Introduction

This document describes how to configure a Cisco IOS® router that terminates Windows 2000 Point-to-Point Tunnelling Protocol (PPTP) Clients, and Microsoft Point-to-Point Encryption Protocol (MPPE).

Refer to Configuring Cisco Secure ACS for Windows Router PPTP Authentication for more information on PPTP authentication with Cisco Secure Access Control Server (ACS).

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on the software and hardware versions:

- Cisco 2621 Router that runs Cisco IOS Software Release 12.2
- Microsoft Windows 2000

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Network Diagram

This document uses this network setup:
Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

PPTP Router Configuration

These IOS commands are applicable to all platforms that support PPTP.

2621#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.

!−−− Enable virtual private dial-up networking.

2621(config)#vpdn enable
!−−− Enters VPDN group configuration mode for the specified VPDN group.

2621(config)#vpdn-group 1
!−−− Enters VPDN accept-dialin configuration mode
!−−− and enables the router to accept dial-in requests.

2621(config-vpdn)#accept-dialin
!−−− Specifies which PPTP protocol is used.

2621(config-vpdn-acc-in)#protocol pptp
!−−− Specifies the virtual template that is used
!−−− in order to clone the virtual access interface.

2621(config-vpdn-acc-in)#virtual-template 1
2621(config-vpdn-acc-in)#exit

2621(config)#ip local pool test 192.168.1.1 192.168.1.250
!−−− Create virtual-template interface used for cloning
!−−− virtual-access interfaces with the use of address pool test
!−−− with Challenge Authentication Protocol (CHAP) authentication, PAP, and MS-CHAP.

2621(config)#interface virtual-template 1

2621(config-if)#encapsulation ppp
2621(config-if)#peer default ip address pool test
2621(config-if)#ip unnumbered FastEthernet0/0
2621(config-if)#no keepalive
2621(config-if)#ppp encrypt mppe auto
2621(config-if)#ppp authentication pap chap ms-chap
2621# show run
Building configuration...

Current configuration : 1566 bytes
!
version 12.2
service timestamps debug datetime msec localtime
service timestamps log datetime msec localtime
no service password-encryption
!
hostname 2621
!
boot system flash
logging queue-limit 100
enable secret 5 $1$dGFC$VA28yOWzx1CKyj1dq8SkE/
!
username cisco password 0 cisco123
username client password 0 testclient
ip subnet-zero
ip cef
!
!
no ip domain lookup
ip domain name cisco.com
!
vpdn enable

!--- Enable VDPN.
!
vpdn-group 1

!--- Default PPTP VPDN group.

  accept-dialin
  protocol pptp
    virtual-template 1

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voice call carrier capacity active
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no voice hpi capture buffer
no voice hpi capture destination
!
!
mta receive maximum-recipients 0
!
!
controller T1 0/0
  framing sf
  linecode ami
controller T1 0/1
framing sf
linecode ami
!
!
interface Loopback0
ip address 10.100.100.1 255.255.255.0
ip nat inside
!
interface FastEthernet0/0
ip address 172.16.142.191 255.255.255.0
no ip route-cache
no ip mroute-cache
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 10.130.13.13 255.255.0.0
duplex auto
speed auto
!
!--- Create virtual-template interface used for cloning
!--- virtual-access interfaces with the use of address pool test
!--- with CHAP authentication, PAP, and MS-CHAP.

interface Virtual-Template1
ip unnumbered FastEthernet0/0
peer default ip address pool test
no keepalive
ppp encrypt mppe auto
ppp authentication pap chap ms-chap
!

!--- Create IP pool named test and specify IP range.

ip local pool test 192.168.1.1 192.168.1.250
no ip http server
no ip http secure-server
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.142.1
!
ip pim bidir-enable
!
!
call rsvp-sync
!
!
mgcp profile default
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dial-peer cor custom
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!
Router Configuration with MPPE and MS–CHAP

```bash
!--- Enter configuration commands, one per line.
!--- End with CNTL/Z.

2621(config)#interface Virtual-Templatel
2621(config-if)#ppp authentication ms-chap
2621(config-if)#ppp encrypt mppe
  128  128 Bit Encryption only
  40   40 Bit Encryption only
  auto Will offer 40 and 128 bit if available

2621(config-if)#ppp encrypt mppe auto
2621(config-if)#ppp encrypt mppe auto required
```

Windows 2000 VPN (PPTP) Settings and Configuration

Complete these steps:

1. Choose **Start > Settings > Network and Dial-up Connections > Make New Connection**.

2. After the Network Connection Wizard window appears, choose **Network Connection Type** and **Connect to a private network through the Internet**.
3. Choose **Automatically dial this initial connection**.

4. Specify a Destination Address in the Host or IP address field and click **Next**.
5. Choose **Start > Settings > Network and Dial up connections** and select the recently configured connection.

6. After this window appears, choose **Properties > Security** in order to set the option properly.
7. Choose **Advanced (customer settings)**, choose **Settings**, and select the appropriate encryption (Data Encryption) level and authentication (allow these protocols).
8. Under Networking (type of VPN server that is called) choose **PPTP** and click **OK**.

9. The Verifying username and password window appears.
10. The Registering your computer on the network window appears.

11. The Connections Properties window appears.
12. These windows display the Connection Status.
Verify

This section provides information you can use in order to confirm that your configuration works properly.

The Output Interpreter Tool (registered customers only) (OIT) supports certain show commands. Use the OIT to view an analysis of show command output.

- **show debug** Displays debug commands currently enabled in order to troubleshoot
- **show user** Displays users currently logged on and their status
- **show ip route connected** Displays the current state of the routing table
- **show vpdn** Displays information about active Layer 2 Tunnel Protocol (L2TP) or Layer 2 Forwarding (L2F) Protocol tunnel and message identifiers in a virtual private dialup network (VPDN)

This is sample output of the show debug command.

```
2621# show debug
PPP:
    PPP authentication debugging is on
    PPP protocol negotiation debugging is on

VPN:
    VPDN events debugging is on
```

This is debug output with the initial PPTP configured.

```
2621#
*Mar  5 02:16:25.675: ppp2 PPP: Using vpn set call direction
*Mar  5 02:16:25.675: ppp2 PPP: Treating connection as a callin
*Mar  5 02:16:25.675: ppp2 PPP: Phase is ESTABLISHING, Passive Open
*Mar  5 02:16:25.675: ppp2 LCP: State is listen
*Mar  5 02:16:27.663: ppp2 LCP: TIMEout: State Listen
*Mar  5 02:16:27.663: ppp2 LCP: Authorization required
*Mar  5 02:16:27.663: ppp2 LCP: O CONFREQ [listen] id 1 len 14
*Mar  5 02:16:27.663: ppp2 LCP: AuthProto PAP (0x0304C023)
*Mar  5 02:16:27.663: ppp2 LCP: MagicNumber 0x1658CF62 (0x05061658CF62)
*Mar  5 02:16:27.667: ppp2 LCP: I CONACK [REQsent] id 1 len 14
```
*Mar  5 02:16:27.667: ppp2 LCP: AuthProto PAP (0x0304C023)
*Mar  5 02:16:27.667: ppp2 LCP: MagicNumber 0x1658CF62 (0x05061658CF62)
*Mar  5 02:16:27.667: ppp2 LCP: I CONFREQ [ACKrcvd] id 1 len 44
*Mar  5 02:16:27.667: ppp2 LCP: MagicNumber 0x131A2427 (0x0506131A2427)
*Mar  5 02:16:27.667: ppp2 LCP: PFC (0x0702)
*Mar  5 02:16:27.667: ppp2 LCP: ACFC (0x0802)
*Mar  5 02:16:27.667: ppp2 LCP: Callback 6 (0x0D0306)
*Mar  5 02:16:27.667: ppp2 LCP: MRRU 1614 (0x1104064E)
*Mar  5 02:16:27.667: ppp2 LCP: EndpointDisc 1 Local
*Mar  5 02:16:27.667: ppp2 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar  5 02:16:27.667: ppp2 LCP: (0x897EAE00000002)
*Mar  5 02:16:27.667: ppp2 LCP: O CONFREJ [ACKrcvd] id 1 len 11
*Mar  5 02:16:27.667: ppp2 LCP: Callback 6 (0x0D0306)
*Mar  5 02:16:27.667: ppp2 LCP: MRRU 1614 (0x1104064E)
*Mar  5 02:16:27.667: ppp2 LCP: I CONFREQ [ACKrcvd] id 2 len 37
*Mar  5 02:16:27.667: ppp2 LCP: MagicNumber 0x131A2427 (0x0506131A2427)
*Mar  5 02:16:27.667: ppp2 LCP: PFC (0x0702)
*Mar  5 02:16:27.667: ppp2 LCP: ACFC (0x0802)
*Mar  5 02:16:27.667: ppp2 LCP: EndpointDisc 1 Local
*Mar  5 02:16:27.667: ppp2 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar  5 02:16:27.667: ppp2 LCP: (0x897EAE00000002)
*Mar  5 02:16:27.667: ppp2 LCP: O CONFACK [ACKrcvd] id 2 len 37
*Mar  5 02:16:27.667: ppp2 LCP: MagicNumber 0x131A2427 (0x0506131A2427)
*Mar  5 02:16:27.667: ppp2 LCP: PFC (0x0702)
*Mar  5 02:16:27.667: ppp2 LCP: ACFC (0x0802)
*Mar  5 02:16:27.667: ppp2 LCP: EndpointDisc 1 Local
*Mar  5 02:16:27.667: ppp2 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar  5 02:16:27.667: ppp2 LCP: (0x897EAE00000002)
*Mar  5 02:16:27.667: ppp2 LCP: State is Open
*Mar  5 02:16:27.667: ppp2 PPP: Phase is AUTHENTICATING, by this end
*Mar  5 02:16:27.715: ppp2 PPP: Phase is AUTHENTICATING, Unauthenticated User
*Mar  5 02:16:27.715: ppp2 PPP: Sent PAP LOGIN Request
*Mar  5 02:16:27.723: ppp2 PPP: Received LOGIN Response PASS
*Mar  5 02:16:27.723: ppp2 PPP: Phase is FORWARDING, Attempting Forward
*Mar  5 02:16:27.727: Vi4 PPP: Phase is DOWN, Setup
*Mar  5 02:16:27.727: Vi4 PPP: Virtual interface created for bandwidth 100000 Kbps
*Mar  5 02:16:27.731: Vi4 Tnl/Sn3/3 PPTP: VPDN session up
*Mar  5 02:16:27.731: Vi4 Tnl/Sn3/3 PPTP: Virtual interface created for bandwidth 100000 Kbps
*Mar  5 02:16:27.739: Vi4 IPCP: I CONFREQ [Closed] id 1 len 10
*Mar  5 02:16:27.739: Vi4 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar  5 02:16:27.739: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x081060000000)
*Mar  5 02:16:27.739: Vi4 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar  5 02:16:27.739: Vi4 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar  5 02:16:27.739: Vi4 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0
*Mar  5 02:16:27.755: Vi4 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0
This is debug output with the required MPPE and MS–CHAP configuration.
Mar 5 02:25:03.855: ppp4 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
Mar 5 02:25:03.855: ppp4 LCP: (0x897EAE00000004)
Mar 5 02:25:03.855: ppp4 LCP: O CONFACK [ACKrcvd] id 2 len 37
Mar 5 02:25:03.859: ppp4 LCP: MagicNumber 0x4B5A2A81 (0x05064B5A2A81)
Mar 5 02:25:03.859: ppp4 LCP: PFC (0x0702)
Mar 5 02:25:03.859: ppp4 LCP: ACFC (0x0802)
Mar 5 02:25:03.859: ppp4 LCP: EndpointDisc 1 Local
Mar 5 02:25:03.859: ppp4 LCP: State is Open
Mar 5 02:25:03.859: ppp4 PPP: Phase is AUTHENTICATING, by this end
Mar 5 02:25:03.863: ppp4 MS−CHAP: O CHALLENGE id 1 len 21 from "2621"
Mar 5 02:25:03.867: ppp4 LCP: I IDENTIFY [Open] id 3 len 18 magic 0x4B5A2A81
Mar 5 02:25:03.867: ppp4 LCP: I IDENTIFY [Open] id 4 len 28 magic 0x4B5A2A81
Mar 5 02:25:03.867: ppp4 MS−CHAP: I RESPONSE id 1 len 59 from "cisco"
Mar 5 02:25:03.867: ppp4 PPP: Phase is FORWARDING, Attempting Forward
Mar 5 02:25:03.871: ppp4 PPP: Phase is AUTHENTICATING, Unauthenticated User
Mar 5 02:25:03.871: ppp4 MS−CHAP: O SUCCESS id 1 len 4
Mar 5 02:25:03.871: ppp4 PPP: Phase is DOWN, Setup
Mar 5 02:25:03.963: ppp4 PPP: Sent MSCHAP LOGIN Request
Mar 5 02:25:03.963: ppp4 PPP: Received LOGIN Response PASS
Mar 5 02:25:03.963: ppp4 PPP: Phase is FORWARDING, Attempting Forward
Mar 5 02:25:03.975: Vi4 PPP: Phase is DOWN, Setup
Mar 5 02:25:03.983: Vi4 PPP: Phase is AUTHENTICATING, Authenticated User
Mar 5 02:25:03.987: Vi4 PPP: Phase is UP
Mar 5 02:25:03.987: Vi4 IPCP: O CONFREQ [Closed] id 1 len 10
Mar 5 02:25:03.987: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF)
Mar 5 02:25:03.987: Vi4 CCP: O CONFREQ [Closed] id 1 len 10
Mar 5 02:25:03.987: Vi4 CCP: MS−PPC supported bits 0x01000060 (0x120601000060)
Mar 5 02:25:03.987: Vi4 CCP: I CONFREQ [REQsent] id 5 len 10
Mar 5 02:25:03.987: Vi4 CCP: MS−PPC supported bits 0x01000040 (0x120601000040)
Mar 5 02:25:03.987: Vi4 CCP: O CONFNAK [REQsent] id 1 len 10
Mar 5 02:25:03.987: Vi4 CCP: MS−PPC supported bits 0x01000040 (0x120601000040)
Mar 5 02:25:03.987: Vi4 CCP: I CONFACK [REQsent] id 1 len 10
Mar 5 02:25:03.987: Vi4 CCP: Address 172.16.142.191 (0x0306AC108EBF)
Mar 5 02:25:03.987: Vi4 IPCP: O CONFREQ [REQsent] id 6 len 34
Mar 5 02:25:03.987: Vi4 IPCP: Address 0.0.0.0 (0x030600000000)
Mar 5 02:25:03.987: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
Mar 5 02:25:03.987: Vi4 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
Mar 5 02:25:03.987: Vi4 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
Mar 5 02:25:03.987: Vi4 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
Mar 5 02:25:03.987: Vi4 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0
Mar 5 02:25:04.003: Vi4 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0
Mar 5 02:25:04.003: Vi4 IPCP: Pool returned 192.168.1.4
Mar 5 02:25:04.003: Vi4 IPCP: O CONFREQ [REQsent] id 6 len 28
Mar 5 02:25:04.003: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
Mar 5 02:25:04.003: Vi4 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
Mar 5 02:25:04.003: Vi4 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
Mar 5 02:25:04.003: Vi4 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
Mar 5 02:25:04.003: Vi4 IPCP: I CONFACK [REQsent] id 1 len 10
Mar 5 02:25:04.003: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF)
Mar 5 02:25:04.003: Vi4 IPCP: O CONFREQ [REQsent] id 7 len 10
Mar 5 02:25:04.003: Vi4 IPCP: O CONFACK [REQsent] id 7 len 10
Mar 5 02:25:04.003: Vi4 IPCP: O CONFACK [ACKsent] id 2 len 10
Mar 5 02:25:04.003: Vi4 IPCP: O CONFACK [ACKsent] id 2 len 10
Mar 5 02:25:04.003: Vi4 IPCP: O CONFACK [ACKsent] id 2 len 10
Mar 5 02:25:04.003: Vi4 CCP: I CONFACK [ACKsent] id 2 len 10
Mar 5 02:25:04.003: Vi4 CCP: MS−PPC supported bits 0x01000040 (0x120601000040)
This show user output is before MS–CHAP and MPPE are enabled.

```
2621# show user
Line       User       Host(s)              Idle       Location
*  0 con 0                idle                 00:00:00

Interface    User               Mode         Idle     Peer Address
Vi4          cisco              PPPoVPDN     00:00:01 192.168.1.4
```

This show user output is after MS–CHAP and MPPE are enabled.

```
2621# show user
Line       User       Host(s)              Idle       Location
*  0 con 0                idle                 00:00:00

Interface    User               Mode         Idle     Peer Address
Vi4          cisco              PPPoVPDN     00:00:00 192.168.1.4
```

This show ip route connected output is before MS–CHAP and MPPE are enabled.

```
2621# show ip route connected
172.16.0.0/24 is subnetted, 1 subnets
C    172.16.142.0 is directly connected, FastEthernet0/0
    10.0.0.0/24 is subnetted, 1 subnets
C    10.100.100.0 is directly connected, Loopback0
    192.168.1.0/32 is subnetted, 1 subnets
C    192.168.1.4 is directly connected, Virtual-Access4
```

This show vpdn output is before MS–CHAP and MPPE are enabled.

```
2621# show vpdn
%No active L2TP tunnels
%No active L2F tunnels
PPTP Tunnel and Session Information Total tunnels 1 sessions 1
LocID Remote Name     State    Remote Address  Port  Sessions VPDN Group
  3                     estabd   171.69.89.81    4737  1        1

LocID RemID TunID Intf Username     State    Last Chg Uniq ID
  3     32768 3     Vi4     cisco estabd 00:01:44 2
```

This show vpdn output is after MS–CHAP and MPPE are enabled.

```
2621# show vpdn
```
%No active L2TP tunnels

%No active L2F tunnels

PPTP Tunnel and Session Information Total tunnels 1 sessions 1

<table>
<thead>
<tr>
<th>LocID</th>
<th>Remote Name</th>
<th>State</th>
<th>Remote Address</th>
<th>Port</th>
<th>Sessions</th>
<th>VPDN Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td>estabd</td>
<td>171.69.89.81</td>
<td>4893</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LocID</th>
<th>RemID</th>
<th>TunID</th>
<th>Intf</th>
<th>Username</th>
<th>State</th>
<th>Last Chg Uniq ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
<td>Vi4</td>
<td>cisco</td>
<td>estabd</td>
<td>00:00:37 4</td>
</tr>
</tbody>
</table>

%No active PPPoE tunnels

Troubleshoot

This section provides information you can use to troubleshoot your configuration.

Troubleshooting Commands

Certain `show` commands are supported by the Output Interpreter Tool (registered customers only), which allows you to view an analysis of `show` command output.

**Note:** Refer to Important Information on Debug Commands before you use `debug` commands.

- **clear vpdn tunnel pptp** Used to shut down a specified tunnel and all sessions within the tunnel and clears the specified PPTP tunnel

```
2621# clear vpdn tunnel pptp ip remote 171.69.89.81
Starting to clear the tunnel

2621#
```

Ecryption Mismatch Debug output of the router configured for 128 strong encryption when the VPN Client is configured for 40 bit encryption.

```
2621#
2621#
```
Mar 5 02:29:36.339: ppp5 PPP: Treating connection as a callin
Mar 5 02:29:36.339: ppp5 PPP: Phase is ESTABLISHING, Passive Open
Mar 5 02:29:36.343: ppp5 LCP: State is Listen
Mar 5 02:29:36.351: ppp5 LCP: TIMEout: State Listen
Mar 5 02:29:36.351: ppp5 PPP: Authorization required
Mar 5 02:29:36.351: ppp5 LCP: O CONFREQ [Listen] id 1 len 15
Mar 5 02:29:36.351: ppp5 LCP: AuthProto MS−CHAP (0x0305C22380)
Mar 5 02:29:36.351: ppp5 LCP: MagicNumber 0x1664E006 (0x05061664E006)
Mar 5 02:29:36.351: ppp5 LCP: I CONFACK [REQsent] id 1 len 15
Mar 5 02:29:36.351: ppp5 LCP: AuthProto MS−CHAP (0x0305C22380)
Mar 5 02:29:36.351: ppp5 LCP: MagicNumber 0x1664E006 (0x05061664E006)
Mar 5 02:29:36.351: ppp5 LCP: I CONFREQ [ACKrcvd] id 1 len 44
Mar 5 02:29:36.351: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
Mar 5 02:29:36.351: ppp5 LCP: PFC (0x0702)
Mar 5 02:29:36.351: ppp5 LCP: ACFC (0x0802)
Mar 5 02:29:36.351: ppp5 LCP: Callback 6 (0x0D0306)
Mar 5 02:29:36.351: ppp5 LCP: MRRU 1614 (0x1104064E)

Mar 5 02:29:36.359: ppp5 LCP: I CONFREQ [ACKrcvd] id 1 len 44
Mar 5 02:29:36.359: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
Mar 5 02:29:36.359: ppp5 LCP: PFC (0x0702)
Mar 5 02:29:36.359: ppp5 LCP: ACFC (0x0802)
Mar 5 02:29:36.359: ppp5 LCP: Callback 6 (0x0D0306)
Mar 5 02:29:36.359: ppp5 LCP: MRRU 1614 (0x1104064E)

Mar 5 02:29:36.359: ppp5 LCP: I CONFREQ [ACKrcvd] id 2 len 37
Mar 5 02:29:36.359: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
Mar 5 02:29:36.359: ppp5 LCP: PFC (0x0702)
Mar 5 02:29:36.359: ppp5 LCP: ACFC (0x0802)
Mar 5 02:29:36.359: ppp5 LCP: Callback 6 (0x0D0306)
Mar 5 02:29:36.359: ppp5 LCP: MRRU 1614 (0x1104064E)

Mar 5 02:29:36.371: ppp5 LCP: O CONFREJ [ACKrcvd] id 2 len 37
Mar 5 02:29:36.371: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
Mar 5 02:29:36.371: ppp5 LCP: PFC (0x0702)
Mar 5 02:29:36.371: ppp5 LCP: ACFC (0x0802)
Mar 5 02:29:36.371: ppp5 LCP: Callback 6 (0x0D0306)
Mar 5 02:29:36.371: ppp5 LCP: MRRU 1614 (0x1104064E)

Mar 5 02:29:36.375: ppp5 LCP: I CONFREQ [ACKrcvd] id 2 len 37
Mar 5 02:29:36.375: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
Mar 5 02:29:36.375: ppp5 LCP: PFC (0x0702)
Mar 5 02:29:36.375: ppp5 LCP: ACFC (0x0802)
Mar 5 02:29:36.375: ppp5 LCP: Callback 6 (0x0D0306)
Mar 5 02:29:36.375: ppp5 LCP: MRRU 1614 (0x1104064E)

Mar 5 02:29:36.379: ppp5 PPP: Phase is AUTHENTICATING, by this end
Mar 5 02:29:36.379: ppp5 MS−CHAP: O CHALLENGE id 1 len 21 from "2621"
Mar 5 02:29:36.383: ppp5 LCP: I IDENTIFY [Open] id 3 len 18 magic 0x793D5ED8 MSRARSV5.00
Mar 5 02:29:36.383: ppp5 LCP: I IDENTIFY [Open] id 4 len 28 magic 0x793D5ED8 MSRAR−1−USHAFIQ−W2K1
Mar 5 02:29:36.383: ppp5 MS−CHAP: I RESPONSE id 1 len 59 from "cisco"
Mar 5 02:29:36.383: ppp5 PPP: Phase is AUTHENTICATING, by this end
Mar 5 02:29:36.383: ppp5 MS−CHAP: I RESPONSE id 1 len 59 from "cisco"
Mar 5 02:29:36.383: ppp5 PPP: Phase is AUTHENTICATING, Unauthenticated User
Mar 5 02:29:36.387: ppp5 PPP: Sent MSCHAP LOGIN Request
Mar 5 02:29:36.475: ppp5 PPP: Received LOGIN Response PASS
Mar 5 02:29:36.479: ppp5 PPP: Phase is FORWARDING, Attempting Forward
Mar 5 02:29:36.483: V44 PPP: Phase is DOWN, Setup
Mar 5 02:29:36.483: V44 PPP: Phase is DOWN, Setup
Mar 5 02:29:36.483: Tnl/Sn6/6 PPTP: Virtual interface created for bandwidth 100000 Kbps
Mar 5 02:29:36.487: %LINK−3−UPDOWN: Interface Virtual−Access4, changed state to up
Mar 5 02:29:36.487: V44 PPP: Phase is AUTHENTICATING, Authenticated User
Mar 5 02:29:36.487: V44 MS−CHAP: O SUCCESS id 1 len 4
Mar 5 02:29:36.491: V44 PPP: Phase is UP
Mar 5 02:29:36.491: V44 IPCP: O CONFREQ [Closed] id 1 len 10
Mar 5 02:29:36.491: V44 IPCP: Address 172.16.142.191 (0x0306AC108EBF)
Mar 5 02:29:36.491: V44 IPCP: O CONFREQ [Closed] id 1 len 10
Mar 5 02:29:36.491: V44 IPCP: MS−PPC supported bits 0x01000060 (0x120601000060)
Mar 5 02:29:36.491: V44 PPP: Process pending packets
Mar 5 02:29:36.499: V44 IPCP: I CONFREQ [REQsent] id 5 len 10
Mar 5 02:29:36.503: V44 IPCP: MS−PPC supported bits 0x01000001 (0x120601000001)
Mar 5 02:29:36.503: V44 IPCP: O CONFNAK [REQsent] id 5 len 10
Authentication Mismatch

Debug output of the router configured for MS−CHAP and the VPN Client configured for PAP.

*Mar 5 02:29:38.503: Vi4 CCP: MS−PPC supported bits 0x01000060 (0x120601000060)
*Mar 5 02:29:38.503: Vi4 CCP: I CONFREJ [REQsent] id 1 len 10
*Mar 5 02:29:38.503: Vi4 CCP: MS−PPC supported bits 0x01000060 (0x120601000060)
*Mar 5 02:29:38.503: Vi4 MPPE: Required encryption not negotiated
*Mar 5 02:29:38.507: Vi4 CCP: State is Closed
*Mar 5 02:29:38.507: Vi4 MPPE: Required encryption not negotiated
*Mar 5 02:29:38.507: Vi4 PPP: Phase is TERMINATING
*Mar 5 02:29:38.507: Vi4 LCP: State is Closed
*Mar 5 02:29:38.507: Vi4 LCP: State is Terminating
*Mar 5 02:29:38.507: Vi4 VPDN: Reseting interface
*Mar 5 02:29:38.507: Vi4 LCP: State is Closed
*Mar 5 02:29:38.507: Vi4 PPP: Phase is Down
*Mar 5 02:29:38.507: Vi4 LCP: State is Closed
*Mar 5 02:29:38.507: Vi4 LCP: State is Closed
*Mar 5 02:29:38.511: Vi4 PPP: Phase is DOWN
*Mar 5 02:29:38.511: Vi4 VPDN: Reseting interface
*Mar 5 02:29:38.511: Vi4 LCP: State is Closed
*Mar 5 02:29:38.511: Vi4 PPP: Phase is DOWN

Authentication Mismatch

Debug output of the router configured for MS−CHAP and the VPN Client configured for PAP.

*Mar 5 02:30:46.555: ppp6 PPP: Using vpn set call direction
*Mar 5 02:30:46.559: ppp6 PPP: Treating connection as a callin
*Mar 5 02:30:46.559: ppp6 PPP: Phase is ESTABLISHING, Passive Open
*Mar 5 02:30:46.559: ppp6 LCP: State is Listen
*Mar 5 02:30:46.559: ppp6 PPP: Authorization required
*Mar 5 02:30:46.559: ppp6 LCP: O CONFREQ [Listen] id 1 len 15
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto MS−CHAP (0x0305C22380)
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFNAK [REQsent] id 1 len 8
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:46.559: ppp6 LCP: O CONFREQ [REQsent] id 2 len 15
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto MS−CHAP (0x0305C22380)
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFREQ [REQsent] id 1 len 44
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:46.559: ppp6 LCP: PFC (0x0702)
*Mar 5 02:30:46.559: ppp6 LCP: ACFC (0x0802)
*Mar 5 02:30:46.559: ppp6 LCP: Callback 6 (0x0D0306)
*Mar 5 02:30:46.559: ppp6 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:30:46.559: ppp6 LCP: EndpointDisc 1 Local
*Mar 5 02:30:46.559: ppp6 LCP: Callback 6 (0x0D0306)
*Mar 5 02:30:46.559: ppp6 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFNAK [REQsent] id 2 len 8
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:46.559: ppp6 LCP: O CONFREQ [REQsent] id 3 len 15
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto MS−CHAP (0x0305C22380)
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFREQ [REQsent] id 2 len 37
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:46.559: ppp6 LCP: PFC (0x0702)
*Mar 5 02:30:46.559: ppp6 LCP: ACFC (0x0802)
*Mar 5 02:30:46.559: ppp6 LCP: Callback 6 (0x0D0306)
*Mar 5 02:30:46.559: ppp6 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFNAK [REQsent] id 2 len 8
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:46.559: ppp6 LCP: O CONFREQ [REQsent] id 3 len 15
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto MS−CHAP (0x0305C22380)
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFREQ [REQsent] id 2 len 37
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:46.559: ppp6 LCP: PFC (0x0702)
*Mar 5 02:30:46.559: ppp6 LCP: ACFC (0x0802)
*Mar 5 02:30:46.559: ppp6 LCP: Callback 6 (0x0D0306)
*Mar 5 02:30:46.559: ppp6 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFNAK [REQsent] id 2 len 8
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:46.559: ppp6 LCP: O CONFREQ [REQsent] id 3 len 15
*Mar 5 02:30:46.559: ppp6 LCP: AuthProto MS−CHAP (0x0305C22380)
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:46.559: ppp6 LCP: I CONFREQ [REQsent] id 2 len 37
*Mar 5 02:30:46.559: ppp6 LCP: MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:46.559: ppp6 LCP: PFC (0x0702)
*Mar 5 02:30:46.559: ppp6 LCP: ACFC (0x0802)
*Mar 5 02:30:48.595: ppp6 LCP: EndpointDisc 1 Local
*Mar 5 02:30:48.595: ppp6 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:30:48.595: ppp6 LCP: (0x897EAE00000006)
*Mar 5 02:30:48.599: ppp6 LCP: I CONFNAK [ACKsent] id 3 len 8
*Mar 5 02:30:48.599: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.599: ppp6 LCP: O CONFREQ [ACKsent] id 4 len 15
*Mar 5 02:30:48.599: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.599: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.603: ppp6 LCP: I CONFNAK [ACKsent] id 4 len 8
*Mar 5 02:30:48.603: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.607: ppp6 LCP: O CONFREQ [ACKsent] id 5 len 15
*Mar 5 02:30:48.607: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.607: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.611: ppp6 LCP: I CONFNAK [ACKsent] id 5 len 8
*Mar 5 02:30:48.611: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.611: ppp6 LCP: O CONFREQ [ACKsent] id 6 len 15
*Mar 5 02:30:48.611: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.611: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.615: ppp6 LCP: I CONFNAK [ACKsent] id 6 len 8
*Mar 5 02:30:48.615: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.615: ppp6 LCP: O CONFREQ [ACKsent] id 7 len 15
*Mar 5 02:30:48.615: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.615: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.619: ppp6 LCP: I CONFNAK [ACKsent] id 7 len 8
*Mar 5 02:30:48.619: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.623: ppp6 LCP: O CONFREQ [ACKsent] id 8 len 15
*Mar 5 02:30:48.623: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.623: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.627: ppp6 LCP: I CONFNAK [ACKsent] id 8 len 8
*Mar 5 02:30:48.627: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.627: ppp6 LCP: O CONFREQ [ACKsent] id 9 len 15
*Mar 5 02:30:48.627: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.627: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.631: ppp6 LCP: I CONFNAK [ACKsent] id 9 len 8
*Mar 5 02:30:48.631: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.631: ppp6 LCP: O CONFREQ [ACKsent] id 10 len 15
*Mar 5 02:30:48.631: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.631: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.635: ppp6 LCP: I CONFNAK [ACKsent] id 10 len 8
*Mar 5 02:30:48.635: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.635: ppp6 LCP: Failed to negotiate with peer
*Mar 5 02:30:48.639: ppp6 LCP: O TERMREQ [ACKsent] id 11 len 4
*Mar 5 02:30:48.639: ppp6 LCP: Phase is TERMINATING
*Mar 5 02:30:48.647: ppp6 LCP: I TERMACK [TERMsent] id 11 len 4
*Mar 5 02:30:48.647: ppp6 LCP: State is Closed
*Mar 5 02:30:48.647: ppp6 LCP: Phase is DOWN

Related Information

- Configuring the Cisco Secure PIX Firewall to use PPTP
- PPTP Support Page
- Technical Support & Documentation – Cisco Systems