

Настройка маршрутизатора Cisco и VPN-клиентов с использованием PPTP и MPPE

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Введение

В этом документе описывается настройка маршрутизатора на базе Cisco IOS® для окончательной обработки подключений клиентов двухточечного протокола туннелирования (PPTP) и двухточечного протокола шифрования Microsoft (MPPE) в ОС Windows 2000.

[Дополнительные сведения об аутентификации PPTP с сервером контроля доступа Cisco Secure ACS можно найти в документе Настройка сервера Cisco Secure ACS для аутентификации маршрутизатора PPTP в ОС Windows.](#)

Предварительные условия

Требования

Для этого документа отсутствуют особые требования.

Используемые компоненты

Сведения, содержащиеся в этом документе, касаются следующих версий программного обеспечения и оборудования:

- Маршрутизатор Cisco 2621 с ПО Cisco IOS версии 12.2
- Microsoft Windows 2000

Сведения, представленные в этом документе, были получены от устройств, работающих в специальной лабораторной среде. Все устройства, описанные в этом документе, были запущены с чистой (стандартной) конфигурацией. В рабочей сети необходимо изучить потенциальное воздействие всех команд до их использования.

Схема сети

В настоящем документе используется следующая схема сети:

Условные обозначения

[Дополнительные сведения об условных обозначениях см. в документе Условные обозначения технических терминов Cisco.](#)

Конфигурация маршрутизатора PPTP

Эти команды IOS применимы ко всем платформам, поддерживающим протокол 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
```

Маршрутизатор Cisco 2621

```
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
!$dGFC$VA28yOWzxlCKyjldq8SkE/ ! 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 ! ! ! ! ! ! ! ! !
voice call carrier capacity active ! ! ! ! ! ! ! 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-Templatel 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 ! dial-peer cor custom ! ! ! ! ! line con 0
exec-timeout 0 0 line aux 0 line vty 0 4 password cisco
login ! ! end 2621#
```

Конфигурация маршрутизатора с протоколами MPPE и MS-CHAP

```
!--- 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
```

Настройки и конфигурация VPN (PPTP) в Windows 2000

Выполните следующие действия:

1. Выберите Пуск > Настройки > Сеть и удаленный доступ к сети > Новое подключение.
2. В появившемся окне мастера подключений выберите Тип сетевого подключения, затем выберите Подключиться к частной сети через Интернет.
3. Выберите Набрать номер для следующего предварительного подключения.
4. В поле Host или IP Address укажите адрес места назначения и нажмите Далее.
5. Выберите Пуск > Настройки > Сеть и удаленный доступ к сети, затем выберите соединение, которое только что было настроено.
6. При появлении следующего окна выберите Свойства > Безопасность для настройки параметров.
7. Выберите Дополнительно (настройки заказчика), затем выберите Настройки и укажите соответствующие типы шифрования (пункт «Шифрование данных») и аутентификации (разрешите эти протоколы).
8. В разделе «Сеть» (тип вызываемого VPN-сервера) выберите PPTP и нажмите ОК.
9. Появится окно проверки имени пользователя и пароля.
10. Появится сообщение о выполнении регистрации компьютера в сети.
11. Появится окно «Свойства подключения».
12. В следующих окнах отображается состояние подключения.

Проверка

В данном разделе содержатся сведения для проверки работы текущей конфигурации.

Средство Output Interpreter (OIT) (только для зарегистрированных клиентов) поддерживает определенные команды show. Посредством OIT можно анализировать выходные данные команд show.

- **show debug** – отображает команды debug, разрешенные в данный момент, для диагностики
- **show user** – отображает список и состояние пользователей, работающих в системе в данный момент
- **show ip route connected** – отображает текущее состояние таблицы маршрутизации
- **show vpdn** – отображает информацию об активном туннеле с протоколом пересылки 2-го уровня (L2F) и идентификаторы сообщений в виртуальной частной коммутируемой сети (VPDN)

Ниже приведен пример выходных данных команды **show debug**.

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

Выходные данные отладки с начальной настройкой PPTP имеют следующий вид.

```
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 PPP: 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 CONFACK [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 02:16:27.695: ppp2 LCP: I CONFREQ [ACKrcvd] id 1 len 44
*Mar 5 02:16:27.695: ppp2 LCP:   MagicNumber 0x131A2427 (0x0506131A2427)
*Mar 5 02:16:27.695: ppp2 LCP:   PFC (0x0702)
*Mar 5 02:16:27.695: ppp2 LCP:   ACFC (0x0802)
*Mar 5 02:16:27.695: ppp2 LCP:   Callback 6 (0x0D0306)
*Mar 5 02:16:27.695: ppp2 LCP:   MRRU 1614 (0x1104064E)
*Mar 5 02:16:27.695: ppp2 LCP:   EndpointDisc 1 Local
*Mar 5 02:16:27.699: ppp2 LCP:   (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:16:27.699: ppp2 LCP:   (0x897EAE00000002)
*Mar 5 02:16:27.699: ppp2 LCP: O CONFREQ [ACKrcvd] id 1 len 11
*Mar 5 02:16:27.699: ppp2 LCP:   Callback 6 (0x0D0306)
*Mar 5 02:16:27.699: ppp2 LCP:   MRRU 1614 (0x1104064E)
*Mar 5 02:16:27.703: ppp2 LCP: I CONFREQ [ACKrcvd] id 2 len 37
*Mar 5 02:16:27.703: ppp2 LCP:   MagicNumber 0x131A2427 (0x0506131A2427)
*Mar 5 02:16:27.703: ppp2 LCP:   PFC (0x0702)
*Mar 5 02:16:27.707: ppp2 LCP:   ACFC (0x0802)
*Mar 5 02:16:27.707: ppp2 LCP:   EndpointDisc 1 Local
*Mar 5 02:16:27.707: ppp2 LCP:   (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:16:27.707: ppp2 LCP:   (0x897EAE00000002)
*Mar 5 02:16:27.707: ppp2 LCP: O CONFACK [ACKrcvd] id 2 len 37
*Mar 5 02:16:27.707: ppp2 LCP:   MagicNumber 0x131A2427 (0x0506131A2427)
*Mar 5 02:16:27.707: ppp2 LCP:   PFC (0x0702)
*Mar 5 02:16:27.707: ppp2 LCP:   ACFC (0x0802)
*Mar 5 02:16:27.711: ppp2 LCP:   EndpointDisc 1 Local
*Mar 5 02:16:27.711: ppp2 LCP:   (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:16:27.711: ppp2 LCP:   (0x897EAE00000002)
*Mar 5 02:16:27.711: ppp2 LCP: State is Open
*Mar 5 02:16:27.711: ppp2 PPP: Phase is AUTHENTICATING, by this end *Mar 5 02:16:27.715: ppp2
LCP: I IDENTIFY [Open] id 3 len 18 magic 0x131A2427 MSRASV5.00 *Mar 5 02:16:27.719: ppp2 LCP: I
IDENTIFY [Open] id 4 len 28 magic 0x131A2427 MSRAS-1-USHAFIQ-W2K1 *Mar 5 02:16:27.719: ppp2 PAP:
I AUTH-REQ id 1 len 19 from "cisco" *Mar 5 02:16:27.719: ppp2 PAP: Authenticating peer cisco
*Mar 5 02:16:27.719: ppp2 PPP: Phase is FORWARDING, Attempting Forward *Mar 5 02:16:27.719: ppp2
PPP: Phase is AUTHENTICATING, Unauthenticated User *Mar 5 02:16:27.719: 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: Tnl/Sn3/3 PPTP: Virtual interface created for bandwidth 10000 Kbps *Mar 5
02:16:27.731: Vi4 Tnl/Sn3/3 PPTP: VPDN session up *Mar 5 02:16:27.735: %LINK-3-UPDOWN: Interface
Virtual-Access4, changed state to up *Mar 5 02:16:27.735: Vi4 PPP: Phase is AUTHENTICATING,
Authenticated User *Mar 5 02:16:27.735: Vi4 PAP: O AUTH-ACK id 1 len 5 *Mar 5 02:16:27.739: Vi4
PPP: Phase is UP *Mar 5 02:16:27.739: Vi4 IPCP: O CONFREQ [Closed] id 1 len 10 *Mar 5
02:16:27.739: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF) *Mar 5 02:16:27.739: Vi4 CCP: O
CONFREQ [Closed] id 1 len 4 *Mar 5 02:16:27.739: Vi4 PPP: Process pending packets *Mar 5
02:16:27.747: Vi4 CCP: I CONFREQ [REQsent] id 5 len 10 *Mar 5 02:16:27.747: Vi4 CCP: MS-PPC
supported bits 0x01000001 (0x120601000001) *Mar 5 02:16:27.747: Vi4 CCP: O CONFNAK [REQsent] id
5 len 10 *Mar 5 02:16:27.751: Vi4 CCP: MS-PPC supported bits 0x01000060 (0x120601000060) *Mar 5
02:16:27.751: Vi4 CCP: I CONFACK [REQsent] id 1 len 4 *Mar 5 02:16:27.751: Vi4 IPCP: I CONFREQ
[REQsent] id 6 len 34 *Mar 5 02:16:27.751: Vi4 IPCP: Address 0.0.0.0 (0x030600000000) *Mar 5
02:16:27.751: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000) *Mar 5 02:16:27.751: Vi4 IPCP:
PrimaryWINS 0.0.0.0 (0x820600000000) *Mar 5 02:16:27.755: Vi4 IPCP: SecondaryDNS 0.0.0.0
(0x830600000000) *Mar 5 02:16:27.755: Vi4 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000) *Mar 5
02:16:27.755: 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 ***Mar 5
02:16:27.755: Vi4 IPCP: Pool returned 192.168.1.4 *Mar 5 02:16:27.755: Vi4 IPCP: O CONFREQ
[REQsent] id 6 len 28 *Mar 5 02:16:27.759: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000) *Mar 5
02:16:27.759: Vi4 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000) *Mar 5 02:16:27.759: Vi4 IPCP:
SecondaryDNS 0.0.0.0 (0x830600000000) *Mar 5 02:16:27.759: Vi4 IPCP: SecondaryWINS 0.0.0.0
(0x840600000000) *Mar 5 02:16:27.759: Vi4 IPCP: I CONFACK [REQsent] id 1 len 10 *Mar 5
02:16:27.759: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF) *Mar 5 02:16:27.763: Vi4 CCP: I
CONFREQ [ACKrcvd] id 7 len 4 *Mar 5 02:16:27.767: Vi4 CCP: O CONFACK [ACKrcvd] id 7 len 4 *Mar 5
02:16:27.767: Vi4 CCP: State is Open *Mar 5 02:16:27.767: Vi4 CCP: Compression not negotiated
*Mar 5 02:16:27.767: Vi4 CCP: Decompression not negotiated *Mar 5 02:16:27.767: Vi4 CCP:
Negotiation mismatch, closing CCP *Mar 5 02:16:27.767: Vi4 CCP: O TERMREQ [Open] id 2 len 4 *Mar
5 02:16:27.767: Vi4 IPCP: I CONFREQ [ACKrcvd] id 8 len 10 *Mar 5 02:16:27.767: Vi4 IPCP: Address
0.0.0.0 (0x030600000000) *Mar 5 02:16:27.771: Vi4 IPCP: O CONFNAK [ACKrcvd] id 8 len 10 *Mar 5
02:16:27.771: Vi4 IPCP: Address 192.168.1.4 (0x0306C0A80104) *Mar 5 02:16:27.775: Vi4 CCP: I
TERMACK [TERMsent] id 2 len 4 *Mar 5 02:16:27.775: Vi4 CCP: State is Closed *Mar 5 02:16:27.775:
Vi4 IPCP: I CONFREQ [ACKrcvd] id 9 len 10 *Mar 5 02:16:27.775: Vi4 IPCP: Address 192.168.1.4
(0x0306C0A80104) *Mar 5 02:16:27.775: Vi4 IPCP: O CONFACK [ACKrcvd] id 9 len 10 *Mar 5
02:16:27.779: Vi4 IPCP: Address 192.168.1.4 (0x0306C0A80104) ***Mar 5 02:16:27.779: Vi4 IPCP:
State is Open *Mar 5 02:16:27.783: Vi4 IPCP: Install route to 192.168.1.4 *Mar 5 02:16:27.783:
Vi4 IPCP: Add link info for cef entry 192.168.1.4 *Mar 5 02:16:28.735: %LINEPROTO-5-UPDOWN: Line
protocol on Interface Virtual-Access4, changed state to up *Mar 5 02:16:37.743: Vi4 CCP: O
CONFREQ [Closed] id 3 len 4 2621# 2621#******

Выходные данные отладки с необходимой настройкой MPPE и MS-CHAP имеют следующий вид.

```
2621#
*Mar 5 02:25:01.815: ppp4 PPP: Using vpn set call direction
*Mar 5 02:25:01.815: ppp4 PPP: Treating connection as a callin
*Mar 5 02:25:01.815: ppp4 PPP: Phase is ESTABLISHING, Passive Open
*Mar 5 02:25:01.815: ppp4 LCP: State is Listen
*Mar 5 02:25:03.823: ppp4 LCP: TIMEout: State Listen
*Mar 5 02:25:03.823: ppp4 PPP: Authorization required
*Mar 5 02:25:03.823: ppp4 LCP: O CONFREQ [Listen] id 1 len 15
*Mar 5 02:25:03.823: ppp4 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:25:03.823: ppp4 LCP: MagicNumber 0x1660AFA4 (0x05061660AFA4)
*Mar 5 02:25:03.843: ppp4 LCP: I CONFACK [REQsent] id 1 len 15
*Mar 5 02:25:03.843: ppp4 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:25:03.843: ppp4 LCP: MagicNumber 0x1660AFA4 (0x05061660AFA4)
*Mar 5 02:25:03.843: ppp4 LCP: I CONFREQ [ACKrcvd] id 1 len 44
*Mar 5 02:25:03.843: ppp4 LCP: MagicNumber 0x4B5A2A81 (0x05064B5A2A81)
*Mar 5 02:25:03.843: ppp4 LCP: PFC (0x0702)
*Mar 5 02:25:03.847: ppp4 LCP: ACFC (0x0802)
*Mar 5 02:25:03.847: ppp4 LCP: Callback 6 (0x0D0306)
*Mar 5 02:25:03.847: ppp4 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:25:03.847: ppp4 LCP: EndpointDisc 1 Local
```

```
*Mar 5 02:25:03.847: ppp4 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:25:03.847: ppp4 LCP: (0x897EAE00000004)
*Mar 5 02:25:03.847: ppp4 LCP: O CONFREJ [ACKrcvd] id 1 len 11
*Mar 5 02:25:03.847: ppp4 LCP: Callback 6 (0x0D0306)
*Mar 5 02:25:03.851: ppp4 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:25:03.851: ppp4 LCP: I CONFREQ [ACKrcvd] id 2 len 37
*Mar 5 02:25:03.855: ppp4 LCP: MagicNumber 0x4B5A2A81 (0x05064B5A2A81)
*Mar 5 02:25:03.855: ppp4 LCP: PFC (0x0702)
*Mar 5 02:25:03.855: ppp4 LCP: ACFC (0x0802)
*Mar 5 02:25:03.855: ppp4 LCP: EndpointDisc 1 Local
*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: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:25:03.859: ppp4 LCP: (0x897EAE00000004)
*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
MSRASV5.00
*Mar 5 02:25:03.867: ppp4 LCP: I IDENTIFY [Open] id 4 len 28 magic 0x4B5A2A81
MSRAS-1-USHAFIQ-W2K1
*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 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 02:25:03.975: Tnl/Sn5/5 PPTP: Virtual interface created for
bandwidth 100000 Kbps
*Mar 5 02:25:03.979: Vi4 Tnl/Sn5/5 PPTP: VPDN session up
*Mar 5 02:25:03.983: %LINK-3-UPDOWN: Interface Virtual-Access4, changed state to up
*Mar 5 02:25:03.983: Vi4 PPP: Phase is AUTHENTICATING, Authenticated User
*Mar 5 02:25:03.983: Vi4 MS-CHAP: O SUCCESS id 1 len 4
*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 PPP: Process pending packets
*Mar 5 02:25:03.995: Vi4 CCP: I CONFREQ [REQsent] id 5 len 10
*Mar 5 02:25:03.995: Vi4 CCP: MS-PPC supported bits 0x01000001 (0x120601000001)
*Mar 5 02:25:03.999: Vi4 CCP: O CONFNAK [REQsent] id 5 len 10
*Mar 5 02:25:03.999: Vi4 CCP: MS-PPC supported bits 0x01000060 (0x120601000060)
*Mar 5 02:25:03.999: Vi4 CCP: I CONFNAK [REQsent] id 1 len 10
*Mar 5 02:25:03.999: Vi4 CCP: MS-PPC supported bits 0x01000040 (0x120601000040)
*Mar 5 02:25:03.999: Vi4 CCP: O CONFREQ [REQsent] id 2 len 10
*Mar 5 02:25:03.999: Vi4 CCP: MS-PPC supported bits 0x01000040 (0x120601000040)
*Mar 5 02:25:04.003: Vi4 IPCP: I CONFREQ [REQsent] id 6 len 34
*Mar 5 02:25:04.003: Vi4 IPCP: Address 0.0.0.0 (0x030600000000)
*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 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0
*Mar 5 02:25:04.007: Vi4 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0
*Mar 5 02:25:04.007: Vi4 IPCP: Pool returned 192.168.1.4
*Mar 5 02:25:04.007: Vi4 IPCP: O CONFREJ [REQsent] id 6 len 28
*Mar 5 02:25:04.007: Vi4 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
```

```

*Mar 5 02:25:04.007: Vi4 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
*Mar 5 02:25:04.007: Vi4 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar 5 02:25:04.011: Vi4 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar 5 02:25:04.011: Vi4 IPCP: I CONFACK [REQsent] id 1 len 10
*Mar 5 02:25:04.011: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF)
*Mar 5 02:25:04.015: Vi4 CCP: I CONFREQ [REQsent] id 7 len 10
*Mar 5 02:25:04.015: Vi4 CCP: MS-PPC supported bits 0x01000040 (0x120601000040)
*Mar 5 02:25:04.015: Vi4 CCP: O CONFACK [REQsent] id 7 len 10
*Mar 5 02:25:04.015: Vi4 CCP: MS-PPC supported bits 0x01000040 (0x120601000040)
*Mar 5 02:25:04.019: Vi4 CCP: I CONFACK [ACKsent] id 2 len 10
*Mar 5 02:25:04.019: Vi4 CCP: MS-PPC supported bits 0x01000040 (0x120601000040)
*Mar 5 02:25:04.019: Vi4 CCP: State is Open
*Mar 5 02:25:04.023: Vi4 IPCP: I CONFREQ [ACKrcvd] id 8 len 10
*Mar 5 02:25:04.027: Vi4 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 5 02:25:04.027: Vi4 IPCP: O CONFNAK [ACKrcvd] id 8 len 10
*Mar 5 02:25:04.027: Vi4 IPCP: Address 192.168.1.4 (0x0306C0A80104)
*Mar 5 02:25:04.031: Vi4 IPCP: I CONFREQ [ACKrcvd] id 9 len 10
*Mar 5 02:25:04.031: Vi4 IPCP: Address 192.168.1.4 (0x0306C0A80104)
*Mar 5 02:25:04.031: Vi4 IPCP: O CONFACK [ACKrcvd] id 9 len 10
*Mar 5 02:25:04.031: Vi4 IPCP: Address 192.168.1.4 (0x0306C0A80104)
*Mar 5 02:25:04.031: Vi4 IPCP: State is Open
*Mar 5 02:25:04.035: Vi4 IPCP: Install route to 192.168.1.4
*Mar 5 02:25:04.035: Vi4 IPCP: Add link info for cef entry 192.168.1.4
*Mar 5 02:25:04.983: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Virtual-Access4, changed state to up

```

Выходные данные команды show user до включения MS-CHAP и MPPE имеют следующий вид.

```

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

```

Выходные данные команды show user после включения MS-CHAP и MPPE имеют следующий вид.

```

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

```

Выходные данные команды show ip route connected до включения MS-CHAP и MPPE имеют следующий вид.

```

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

```

Выходные данные команды show vpdn до включения MS-CHAP и MPPE имеют следующий вид.

```

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 %No active PPPoE tunnels

```

Выходные данные команды show vpdn после включения MS-CHAP и MPPE имеют следующий вид.

```

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 5 estabd 171.69.89.81 4893 1 1 LocID RemID TunID Intf Username State Last Chg Uniq ID 5 0
5 Vi4 cisco estabd 00:00:37 4 %No active PPPoE tunnels

```

[Устранение неполадок](#)

В этом разделе описывается процесс устранения неполадок конфигурации.

Команды для устранения неполадок

Некоторые команды show поддерживаются Средством интерпретации выходных данных(только зарегистрированные клиенты), которое позволяет просматривать аналитику выходных данных команды show.

Примечание: [Прежде чем выполнять какие-либо команды отладки , ознакомьтесь с документом "Важные сведения о командах отладки".](#)

- **clear vpdn tunnel pptp** – служит для закрытия указанного туннеля вместе со всеми сеансами в туннеле и очистки указанного туннеля PPTP

```
2621#clear vpdn tunnel pptp ip remote 171.69.89.81 Starting to clear the tunnel 2621# *Mar 5
02:27:35.611: Vi4 PPP: Sending Acct Event[Down] id[5] *Mar 5 02:27:35.611: Vi4 VPDN: Reseting
interface *Mar 5 02:27:35.611: Vi4 PPP: Block vaccess from being freed [0x1D] *Mar 5
02:27:35.619: %LINK-3-UPDOWN: Interface Virtual-Access4, changed state to down *Mar 5
02:27:35.619: Vi4 CCP: State is Closed *Mar 5 02:27:35.623: Vi4 MPPE: Required encryption not
negotiated *Mar 5 02:27:35.623: Vi4 IPCP: Remove link info for cef entry 192.168.1.4 *Mar 5
02:27:35.623: Vi4 PPP: Unlocked by [0x4] Still Locked by [0x1B] *Mar 5 02:27:35.623: Vi4 PPP:
Unlocked by [0x10] Still Locked by [0xB] *Mar 5 02:27:35.623: Vi4 PPP: Phase is TERMINATING *Mar
5 02:27:35.627: Vi4 LCP: O TERMREQ [Open] id 2 len 4 *Mar 5 02:27:35.627: Vi4 IPCP: State is
Closed *Mar 5 02:27:35.627: Vi4 PPP: Unlocked by [0x8] Still Locked by [0x3] *Mar 5
02:27:35.627: Vi4 LCP: State is Closed *Mar 5 02:27:35.627: Vi4 PPP: Phase is DOWN *Mar 5
02:27:35.627: Vi4 PPP: Unlocked by [0x2] Still Locked by [0x1] *Mar 5 02:27:35.639: Vi4 IPCP:
Remove route to 192.168.1.4 *Mar 5 02:27:35.639: Vi4 PPP: Unlocked by [0x1] Still Locked by
[0x0] *Mar 5 02:27:35.639: Vi4 PPP: Free previously blocked vaccess *Mar 5 02:27:36.619:
%LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access4, changed state to down
```

Рассогласование параметров шифрования. – Выходные данные отладки маршрутизатора, настроенного в режиме криптостойкого 128-разрядного шифрования в то время, как клиент VPN настроен в режиме 40-разрядного шифрования.

```
2621#
2621#
*Mar 5 02:29:36.339: ppp5 PPP: Using vpn set call direction
*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 02:29:38.351: ppp5 LCP: TIMEout: State Listen
*Mar 5 02:29:38.351: ppp5 PPP: Authorization required
*Mar 5 02:29:38.351: ppp5 LCP: O CONFREQ [Listen] id 1 len 15
*Mar 5 02:29:38.351: ppp5 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:29:38.351: ppp5 LCP: MagicNumber 0x1664E006 (0x05061664E006)
*Mar 5 02:29:38.359: ppp5 LCP: I CONFACK [REQsent] id 1 len 15
*Mar 5 02:29:38.359: ppp5 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:29:38.359: ppp5 LCP: MagicNumber 0x1664E006 (0x05061664E006)
*Mar 5 02:29:38.359: ppp5 LCP: I CONFREQ [ACKrcvd] id 1 len 44
*Mar 5 02:29:38.359: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
*Mar 5 02:29:38.363: ppp5 LCP: PFC (0x0702)
*Mar 5 02:29:38.363: ppp5 LCP: ACFC (0x0802)
*Mar 5 02:29:38.363: ppp5 LCP: Callback 6 (0x0D0306)
*Mar 5 02:29:38.363: ppp5 LCP: MRRU 1614 (0x1104064E)
*Mar 5 02:29:38.363: ppp5 LCP: EndpointDisc 1 Local
*Mar 5 02:29:38.363: ppp5 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:29:38.363: ppp5 LCP: (0x897EAE00000005)
*Mar 5 02:29:38.363: ppp5 LCP: O CONFREQ [ACKrcvd] id 1 len 11
*Mar 5 02:29:38.367: ppp5 LCP: Callback 6 (0x0D0306)
*Mar 5 02:29:38.367: ppp5 LCP: MRRU 1614 (0x1104064E)
```



```

*Mar 5 02:29:38.367: ppp5 LCP: I CONFREQ [ACKrcvd] id 2 len 37
*Mar 5 02:29:38.371: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
*Mar 5 02:29:38.371: ppp5 LCP: PFC (0x0702)
*Mar 5 02:29:38.371: ppp5 LCP: ACFC (0x0802)
*Mar 5 02:29:38.371: ppp5 LCP: EndpointDisc 1 Local
*Mar 5 02:29:38.371: ppp5 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:29:38.371: ppp5 LCP: (0x897EAE00000005)
*Mar 5 02:29:38.371: ppp5 LCP: O CONFACK [ACKrcvd] id 2 len 37
*Mar 5 02:29:38.375: ppp5 LCP: MagicNumber 0x793D5ED8 (0x0506793D5ED8)
*Mar 5 02:29:38.375: ppp5 LCP: PFC (0x0702)
*Mar 5 02:29:38.375: ppp5 LCP: ACFC (0x0802)
*Mar 5 02:29:38.375: ppp5 LCP: EndpointDisc 1 Local
*Mar 5 02:29:38.375: ppp5 LCP: (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:29:38.375: ppp5 LCP: (0x897EAE00000005)
*Mar 5 02:29:38.375: ppp5 LCP: State is Open
*Mar 5 02:29:38.375: ppp5 PPP: Phase is AUTHENTICATING, by this end
*Mar 5 02:29:38.379: ppp5 MS-CHAP: O CHALLENGE id 1 len 21 from "2621 "
*Mar 5 02:29:38.383: ppp5 LCP: I IDENTIFY [Open] id 3 len 18 magic
0x793D5ED8 MSRASV5.00
*Mar 5 02:29:38.383: ppp5 LCP: I IDENTIFY [Open] id 4 len 28 magic
0x793D5ED8 MSRAS-1-USHAFIQ-W2K1
*Mar 5 02:29:38.383: ppp5 MS-CHAP: I RESPONSE id 1 len 59 from "cisco"
*Mar 5 02:29:38.383: ppp5 PPP: Phase is FORWARDING, Attempting Forward
*Mar 5 02:29:38.387: ppp5 PPP: Phase is AUTHENTICATING, Unauthenticated User
*Mar 5 02:29:38.387: ppp5 PPP: Sent MSCHAP LOGIN Request
*Mar 5 02:29:38.475: ppp5 PPP: Received LOGIN Response PASS
*Mar 5 02:29:38.479: ppp5 PPP: Phase is FORWARDING, Attempting Forward
*Mar 5 02:29:38.483: Vi4 PPP: Phase is DOWN, Setup
*Mar 5 02:29:38.483: Tnl/Sn6/6 PPTP: Virtual interface created for
bandwidth 100000 Kbps
*Mar 5 02:29:38.483: Vi4 Tnl/Sn6/6 PPTP: VPDN session up
*Mar 5 02:29:38.487: %LINK-3-UPDOWN: Interface Virtual-Access4, changed state to up
*Mar 5 02:29:38.487: Vi4 PPP: Phase is AUTHENTICATING, Authenticated User
*Mar 5 02:29:38.487: Vi4 MS-CHAP: O SUCCESS id 1 len 4
*Mar 5 02:29:38.491: Vi4 PPP: Phase is UP
*Mar 5 02:29:38.491: Vi4 IPCP: O CONFREQ [Closed] id 1 len 10
*Mar 5 02:29:38.491: Vi4 IPCP: Address 172.16.142.191 (0x0306AC108EBF)
*Mar 5 02:29:38.491: Vi4 CCP: O CONFREQ [Closed] id 1 len 10
*Mar 5 02:29:38.491: Vi4 CCP: MS-PPC supported bits 0x01000060 (0x120601000060)
*Mar 5 02:29:38.491: Vi4 PPP: Process pending packets
*Mar 5 02:29:38.499: Vi4 CCP: I CONFREQ [REQsent] id 5 len 10
*Mar 5 02:29:38.503: Vi4 CCP: MS-PPC supported bits 0x01000001 (0x120601000001)
*Mar 5 02:29:38.503: Vi4 CCP: O CONFNAK [REQsent] id 5 len 10
*Mar 5 02:29:38.503: Vi4 CCP: MS-PPC supported bits 0x01000060 (0x120601000060)
*Mar 5 02:29:38.503: Vi4 CCP: I CONFREQ [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 02:29:38.503: Vi4 PPP: Sending Acct Event[Down] id[6]
*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: O TERMREQ [Open] id 2 len 4
*Mar 5 02:29:38.507: Vi4 IPCP: 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 02:29:38.515: Vi4 PPP: Phase is ESTABLISHING, Passive Open
*Mar 5 02:29:38.515: Vi4 LCP: State is Listen
*Mar 5 02:29:38.515: Vi4 CCP: O CONFREQ [Closed] id 2 len 4
*Mar 5 02:29:38.519: %LINK-3-UPDOWN: Interface Virtual-Access4, changed state to down
*Mar 5 02:29:38.519: Vi4 LCP: State is Closed
*Mar 5 02:29:38.519: Vi4 PPP: Phase is DOWN

```

Рассогласование параметров аутентификации. – Выходные данные отладки

маршрутизатора, настроенного для использования протокола MS-CHAP в то время, как клиент VPN настроен для использования протокола 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 02:30:48.559: ppp6 LCP: TIMEOUT: State Listen
*Mar 5 02:30:48.559: ppp6 PPP: Authorization required
*Mar 5 02:30:48.559: ppp6 LCP: O CONFREQ [Listen] id 1 len 15
*Mar 5 02:30:48.559: ppp6 LCP:   AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.559: ppp6 LCP:   MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.575: ppp6 LCP: I CONFNAK [REQsent] id 1 len 8
*Mar 5 02:30:48.575: ppp6 LCP:   AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.575: ppp6 LCP: O CONFREQ [REQsent] id 2 len 15
*Mar 5 02:30:48.575: ppp6 LCP:   AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.575: ppp6 LCP:   MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.579: ppp6 LCP: I CONFREQ [REQsent] id 1 len 44
*Mar 5 02:30:48.579: ppp6 LCP:   MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:48.579: ppp6 LCP:   PFC (0x0702)
*Mar 5 02:30:48.579: ppp6 LCP:   ACFC (0x0802)
*Mar 5 02:30:48.579: ppp6 LCP:   Callback 6 (0x0D0306)
*Mar 5 02:30:48.579: ppp6 LCP:   MRRU 1614 (0x1104064E)
*Mar 5 02:30:48.579: ppp6 LCP:   EndpointDisc 1 Local
*Mar 5 02:30:48.583: ppp6 LCP:   (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:30:48.583: ppp6 LCP:   (0x897EAE00000006)
*Mar 5 02:30:48.583: ppp6 LCP: O CONFREQ [REQsent] id 1 len 11
*Mar 5 02:30:48.583: ppp6 LCP:   Callback 6 (0x0D0306)
*Mar 5 02:30:48.583: ppp6 LCP:   MRRU 1614 (0x1104064E)
*Mar 5 02:30:48.587: ppp6 LCP: I CONFNAK [REQsent] id 2 len 8
*Mar 5 02:30:48.587: ppp6 LCP:   AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.587: ppp6 LCP: O CONFREQ [REQsent] id 3 len 15
*Mar 5 02:30:48.587: ppp6 LCP:   AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.587: ppp6 LCP:   MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.591: ppp6 LCP: I CONFREQ [REQsent] id 2 len 37
*Mar 5 02:30:48.591: ppp6 LCP:   MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:48.591: ppp6 LCP:   PFC (0x0702)
*Mar 5 02:30:48.591: ppp6 LCP:   ACFC (0x0802)
*Mar 5 02:30:48.591: ppp6 LCP:   EndpointDisc 1 Local
*Mar 5 02:30:48.591: ppp6 LCP:   (0x131701E18F20C4D84A435B98EBA4BEA6)
*Mar 5 02:30:48.595: ppp6 LCP:   (0x897EAE00000006)
*Mar 5 02:30:48.595: ppp6 LCP: O CONFACK [REQsent] id 2 len 37
*Mar 5 02:30:48.595: ppp6 LCP:   MagicNumber 0x78FD271D (0x050678FD271D)
*Mar 5 02:30:48.595: ppp6 LCP:   PFC (0x0702)
*Mar 5 02:30:48.595: 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 02:30:48.619: 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 02:30:48.635: ppp6 LCP: AuthProto MS-CHAP (0x0305C22380)
*Mar 5 02:30:48.635: ppp6 LCP: MagicNumber 0x1665F247 (0x05061665F247)
*Mar 5 02:30:48.635: ppp6 LCP: I CONFNAK [ACKsent] id 10 len 8
*Mar 5 02:30:48.639: ppp6 LCP: AuthProto PAP (0x0304C023)
*Mar 5 02:30:48.639: ppp6 LCP: Failed to negotiate with peer
*Mar 5 02:30:48.639: ppp6 PPP: Sending Acct Event[Down] id[7]
*Mar 5 02:30:48.639: ppp6 LCP: O TERMREQ [ACKsent] id 11 len 4
*Mar 5 02:30:48.639: ppp6 PPP: 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 PPP: Phase is DOWN
```

Дополнительные сведения

- [Настройка межсетевое экрана PIX Cisco Secure для использования PPTP](#)
- [Страница поддержки PPTP](#)
- [Cisco Systems – техническая поддержка и документация](#)