

Как применять списки доступа к интерфейсам вызова с сервером TACACS+

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Введение

Этот документ демонстрирует, как применить списки доступа для набора номера интерфейсов с TACACS + сервер. Существует два возможных метода:

- Определите нумерованный список доступа на маршрутизаторе и сошлитесь на нумерованный список доступа на сервере. Это поддерживается в большинстве версий программного обеспечения Cisco IOS.
- Определите весь список доступа на сервере. Программное обеспечение Cisco IOS версии 11.3 или позже требуется для этого **способа для каждого пользователя**.

Примечание: Для ISDN необходимо использовать **способ для каждого пользователя**, и необходимо было настроить виртуальные профили на маршрутизаторе.

Предварительные условия

Требования

Для этого документа отсутствуют особые требования.

Используемые компоненты

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

- Программное обеспечение Cisco IOS версии 11.1 или позже (определяют списки доступа на маршрутизаторе), Программное обеспечение Cisco IOS версии 11.3 или позже (определяют списки доступа на сервере),
- Cisco Secure ACS для UNIX Cisco Secure ACS для Windows 2.x и позже TACACS+ Freeware

Примечание: Этот документ предполагает, что был ранее настроен Набираемый доступ. Этот документ не обсуждает подробные данные Набираемой конфигурации. См. [Настройку NAS для Доступа Базового соединения](#) для получения информации о том, как настроить сервер доступа к сети (NAS) для Набора.

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.

[Условные обозначения](#)

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

[Настройка](#)

В этом разделе содержатся сведения о настройке функций, описанных в этом документе.

Примечание: [Чтобы получить подробные сведения о командах в данном документе, используйте Средство поиска команд \(только для зарегистрированных клиентов\).](#)

[Схема сети](#)

В настоящем документе используется следующая схема сети:

Примечание: Конфигурации позволяют пользователю, который получает адрес 1.1.1.x от "turpool" для прозванивания (трафик ICMP) сети 9.9.9.x и Telnet (Трафик TCP) к сети 15.15.15. x. Это не позволяет пользователю сети ping 15.15.15.x или Telnet к сети 9.9.9. x.

[Конфигурации](#)

Эти конфигурации используются в данном документе.

- [Маршрутизатор Cisco серии 2500 рабочее программное обеспечение Cisco IOS версии 12.0\(5\)T](#)
- [Cisco Secure ACS для UNIX 2.3](#)
- [Cisco Secure ACS для Windows 3.2](#)

[Определите нумерованные списки доступа на маршрутизаторе](#)

Маршрутизатор Cisco серии 2500, которые выполняют программное обеспечение Cisco IOS версии 12.0(5)T

```
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are
specific to Cisco IOS Software Release 12.0.5.T and
later. !--- See the Commands for Other Cisco IOS
Releases section for commands !--- for other Cisco IOS
releases. ! aaa authentication login default local group
tacacs+
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
```

```

no ip http server
!
!--- Access list 101 is defined on the NAS. access-list
101 permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0
0.0.0.255
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
!--- Specify TACACS+ server host and key. tacacs-server
host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

Команды для других версий Cisco IOS

Примечание: Для использования этих команд удалите команды полужирным из конфигурации [маршрутизатора Cisco серии 2500](#) и вставьте эти команды в, как продиктовано Cisco IOS Software Release.

Cisco IOS Software Release 11.3. 3. T до 12.0.5. T

Current configuration:

```

!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other Cisco IOS Releases section for commands !---
for other Cisco IOS releases. ! aaa authentication login default local group tacacs+
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnnZQ$g6XdsgVnnYjEa.17v.Pij1
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!

```

```

interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
!--- Access list 101 is defined on the NAS. access-list 101 permit icmp 1.1.1.0 0.0.0.255
9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
!--- Specify TACACS+ server host and key. tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

Программное обеспечение Cisco IOS версии 11.1 до 11.3.3. T

Current configuration:

```

!
version 12.0
service timestamps debug uptime

```

```
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other Cisco IOS Releases section for commands !---
for other Cisco IOS releases. ! aaa authentication login default local group tacacs+
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mNzQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
!--- Access list 101 is defined on the NAS. access-list 101 permit icmp 1.1.1.0 0.0.0.255
9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
!--- Specify TACACS+ server host and key. tacacs-server host 172.18.124.111
tacacs-server key cisco
!
```

```
line con 0
transport input none
line 1
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end
```

Конфигурация сервера - TACACS + бесплатное программное обеспечение

Current configuration:

```
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other Cisco IOS Releases section for commands !---
for other Cisco IOS releases. ! aaa authentication login default local group tacacs+
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
```

```

async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
!--- Access list 101 is defined on the NAS. access-list 101 permit icmp 1.1.1.0 0.0.0.255
9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
!--- Specify TACACS+ server host and key. tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

[Конфигурация сервера - Cisco Secure UNIX - TACACS +](#)

Current configuration:

```

!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other Cisco IOS Releases section for commands !---
for other Cisco IOS releases. ! aaa authentication login default local group tacacs+
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pij1
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!

```



```

interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
!--- Access list 101 is defined on the NAS. access-list 101 permit icmp 1.1.1.0 0.0.0.255
9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
!--- Specify TACACS+ server host and key. tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

[Конфигурация сервера - Cisco Secure ACS для Windows 2.x и позже - TACACS +](#)

Выполните эти шаги для настройки Cisco Secure ACS для Windows для определения, какие ACL NAS должен применить.

1. Нажмите **Group Setup**, выберите группу, которой принадлежит пользователь, и нажмите **Edit Settings**.
2. Нажмите **PPP IP**, список контроля доступа **In** и флажки **PPP LCP** в TACACS + раздел Параметров настройки. Задайте номер ACL, который будет применен (в этом случае 101) в 'В списке контроля доступа' коробка.
3. Проверьте **Включил** для включения IP PPP и параметров PPP LCP.

Пример отладки маршрутизатора

```

koala#show debug
General OS:
TACACS access control debugging is on
AAA Authentication debugging is on
AAA Authorization debugging is on
koala#show ip access-lists
Extended IP access list 101
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log (2 matches)
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log (11 matches)
koala#
4d05h: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
4d05h: %LINK-3-UPDOWN: Interface Async1, changed state to up
4d05h: AAA: parse name=Async1 idb type=10 tty=1
4d05h: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=1 channel=0
4d05h: AAA/MEMORY: create_user (0x54F934) user='chaprtr'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP
service=PPP priv=1
4d05h: AAA/AUTHEN/START (1203050692): port='Async1' list=''
action=LOGIN service=PPP
4d05h: AAA/AUTHEN/START (1203050692): using "default" list
4d05h: AAA/AUTHEN (1203050692): status = UNKNOWN
4d05h: AAA/AUTHEN/START (1203050692): Method=tacacs+ (tacacs+)
4d05h: TAC+: send AUTHEN/START packet ver=193 id=1203050692
4d05h: TAC+: Using default tacacs server-group "tacacs+" list.
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538778 to 172.18.124.111/49
4d05h: TAC+: 172.18.124.111 (1203050692) AUTHEN/START/LOGIN/CHAP queued
4d05h: TAC+: (1203050692) AUTHEN/START/LOGIN/CHAP processed
4d05h: TAC+: ver=192 id=1203050692 received AUTHEN status = GETPASS
4d05h: TAC+: Closing TCP/IP 0x538778 connection to 172.18.124.111/49
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538BBC to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: AAA: parse name=Async1 idb type=-1 tty=-1
4d05h: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0 adapter=0
port=1 channel=0
4d05h: AAA/MEMORY: create_user (0x19FCF8) user='chaprtr' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
4d05h: TAC+: rev0 inbound chap for id=1203050692 using id=2966879003
4d05h: TAC+: 172.18.124.111 (2966879003) AUTHEN/START/SENDPASS/CHAP queued
4d05h: TAC+: (2966879003) AUTHEN/START/SENDPASS/CHAP processed
4d05h: TAC+: ver=192 id=2966879003 received AUTHEN status = PASS
4d05h: TAC+: rev0 inbound chap SENDPASS status=PASS for id=1203050692
4d05h: TAC+: rev0 inbound chap MD5 compare OK
4d05h: AAA/MEMORY: free_user (0x19FCF8) user='chaprtr' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
4d05h: TAC+: Closing TCP/IP 0x538BBC connection to 172.18.124.111/49
4d05h: AAA/AUTHEN (1203050692): status = PASS
4d05h: As1 AAA/AUTHOR/LCP: Authorize LCP
4d05h: As1 AAA/AUTHOR/LCP (3002156107): Port='Async1' list='' service=NET

```

```
4d05h: AAA/AUTHOR/LCP: As1 (3002156107) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/LCP (3002156107): send AV service=ppp
4d05h: As1 AAA/AUTHOR/LCP (3002156107): send AV protocol=lcp
4d05h: As1 AAA/AUTHOR/LCP (3002156107): found list "default"
4d05h: As1 AAA/AUTHOR/LCP (3002156107): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (3002156107): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (3002156107): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (3002156107): send AV protocol=lcp
4d05h: TAC+: using previously set server 172.18.124.111 from group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x539000 to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (3002156107) AUTHOR/START queued
4d05h: TAC+: (3002156107) AUTHOR/START processed
4d05h: TAC+: (3002156107): received author response status = PASS_ADD
4d05h: TAC+: Closing TCP/IP 0x539000 connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (3002156107): Post authorization status = PASS_ADD
4d05h: As1 AAA/AUTHOR/FSM: (0): Can we start IPCP?
4d05h: As1 AAA/AUTHOR/FSM (1577158668): Port='Async1' list='' service=NET
4d05h: AAA/AUTHOR/FSM: As1 (1577158668) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/FSM (1577158668): send AV service=ppp
4d05h: As1 AAA/AUTHOR/FSM (1577158668): send AV protocol=ip
4d05h: As1 AAA/AUTHOR/FSM (1577158668): found list "default"
4d05h: As1 AAA/AUTHOR/FSM (1577158668): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (1577158668): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (1577158668): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (1577158668): send AV protocol=ip
4d05h: TAC+: using previously set server 172.18.124.111 from group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x539444 to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (1577158668) AUTHOR/START queued
4d05h: TAC+: (1577158668) AUTHOR/START processed
4d05h: TAC+: (1577158668): received author response status = PASS_ADD
4d05h: TAC+: Closing TCP/IP 0x539444 connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (1577158668): Post authorization status = PASS_ADD
4d05h: As1 AAA/AUTHOR/FSM: We can start IPCP
4d05h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1,
changed state to up
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101
4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
!--- Apply ACL 101 in the inbound direction. 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
inacl=101
4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 1.1.1.2, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): Port='Async1' list=''
service=NET
4d05h: AAA/AUTHOR/IPCP: As1 (1659098608) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV addr*1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): found list "default"
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (1659098608): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV protocol=ip
```

```
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV addr*1.1.1.2
4d05h: TAC+: using previously set server 172.18.124.111 from
group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538BBC to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (1659098608) AUTHOR/START queued
4d05h: TAC+: (1659098608) AUTHOR/START processed
4d05h: TAC+: (1659098608): received author response status = PASS_REPL
4d05h: TAC+: Closing TCP/IP 0x538BBC connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (1659098608): Post authorization status = PASS_REPL
4d05h: As1 AAA/AUTHOR/IPCP: Reject 1.1.1.2, using 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV addr*1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.2, we want 1.1.1.2
4d05h: %SEC-6-IPACCESSLOGDP: list 101 permitted icmp 1.1.1.2 ->
9.9.9.9 (0/0), 3 packets
koala#show ip access-lists
Extended IP access list 101
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log (5 matches)
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log (11 matches)
koala#
```

[Определите списки доступа на сервере](#)

Примечание: Инструкции маршрута не должны быть переданы от сервера до маршрутизатора. Набираемый пользователь обычно поднимает маршруты с маршрутизатора. Присутствие инструкций маршрута на маршрутизаторе зависит от того, переданы ли маршруты от сервера или подняты с маршрутизатора:

```
koala#show debug
General OS:
TACACS access control debugging is on
AAA Authentication debugging is on
AAA Authorization debugging is on
koala#show ip access-lists
Extended IP access list 101
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log (2 matches)
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log (11 matches)
koala#
4d05h: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
4d05h: %LINK-3-UPDOWN: Interface Async1, changed state to up
4d05h: AAA: parse name=Async1 idb type=10 tty=1
4d05h: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=1 channel=0
4d05h: AAA/MEMORY: create_user (0x54F934) user='chaptr'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP
service=PPP priv=1
4d05h: AAA/AUTHEN/START (1203050692): port='Async1' list=''
action=LOGIN service=PPP
4d05h: AAA/AUTHEN/START (1203050692): using "default" list
4d05h: AAA/AUTHEN (1203050692): status = UNKNOWN
4d05h: AAA/AUTHEN/START (1203050692): Method=tacacs+ (tacacs+)
4d05h: TAC+: send AUTHEN/START packet ver=193 id=1203050692
4d05h: TAC+: Using default tacacs server-group "tacacs+" list.
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538778 to 172.18.124.111/49
4d05h: TAC+: 172.18.124.111 (1203050692) AUTHEN/START/LOGIN/CHAP queued
4d05h: TAC+: (1203050692) AUTHEN/START/LOGIN/CHAP processed
4d05h: TAC+: ver=192 id=1203050692 received AUTHEN status = GETPASS
```

```
4d05h: TAC+: Closing TCP/IP 0x538778 connection to 172.18.124.111/49
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538BBC to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: AAA: parse name=Async1 idb type=-1 tty=-1
4d05h: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0 adapter=0
port=1 channel=0
4d05h: AAA/MEMORY: create_user (0x19FCF8) user='chaptrtr' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
4d05h: TAC+: rev0 inbound chap for id=1203050692 using id=2966879003
4d05h: TAC+: 172.18.124.111 (2966879003) AUTHEN/START/SENDPASS/CHAP queued
4d05h: TAC+: (2966879003) AUTHEN/START/SENDPASS/CHAP processed
4d05h: TAC+: ver=192 id=2966879003 received AUTHEN status = PASS
4d05h: TAC+: rev0 inbound chap SENDPASS status=PASS for id=1203050692
4d05h: TAC+: rev0 inbound chap MD5 compare OK
4d05h: AAA/MEMORY: free_user (0x19FCF8) user='chaptrtr' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
4d05h: TAC+: Closing TCP/IP 0x538BBC connection to 172.18.124.111/49
4d05h: AAA/AUTHEN (1203050692): status = PASS
4d05h: As1 AAA/AUTHOR/LCP: Authorize LCP
4d05h: As1 AAA/AUTHOR/LCP (3002156107): Port='Async1' list='' service=NET
4d05h: AAA/AUTHOR/LCP: As1 (3002156107) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/LCP (3002156107): send AV service=ppp
4d05h: As1 AAA/AUTHOR/LCP (3002156107): send AV protocol=lcp
4d05h: As1 AAA/AUTHOR/LCP (3002156107): found list "default"
4d05h: As1 AAA/AUTHOR/LCP (3002156107): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (3002156107): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (3002156107): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (3002156107): send AV protocol=lcp
4d05h: TAC+: using previously set server 172.18.124.111 from group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x539000 to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (3002156107) AUTHOR/START queued
4d05h: TAC+: (3002156107) AUTHOR/START processed
4d05h: TAC+: (3002156107): received author response status = PASS_ADD
4d05h: TAC+: Closing TCP/IP 0x539000 connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (3002156107): Post authorization status = PASS_ADD
4d05h: As1 AAA/AUTHOR/FSM: (0): Can we start IPCP?
4d05h: As1 AAA/AUTHOR/FSM (1577158668): Port='Async1' list='' service=NET
4d05h: AAA/AUTHOR/FSM: As1 (1577158668) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/FSM (1577158668): send AV service=ppp
4d05h: As1 AAA/AUTHOR/FSM (1577158668): send AV protocol=ip
4d05h: As1 AAA/AUTHOR/FSM (1577158668): found list "default"
4d05h: As1 AAA/AUTHOR/FSM (1577158668): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (1577158668): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (1577158668): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (1577158668): send AV protocol=ip
4d05h: TAC+: using previously set server 172.18.124.111 from group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x539444 to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (1577158668) AUTHOR/START queued
4d05h: TAC+: (1577158668) AUTHOR/START processed
4d05h: TAC+: (1577158668): received author response status = PASS_ADD
4d05h: TAC+: Closing TCP/IP 0x539444 connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (1577158668): Post authorization status = PASS_ADD
4d05h: As1 AAA/AUTHOR/FSM: We can start IPCP
4d05h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1,
changed state to up
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101
```

```

4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 0.0.0.0
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
  !--- Apply ACL 101 in the inbound direction. 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
inacl=101
4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 1.1.1.2, we want 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): Port='Async1' list=''
service=NET
4d05h: AAA/AUTHOR/IPCP: As1 (1659098608) user='chaptrtr'
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): send AV addr*1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): found list "default"
4d05h: As1 AAA/AUTHOR/IPCP (1659098608): Method=tacacs+ (tacacs+)
4d05h: AAA/AUTHOR/TAC+: (1659098608): user=chaptrtr
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV service=ppp
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV protocol=ip
4d05h: AAA/AUTHOR/TAC+: (1659098608): send AV addr*1.1.1.2
4d05h: TAC+: using previously set server 172.18.124.111 from
group tacacs+
4d05h: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
4d05h: TAC+: Opened TCP/IP handle 0x538BBC to 172.18.124.111/49
4d05h: TAC+: Opened 172.18.124.111 index=1
4d05h: TAC+: 172.18.124.111 (1659098608) AUTHOR/START queued
4d05h: TAC+: (1659098608) AUTHOR/START processed
4d05h: TAC+: (1659098608): received author response status = PASS_REPL
4d05h: TAC+: Closing TCP/IP 0x538BBC connection to 172.18.124.111/49
4d05h: As1 AAA/AUTHOR (1659098608): Post authorization status = PASS_REPL
4d05h: As1 AAA/AUTHOR/IPCP: Reject 1.1.1.2, using 1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV addr*1.1.1.2
4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded
4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.2, we want 1.1.1.2
4d05h: %SEC-6-IPACCESSLOGDP: list 101 permitted icmp 1.1.1.2 ->
9.9.9.9 (0/0), 3 packets
koala#show ip access-lists
Extended IP access list 101
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log (5 matches)
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log (11 matches)
koala#

```

В этом примере конфигурации, передавая маршруты от сервера в целях рисунка только.

Настройка маршрутизатора

```

Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are
specific to Cisco IOS Software Release 12.0.5.T and

```

```
later. !--- See the Commands for Other IOS Releases
section for !--- commands for other Cisco IOS Software
releases. ! aaa authentication login default group
tacacs+ none
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
```

```
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end
```

[Команды для других версий Cisco IOS](#)

Примечание: Для использования этих команд удалите команды полужирным из [Конфигурации маршрутизатора](#) и вставьте эти команды в, как продиктовано Cisco IOS Software Release.

Cisco IOS Software Release 11.3. 3. T до 12.0.5. T

Current configuration:

```
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release 12.0.5.T and later. !--- See the Commands for Other IOS Releases section for !--- commands for other Cisco IOS Software releases. !
aaa authentication login default group tacacs+ none
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
```



```

no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

Программное обеспечение Cisco IOS версии 11.3 до 11.3.3. T

Current configuration:

```

!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other IOS Releases section for !--- commands for
other Cisco IOS Software releases. ! aaa authentication login default group tacacs+ none
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!

```

```
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end
```

[Конфигурация сервера - TACACS + бесплатное программное обеспечение](#)

Current configuration:

```
!  
version 12.0  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname koala  
!  
aaa new-model  
!  
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release  
12.0.5.T and later. !--- See the Commands for Other IOS Releases section for !--- commands for  
other Cisco IOS Software releases. ! aaa authentication login default group tacacs+ none  
aaa authentication ppp default if-needed group tacacs+  
aaa authorization network default group tacacs+  
enable secret 5 $1$mnmZQ$g6XdsgVnnYjEa.17v.Pij1  
enable password ww  
!  
username john password 0 doe  
!  
ip subnet-zero  
!  
cns event-service server  
!  
interface Ethernet0  
ip address 10.31.1.5 255.255.255.0  
no ip directed-broadcast  
no mop enabled  
!  
interface Serial0  
ip address 11.11.11.11 255.255.255.0  
no ip directed-broadcast  
no ip mroute-cache  
no fair-queue  
!  
interface Serial1  
ip address 12.12.12.12 255.255.255.0  
no ip directed-broadcast  
!  
interface Async1  
ip unnumbered Ethernet0  
no ip directed-broadcast  
encapsulation ppp  
no ip route-cache  
no ip mroute-cache  
async mode dedicated  
peer default ip address pool mypool  
fair-queue 64 16 0  
no cdp enable  
ppp authentication chap  
!  
ip local pool mypool 1.1.1.1 1.1.1.5  
ip classless  
ip route 0.0.0.0 0.0.0.0 10.31.1.1  
ip route 172.17.192.0 255.255.255.0 10.31.1.1  
ip route 172.18.124.0 255.255.255.0 10.31.1.1  
ip route 172.18.125.0 255.255.255.0 10.31.1.1  
no ip http server  
!  
dialer-list 1 protocol ip permit  
dialer-list 1 protocol ipx permit  
!  
tacacs-server host 172.18.124.111  
tacacs-server key cisco
```

```
!  
line con 0  
transport input none  
line 1  
autoselect during-login  
autoselect ppp  
modem InOut  
transport input all  
stopbits 1  
speed 115200  
flowcontrol hardware  
line 2 16  
line aux 0  
line vty 0 4  
password ww  
!  
end
```

[Конфигурация сервера - Cisco Secure UNIX - TACACS +](#)

Current configuration:

```
!  
version 12.0  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname koala  
!  
aaa new-model  
!  
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release  
12.0.5.T and later. !--- See the Commands for Other IOS Releases section for !--- commands for  
other Cisco IOS Software releases. !  
aaa authentication login default group tacacs+ none  
aaa authentication ppp default if-needed group tacacs+  
aaa authorization network default group tacacs+  
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pij1  
enable password ww  
!  
username john password 0 doe  
!  
ip subnet-zero  
!  
cns event-service server  
!  
interface Ethernet0  
ip address 10.31.1.5 255.255.255.0  
no ip directed-broadcast  
no mop enabled  
!  
interface Serial0  
ip address 11.11.11.11 255.255.255.0  
no ip directed-broadcast  
no ip mroute-cache  
no fair-queue  
!  
interface Serial1  
ip address 12.12.12.12 255.255.255.0  
no ip directed-broadcast  
!  
interface Async1  
ip unnumbered Ethernet0  
no ip directed-broadcast  
encapsulation ppp
```

```

no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

[Конфигурация сервера - Windows 2.x Cisco Secure - TACACS +](#)

Выполните эти шаги для настройки Cisco Secure для Windows для передачи ACL к NAS.

1. Нажмите **Interface Configuration** и выберите **TACACS + Cisco**.
2. Проверьте **Показ окно для каждого сервиса, выбранного, в который можно ввести настроенный TACACS +, атрибуты** в 'Пунктах меню Advanced Configuration Option' разделяют и нажимают **Submit**.
3. Нажмите **Group Setup**, выберите группу, которой принадлежит пользователь, и нажмите **Edit Settings**.
4. Перейдите к разделу IP PPP и нажмите **PPP IP, Custom Attributes** и флажки **Enable** от TACACS + Параметры настройки. Введите текст, показанный здесь в коробке **Настраиваемых атрибутов**, и нажмите **Submit**. Current configuration:

```

!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!

```

```
aaa new-model
!
!--- These three lines of the configuration !--- are specific to Cisco IOS Software Release
12.0.5.T and later. !--- See the Commands for Other IOS Releases section for !--- commands
for other Cisco IOS Software releases. ! aaa authentication login default group tacacs+
none
aaa authentication ppp default if-needed group tacacs+
aaa authorization network default group tacacs+
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pij1
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
tacacs-server host 172.18.124.111
tacacs-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
```

```
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end
```

Пример отладки маршрутизатора

Этот профиль пользователя использовался для создания этих выходных данных отладки.

```
chaprtr
{
login = cleartext cisco
chap = cleartext
chaprtr service = ppp
protocol = ip
{
route#1 = "9.9.9.9 255.255.255.255 11.11.11.12"
route#2 = "15.15.15.15 255.255.255.255 12.12.12.13"
route#3 = "15.15.15.16 255.255.255.255 12.12.12.13"
inacl#1 = "permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255"
inacl#2 = "permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255"
}
}

koala#
*Mar 1 01:22:39.963: As1 LCP: I CONFREQ [Closed] id 0 len 23
*Mar 1 01:22:39.967: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 01:22:39.971: As1 LCP: MagicNumber 0x000034BD (0x0506000034BD)
*Mar 1 01:22:39.971: As1 LCP: PFC (0x0702)
*Mar 1 01:22:39.975: As1 LCP: ACFC (0x0802)
*Mar 1 01:22:39.975: As1 LCP: Callback 6 (0x0D0306)
*Mar 1 01:22:39.979: As1 LCP: Lower layer not up, Fast Starting
*Mar 1 01:22:39.983: As1 PPP: Treating connection as a dedicated line
*Mar 1 01:22:39.983: As1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load]
*Mar 1 01:22:39.987: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
*Mar 1 01:22:39.991: As1 LCP: O CONFREQ [Closed] id 30 len 25
*Mar 1 01:22:39.995: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 01:22:39.999: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 01:22:40.003: As1 LCP: MagicNumber 0xE069F1B8 (0x0506E069F1B8)
*Mar 1 01:22:40.003: As1 LCP: PFC (0x0702)
*Mar 1 01:22:40.007: As1 LCP: ACFC (0x0802)
*Mar 1 01:22:40.011: As1 LCP: O CONFREQ [REQsent] id 0 len 7
*Mar 1 01:22:40.011: As1 LCP: Callback 6 (0x0D0306)
01:22:40: %LINK-3-UPDOWN: Interface Async1, changed state to up
*Mar 1 01:22:40.139: As1 LCP: I CONFACK [REQsent] id 30 len 25
*Mar 1 01:22:40.143: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 01:22:40.143: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 01:22:40.147: As1 LCP: MagicNumber 0xE069F1B8 (0x0506E069F1B8)
*Mar 1 01:22:40.151: As1 LCP: PFC (0x0702)
*Mar 1 01:22:40.151: As1 LCP: ACFC (0x0802)
*Mar 1 01:22:40.155: As1 LCP: I CONFREQ [ACKrcvd] id 1 len 20
*Mar 1 01:22:40.159: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 01:22:40.163: As1 LCP: MagicNumber 0x000034BD (0x0506000034BD)
*Mar 1 01:22:40.163: As1 LCP: PFC (0x0702)
*Mar 1 01:22:40.167: As1 LCP: ACFC (0x0802)
*Mar 1 01:22:40.171: As1 LCP: O CONFACK [ACKrcvd] id 1 len 20
```

```
*Mar 1 01:22:40.171: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 01:22:40.175: As1 LCP: MagicNumber 0x000034BD (0x0506000034BD)
*Mar 1 01:22:40.179: As1 LCP: PFC (0x0702)
*Mar 1 01:22:40.179: As1 LCP: ACFC (0x0802)
*Mar 1 01:22:40.183: As1 LCP: State is Open
*Mar 1 01:22:40.183: As1 PPP: Phase is AUTHENTICATING, by this end
[0 sess, 1 load]
*Mar 1 01:22:40.187: As1 CHAP: O CHALLENGE id 10 len 26 from "koala"
*Mar 1 01:22:40.295: As1 LCP: I IDENTIFY [Open] id 2 len 18 magic
0x000034BD MSRASV4.00
*Mar 1 01:22:40.307: As1 LCP: I IDENTIFY [Open] id 3 len 21 magic
0x000034BD MSRAS-1-ZEKIE
*Mar 1 01:22:40.315: As1 CHAP: I RESPONSE id 10 len 28 from "chaptrtr"
*Mar 1 01:22:40.323: AAA: parse name=Async1 idb type=10 tty=1
*Mar 1 01:22:40.323: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=1 channel=0
*Mar 1 01:22:40.327: AAA/MEMORY: create_user (0x4ED58C) user='chaptrtr'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP service=PPP
priv=1
*Mar 1 01:22:40.331: AAA/AUTHEN/START (2439833946): port='Async1'
list='' action=LOGIN service=PPP
*Mar 1 01:22:40.335: AAA/AUTHEN/START (2439833946): using "default" list
*Mar 1 01:22:40.339: AAA/AUTHEN (2439833946): status = UNKNOWN
*Mar 1 01:22:40.339: AAA/AUTHEN/START (2439833946): Method=tacacs+ (tacacs+)
*Mar 1 01:22:40.343: TAC+: send AUTHEN/START packet ver=193 id=2439833946
*Mar 1 01:22:40.347: TAC+: Using default tacacs server-group "tacacs+" list.
*Mar 1 01:22:40.347: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:40.359: TAC+: Opened TCP/IP handle 0x4EDDF8 to 172.18.124.111/49
*Mar 1 01:22:40.367: TAC+: 172.18.124.111 (2439833946)
AUTHEN/START/LOGIN/CHAP queued
*Mar 1 01:22:40.667: TAC+: (2439833946) AUTHEN/START/LOGIN/CHAP processed
*Mar 1 01:22:40.671: TAC+: ver=192 id=2439833946 received AUTHEN
status = GETPASS
*Mar 1 01:22:40.675: TAC+: Closing TCP/IP 0x4EDDF8 connection to
172.18.124.111/49
*Mar 1 01:22:40.679: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:40.695: TAC+: Opened TCP/IP handle 0x4EE23C to 172.18.124.111/49
*Mar 1 01:22:40.695: TAC+: Opened 172.18.124.111 index=1
*Mar 1 01:22:40.699: AAA: parse name=Async1 idb type=-1 tty=-1
*Mar 1 01:22:40.703: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=1 channel=0
*Mar 1 01:22:40.707: AAA/MEMORY: create_user (0x4EC300) user='chaptrtr'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
*Mar 1 01:22:40.711: TAC+: rev0 inbound chap for id=2439833946 using
id=1730351499
*Mar 1 01:22:40.715: TAC+: 172.18.124.111 (1730351499)
AUTHEN/START/SENDPASS/CHAP queued
*Mar 1 01:22:40.915: TAC+: (1730351499) AUTHEN/START/SENDPASS/CHAP processed
*Mar 1 01:22:40.919: TAC+: ver=192 id=1730351499 received AUTHEN
status = PASS
*Mar 1 01:22:40.923: TAC+: rev0 inbound chap SENDPASS status=PASS
for id=2439833946
*Mar 1 01:22:40.927: TAC+: rev0 inbound chap MD5 compare OK
*Mar 1 01:22:40.927: AAA/MEMORY: free_user (0x4EC300) user='chaptrtr'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP service=PPP
priv=1
*Mar 1 01:22:40.935: TAC+: Closing TCP/IP 0x4EE23C connection to
172.18.124.111/49
*Mar 1 01:22:40.939: AAA/AUTHEN (2439833946): status = PASS
*Mar 1 01:22:40.943: As1 AAA/AUTHOR/LCP: Authorize LCP
*Mar 1 01:22:40.947: As1 AAA/AUTHOR/LCP (4250537500): Port='Async1'
list='' service=NET
*Mar 1 01:22:40.947: AAA/AUTHOR/LCP: As1 (4250537500) user='chaptrtr'
*Mar 1 01:22:40.951: As1 AAA/AUTHOR/LCP (4250537500): send AV service=ppp
```



```
*Mar 1 01:22:40.955: As1 AAA/AUTHOR/LCP (4250537500): send AV protocol=lcp
*Mar 1 01:22:40.955: As1 AAA/AUTHOR/LCP (4250537500): found list "default"
*Mar 1 01:22:40.959: As1 AAA/AUTHOR/LCP (4250537500):
Method=tacacs+ (tacacs+)
*Mar 1 01:22:40.963: AAA/AUTHOR/TAC+: (4250537500): user=chaptrtr
*Mar 1 01:22:40.963: AAA/AUTHOR/TAC+: (4250537500): send AV service=ppp
*Mar 1 01:22:40.967: AAA/AUTHOR/TAC+: (4250537500): send AV protocol=lcp
*Mar 1 01:22:40.971: TAC+: using previously set server 172.18.124.111
from group tacacs+
*Mar 1 01:22:40.971: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:40.987: TAC+: Opened TCP/IP handle 0x4EE680 to 172.18.124.111/49
*Mar 1 01:22:40.991: TAC+: Opened 172.18.124.111 index=1
*Mar 1 01:22:40.999: TAC+: 172.18.124.111 (4250537500) AUTHOR/START queued
*Mar 1 01:22:41.195: TAC+: (4250537500) AUTHOR/START processed
*Mar 1 01:22:41.199: TAC+: (4250537500): received author response
status = PASS_ADD
*Mar 1 01:22:41.203: TAC+: Closing TCP/IP 0x4EE680 connection to
172.18.124.111/49
*Mar 1 01:22:41.207: As1 AAA/AUTHOR (4250537500): Post authorization
status = PASS_ADD
*Mar 1 01:22:41.215: As1 CHAP: O SUCCESS id 10 len 4
*Mar 1 01:22:41.219: As1 PPP: Phase is UP [0 sess, 0 load]
*Mar 1 01:22:41.223: As1 AAA/AUTHOR/FSM: (0): Can we start IPCP?
*Mar 1 01:22:41.223: As1 AAA/AUTHOR/FSM (2403262371): Port='Async1'
list='' service=NET
*Mar 1 01:22:41.227: AAA/AUTHOR/FSM: As1 (2403262371) user='chaptrtr'
*Mar 1 01:22:41.231: As1 AAA/AUTHOR/FSM (2403262371): send AV service=ppp
*Mar 1 01:22:41.231: As1 AAA/AUTHOR/FSM (2403262371): send AV protocol=ip
*Mar 1 01:22:41.235: As1 AAA/AUTHOR/FSM (2403262371): found list "default"
*Mar 1 01:22:41.239: As1 AAA/AUTHOR/FSM (2403262371):
Method=tacacs+ (tacacs+)
*Mar 1 01:22:41.239: AAA/AUTHOR/TAC+: (2403262371): user=chaptrtr
*Mar 1 01:22:41.243: AAA/AUTHOR/TAC+: (2403262371): send AV service=ppp
*Mar 1 01:22:41.243: AAA/AUTHOR/TAC+: (2403262371): send AV protocol=ip
*Mar 1 01:22:41.247: TAC+: using previously set server 172.18.124.111
from group tacacs+
*Mar 1 01:22:41.251: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:41.263: TAC+: Opened TCP/IP handle 0x4EEAC4 to
172.18.124.111/49
*Mar 1 01:22:41.267: TAC+: Opened 172.18.124.111 index=1
*Mar 1 01:22:41.275: TAC+: 172.18.124.111 (2403262371) AUTHOR/START queued
*Mar 1 01:22:41.323: As1 CCP: I CONFREQ [Not negotiated] id 4 len 12
*Mar 1 01:22:41.327: As1 CCP: OUI (0x0002)
*Mar 1 01:22:41.327: As1 CCP: MS-PPC supported bits 0x00007080
(0x120600007080)
*Mar 1 01:22:41.335: As1 LCP: O PROTREQ [Open] id 31 len 18 protocol CCP
(0x80FD0104000C0002120600007080)
*Mar 1 01:22:41.339: As1 IPCP: I CONFREQ [Closed] id 5 len 40
*Mar 1 01:22:41.343: As1 IPCP: CompressType VJ 15 slots CompressSlotID
(0x0206002D0F01)
*Mar 1 01:22:41.347: As1 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 1 01:22:41.351: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
*Mar 1 01:22:41.355: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
*Mar 1 01:22:41.359: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar 1 01:22:41.363: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar 1 01:22:41.607: TAC+: (2403262371) AUTHOR/START processed
*Mar 1 01:22:41.623: TAC+: (2403262371): received author response
status = PASS_ADD
*Mar 1 01:22:41.627: TAC+: Closing TCP/IP 0x4EEAC4 connection to
172.18.124.111/49
*Mar 1 01:22:41.635: As1 AAA/AUTHOR (2403262371): Post authorization
status = PASS_ADD
*Mar 1 01:22:41.647: As1 AAA/AUTHOR/FSM: We can start IPCP
*Mar 1 01:22:41.651: As1 IPCP: O CONFREQ [Closed] id 7 len 10
```

```
*Mar 1 01:22:41.655: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
*Mar 1 01:22:41.659: As1 AAA/AUTHOR/FSM: (0): Can we start CDPCP?
*Mar 1 01:22:41.663: As1 AAA/AUTHOR/FSM (840307497): Port='Async1'
list='' service=NET
*Mar 1 01:22:41.667: AAA/AUTHOR/FSM: As1 (840307497) user='chaptr'
*Mar 1 01:22:41.671: As1 AAA/AUTHOR/FSM (840307497): send AV service=ppp
*Mar 1 01:22:41.671: As1 AAA/AUTHOR/FSM (840307497): send AV protocol=cdp
*Mar 1 01:22:41.675: As1 AAA/AUTHOR/FSM (840307497): found list "default"
*Mar 1 01:22:41.675: As1 AAA/AUTHOR/FSM (840307497): Method=tacacs+
(tacacs+)
*Mar 1 01:22:41.679: AAA/AUTHOR/TAC+: (840307497): user=chaptr
*Mar 1 01:22:41.683: AAA/AUTHOR/TAC+: (840307497): send AV service=ppp
*Mar 1 01:22:41.683: AAA/AUTHOR/TAC+: (840307497): send AV protocol=cdp
*Mar 1 01:22:41.687: TAC+: using previously set server 172.18.124.111
from group tacacs+
*Mar 1 01:22:41.691: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:41.703: TAC+: Opened TCP/IP handle 0x4EE23C to
172.18.124.111/49
*Mar 1 01:22:41.707: TAC+: Opened 172.18.124.111 index=1
*Mar 1 01:22:41.715: TAC+: 172.18.124.111 (840307497) AUTHOR/START queued
*Mar 1 01:22:41.759: As1 IPCP: I CONFACK [REQsent] id 7 len 10
*Mar 1 01:22:41.763: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
*Mar 1 01:22:41.915: TAC+: (840307497) AUTHOR/START processed
*Mar 1 01:22:41.923: TAC+: (840307497): received author response
status = FAIL
*Mar 1 01:22:41.927: TAC+: Closing TCP/IP 0x4EE23C connection to
172.18.124.111/49
*Mar 1 01:22:41.931: As1 AAA/AUTHOR (840307497): Post authorization
status = FAIL
*Mar 1 01:22:41.935: As1 AAA/AUTHOR/FSM: We cannot start CDPCP
*Mar 1 01:22:41.935: As1 CDPCP: State is Closed
01:22:42: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1,
changed state to up
*Mar 1 01:22:42.359: As1 PPP: Outbound cdp packet dropped,
CDPCP is Closed [starting negotiations]
*Mar 1 01:22:42.359: As1 CDPCP: State is Closed
*Mar 1 01:22:42.499: As1 PPP: Outbound cdp packet dropped,
CDPCP is Closed [starting negotiations]
*Mar 1 01:22:42.503: As1 CDPCP: State is Closed
*Mar 1 01:22:42.639: As1 PPP: Outbound cdp packet dropped,
CDPCP is Closed [starting negotiations]
*Mar 1 01:22:42.643: As1 CDPCP: State is Closed
*Mar 1 01:22:42.795: As1 PPP: Outbound cdp packet dropped,
CDPCP is Closed [starting negotiations]
*Mar 1 01:22:42.799: As1 CDPCP: State is Closed
*Mar 1 01:22:43.147: As1 CDPCP: TIMEout: State Closed
*Mar 1 01:22:43.151: As1 CDPCP: State is Listen
*Mar 1 01:22:43.155: As1 IPCP: I CONFREQ [ACKrcvd] id 5 len 40
*Mar 1 01:22:43.159: As1 IPCP: CompressType VJ 15 slots
CompressSlotID (0x0206002D0F01)
*Mar 1 01:22:43.163: As1 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 1 01:22:43.167: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
*Mar 1 01:22:43.171: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
*Mar 1 01:22:43.171: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar 1 01:22:43.175: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar 1 01:22:43.179: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0,
we want 0.0.0.0
*Mar 1 01:22:43.183: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
*Mar 1 01:22:43.187: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
!--- The NAS received the route statements and ACLs !--- from the ACS device. *Mar 1
01:22:43.187: As1 AAA/AUTHOR/IPCP: Processing AV route#1=
9.9.9.9 255.255.255.255 11.11.11.12
*Mar 1 01:22:43.191: As1 AAA/AUTHOR/IPCP: Processing AV route#2=
15.15.15.15 255.255.255.255 12.12.12.13
```

```
*Mar 1 01:22:43.195: As1 AAA/AUTHOR/IPCP: Processing AV route#3=
15.15.15.16 255.255.255.255 12.12.12.13
*Mar 1 01:22:43.199: As1 AAA/AUTHOR/IPCP: Processing AV inacl#1=
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
*Mar 1 01:22:43.199: As1 AAA/AUTHOR/IPCP: Processing AV inacl#2=
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
*Mar 1 01:22:43.203: As1 AAA/AUTHOR/IPCP: Authorization succeeded
*Mar 1 01:22:43.207: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0,
we want 0.0.0.0
*Mar 1 01:22:43.211: As1 IPCP: Pool returned 1.1.1.1
*Mar 1 01:22:43.215: As1 IPCP: O CONFREJ [ACKrcvd] id 5 len 28
*Mar 1 01:22:43.219: As1 IPCP: CompressType VJ 15 slots
CompressSlotID (0x0206002D0F01)
*Mar 1 01:22:43.223: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
*Mar 1 01:22:43.227: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar 1 01:22:43.231: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar 1 01:22:43.339: As1 IPCP: I CONFREQ [ACKrcvd] id 6 len 16
*Mar 1 01:22:43.343: As1 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 1 01:22:43.347: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
*Mar 1 01:22:43.351: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0,
we want 1.1.1.1
*Mar 1 01:22:43.355: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
*Mar 1 01:22:43.355: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
!--- The NAS applies the route statements and ACLs. *Mar 1 01:22:43.359: As1 AAA/AUTHOR/IPCP:
Processing AV route#1=
9.9.9.9 255.255.255.255 11.11.11.12
*Mar 1 01:22:43.363: As1 AAA/AUTHOR/IPCP: Processing AV route#2=
15.15.15.15 255.255.255.255 12.12.12.13
*Mar 1 01:22:43.363: As1 AAA/AUTHOR/IPCP: Processing AV route#3=
15.15.15.16 255.255.255.255 12.12.12.13
*Mar 1 01:22:43.367: As1 AAA/AUTHOR/IPCP: Processing AV inacl#1=
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
*Mar 1 01:22:43.371: As1 AAA/AUTHOR/IPCP: Processing AV inacl#2=
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
*Mar 1 01:22:43.375: As1 AAA/AUTHOR/IPCP: Authorization succeeded
*Mar 1 01:22:43.375: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0,
we want 1.1.1.1
*Mar 1 01:22:43.383: As1 IPCP: O CONFNAK [ACKrcvd] id 6 len 16
*Mar 1 01:22:43.387: As1 IPCP: Address 1.1.1.1 (0x030601010101)
*Mar 1 01:22:43.391: As1 IPCP: PrimaryDNS 172.18.125.3 (0x8106AC127D03)
*Mar 1 01:22:43.499: As1 IPCP: I CONFREQ [ACKrcvd] id 7 len 16
*Mar 1 01:22:43.503: As1 IPCP: Address 1.1.1.1 (0x030601010101)
*Mar 1 01:22:43.507: As1 IPCP: PrimaryDNS 172.18.125.3 (0x8106AC127D03)
*Mar 1 01:22:43.511: As1 AAA/AUTHOR/IPCP: Start. Her address 1.1.1.1,
we want 1.1.1.1
*Mar 1 01:22:43.519: As1 AAA/AUTHOR/IPCP (2646570182): Port='Async1'
list='' service=NET
*Mar 1 01:22:43.519: AAA/AUTHOR/IPCP: As1 (2646570182) user='chaprtr'
*Mar 1 01:22:43.523: As1 AAA/AUTHOR/IPCP (2646570182): send AV service=ppp
*Mar 1 01:22:43.523: As1 AAA/AUTHOR/IPCP (2646570182): send AV protocol=ip
*Mar 1 01:22:43.527: As1 AAA/AUTHOR/IPCP (2646570182): send AV addr*1.1.1.1
*Mar 1 01:22:43.531: As1 AAA/AUTHOR/IPCP (2646570182): found list "default"
*Mar 1 01:22:43.535: As1 AAA/AUTHOR/IPCP (2646570182): Method=tacacs+ (tacacs+)
*Mar 1 01:22:43.539: AAA/AUTHOR/TAC+: (2646570182): user=chaprtr
*Mar 1 01:22:43.539: AAA/AUTHOR/TAC+: (2646570182): send AV service=ppp
*Mar 1 01:22:43.543: AAA/AUTHOR/TAC+: (2646570182): send AV protocol=ip
*Mar 1 01:22:43.543: AAA/AUTHOR/TAC+: (2646570182): send AV addr*1.1.1.1
*Mar 1 01:22:43.547: TAC+: using previously set server 172.18.124.111 from
group tacacs+
*Mar 1 01:22:43.551: TAC+: Opening TCP/IP to 172.18.124.111/49 timeout=5
*Mar 1 01:22:43.563: TAC+: Opened TCP/IP handle 0x4EE23C to 172.18.124.111/49
*Mar 1 01:22:43.567: TAC+: Opened 172.18.124.111 index=1
*Mar 1 01:22:43.575: TAC+: 172.18.124.111 (2646570182) AUTHOR/START queued
*Mar 1 01:22:43.875: TAC+: (2646570182) AUTHOR/START processed
```

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*Mar 1 01:22:43.887: TAC+: (2646570182): received author response
status = PASS_REPL
*Mar 1 01:22:43.891: TAC+: Closing TCP/IP 0x4EE23C connection to
172.18.124.111/49
*Mar 1 01:22:43.899: As1 AAA/AUTHOR (2646570182): Post authorization
status = PASS_REPL
*Mar 1 01:22:43.911: As1 AAA/AUTHOR/IPCP: Reject 1.1.1.1, using 1.1.1.1
*Mar 1 01:22:43.915: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
*Mar 1 01:22:43.919: As1 AAA/AUTHOR/IPCP: Processing AV protocol=ip
*Mar 1 01:22:43.923: As1 AAA/AUTHOR/IPCP: Processing AV route#1=
9.9.9.9 255.255.255.255 11.11.11.12
*Mar 1 01:22:43.923: As1 AAA/AUTHOR/IPCP: Processing AV route#2=
15.15.15.15 255.255.255.255 12.12.12.13
*Mar 1 01:22:43.927: As1 AAA/AUTHOR/IPCP: Processing AV route#3=
15.15.15.16 255.255.255.255 12.12.12.13
*Mar 1 01:22:43.931: As1 AAA/AUTHOR/IPCP: Processing AV inacl#1=
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
*Mar 1 01:22:43.935: As1 AAA/AUTHOR/IPCP: Processing AV inacl#2=
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
*Mar 1 01:22:43.939: As1 AAA/AUTHOR/IPCP: Processing AV addr*1.1.1.1
*Mar 1 01:22:43.939: As1 AAA/AUTHOR/IPCP: Authorization succeeded
*Mar 1 01:22:43.943: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.1,
we want 1.1.1.1
*Mar 1 01:22:43.947: As1 IPCP: O CONFACK [ACKrcvd] id 7 len 16
*Mar 1 01:22:43.951: As1 IPCP: Address 1.1.1.1 (0x030601010101)
*Mar 1 01:22:43.955: As1 IPCP: PrimaryDNS 172.18.125.3
(0x8106AC127D03)
*Mar 1 01:22:43.959: As1 IPCP: State is Open
*Mar 1 01:22:44.483: As1 IPCP: Install route to 1.1.1.1
koala#
koala#
```

Проверка

В настоящее время для этой конфигурации нет процедуры проверки.

Устранение неполадок

В этом разделе описывается процесс устранения неполадок конфигурации.

Команды для устранения неполадок

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

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

- **debug aaa authentication** - Вывод сведений об аутентификации AAA/TACACS+.
- **debug aaa authorization** — Отображает информацию о AAA/TACACS + авторизация.
- **debug aaa per-user** — Отображает информацию о настройках на базе отдельных пользователей на маршрутизаторе или серверах доступа, которые передаются от AAA-сервера.
- **debug tacacs +** — Отображает подробную отладочную информацию, привязанную к TACACS +.

- "debug ppp negotiation" – отображаются PPP-пакеты, передаваемые при запуске PPP с согласованием параметров.

См. [Устранение проблем Списков доступа на Набираемых Интерфейсах](#) для сведений об устранении проблем.

Дополнительные сведения

- [Cisco Secure Access Control Server for Unix](#)
- [Уведомления о дефектах продуктов безопасности \(включая CiscoSecure UNIX\)](#)
- [Cisco Secure Access Control Server for Windows](#)
- [Уведомления о дефектах безопасности продукта \(включая CiscoSecure ACS для Windows\)](#)
- [Cisco Systems – техническая поддержка и документация](#)