:50:36.862: ISDN BR0: TX -> RELEASE_COMP pd = 8 callref = 0x8C *Mar 1 04:50:36.866: Cause i = 0x8095 - Call rejected *!--- Reject call (then initiate callback).* *Mar 1 04:50:36.878: DDR: Callback timer expired *!--- The timer is configured with the* **dialer enable-timeout** command.

*Mar 1 04:50:36.878: Di1 DDR: beginning callback to 6121
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!--- The dialing cause is callback. *Mar 1 04:50:36.886: BR0 DDR: Attempting to dial 6121 *!--- Dialing 6121 (Router 2).* *Mar 1 04:50:36.902: ISDN BR0: TX -> SETUP pd = 8 callref = 0x0E *Mar 1 04:50:36.906: Bearer Capability i = 0x8890 *Mar 1 04:50:36.914: Channel ID i = 0x83 *Mar 1 04:50:36.922: Called Party Number i = 0x80, '6121',Plan:Unknown, Type:Unknown *Mar 1 04:50:36.998: ISDN BR0: RX <- CALL_PROC pd = 8 callref = 0x8E *Mar 1 04:50:37.002: Channel ID i = 0x89 *Mar 1 04:50:37.402: ISDN BR0: RX <- CONNECT pd = 8 callref = 0x8E *Mar 1 04:50:37.418: ISDN BR0: TX -> CONNECT_ACK pd = 8 callref = 0x0E *Mar 1 04:50:37.426: %LINK-3-UPDOWN: Interface BRI0:1, changed state to up *!--- The interface is up.* *Mar 1 04:50:37.446: DDR: Freeing callback to 6121 *Mar 1 04:50:37.446: BRI0:1: interface must be fifo queue, force FIFO *Mar 1 04:50:37.450: BR0:1 PPP: Phase is DOWN, Setup *Mar 1 04:50:37.454: BR0:1 PPP: Treating connection as a callout *Mar 1 04:50:37.454: BR0:1 PPP: Phase is ESTABLISHING, Active Open *Mar 1 04:50:37.462: BR0:1 LCP: O CONFREQ [Closed] id 1 len 10 *Mar 1 04:50:37.462: BR0:1 LCP: MagicNumber 0xE1288054 (0x0506E1288054) *Mar 1 04:50:37.466: %DIALER-6-BIND: Interface BR0:1 bound to profile Di1 *Mar 1 04:50:37.478: BR0:1 PPP: Treating connection as a callout *Mar 1 04:50:37.486: BR0:1 LCP: I CONFREQ [REQsent] id 2 Len 10 *Mar 1 04:50:37.490: BR0:1 LCP: MagicNumber 0x000F4499 (0x0506000F4499) *Mar 1 04:50:37.494: BR0:1 LCP: O CONFACK [REQsent] id 2 Len 10 *Mar 1 04:50:37.498: BR0:1 LCP: MagicNumber 0x000F4499 (0x0506000F4499) *Mar 1 04:50:37.502: BR0:1 LCP: I CONFACK [ACKsent] id 1 Len 10 *Mar 1 04:50:37.506: BR0:1 LCP: MagicNumber 0xE1288054 (0x0506E1288054) *Mar 1 04:50:37.506: BR0:1 LCP: State is Open *!--- The LCP negotiation is complete.* *Mar 1 04:50:37.510: BR0:1 PPP: Phase is UP *Mar 1 04:50:37.514: BR0:1 IPCP: O CONFREQ [Closed] id 1 Len 10 *Mar 1 04:50:37.518: BR0:1 IPCP: Address 10.0.0.1 (0x03060A000001) *Mar 1 04:50:37.522: BR0:1 IPCP: I CONFREQ [REQsent] id 2 Len 10 *Mar 1 04:50:37.526: BR0:1 IPCP: Address 10.0.0.2 (0x03060A000002) *Mar 1 04:50:37.530: BR0:1 IPCP: O CONFACK [REQsent] id 2 Len 10 *Mar 1 04:50:37.534: BR0:1 IPCP: Address 10.0.0.2 (0x03060A000002) *Mar 1 04:50:37.550: BR0:1 IPCP: I CONFACK [ACKsent] id 1 Len 10 *Mar 1 04:50:37.550: BR0:1 IPCP: Address 10.0.0.1 (0x03060A000001) *!--- IPCP address negotiation.* *Mar 1 04:50:37.554: BR0:1 IPCP: State is Open *Mar 1 04:50:37.562: BR0:1 DDR: dialer protocol up *Mar 1 04:50:37.570: Di1 IPCP: Install route to 10.0.0.2 *!--- Route to Router 2 is installed.* *Mar 1

```
04:50:38.510: %LINEPROTO-5-UPDOWN: Line protocol on InterfaceBRI0:1, changed state to up
```

相关信息

- 配置ISDN 呼叫程序 ID回拨
- 配置在回拨尝试失败后的重拨定时器
- 通过 DDR 拨号映射配置 BRI 之间的拨号
- 利用 Dialer Profiles 来配置 ISDN DDR
- 在 ISDN 上配置 PPP 回呼
- 拨号接入- Cisco系统
- 技术支持和文档 - Cisco Systems