



Command Reference

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Command Reference

A

abr {*pcr*} {*mcr*}

Description

Available bit rate, or abr, specifies a minimum available bit rate for the interface.

Parameters

pcr - Peak cell rate

mcr - Minimum cell rate

No Parameters - If no parameters are set the abr command will use the bandwidth command to calculate the pcr and mcr values

Examples

abr 500 100 - Sets the abr to a peak cell rate of 500 cells per second and a minimum cell rate of 100 cells per second

abr - Sets the abr using the bandwidth command to calculate the pcr and mcr

B

bandwidth {*bits_per_second*}

Description

Sets the intended bandwidth in bits per second. This command does not set internal clock speeds. See baud to set internal clocking for interfaces.

When used in conjunction with ATM QoS commands this value is used to calculate the correct ATM QoS settings. When this command is used on a Frame-relay interface this is used to setup rate-limiting on the interface.

Parameter

bits_per_second - Non-negative integer which represents how much data an interface can push.

Examples

bandwidth 2000000 - Sets the interface to 2 Mbps

bandwidth 100000000 - Sets the interface to 100Mbps

baud {*bits_per_second*}

Description

Configure internal clocking for the interface in bits per second. Use the baud command only with cards that do not have integrated CSU/DSUs. Use the service-module command to set clocking parameters for cards with integrated CSU/DSUs.

Parameter

bits_per_second - Non-negative integer which represents how much data an interface can push.

Examples

baud 1500000 - Sets the interface to 1.5 Mbps
baud 45000000 - Sets the interface to 45 Mbps

bond {*device_name*}

Description

Used to add serial devices or PVCs to a bond interface.

Parameter

device_name - Device_name is a previously defined network device. This is only on Inetics interfaces, does not function for Ethernet interfaces.

Example

bond Serial0 - Attach Serial0 to the Bond interface.

bridge-group {*Bridge ID*} [spanning-disabled]

Description

This option goes into an interface section. It adds the interface to a group identified by <Bridge ID>. This is functionally equivalent to a switch containing all interfaces tagged bridge-group <Bridge ID>.

Parameter

Bridge ID - An integer used to group ports in each bridge group. "Interface bvi<Bridge ID>" is used to assign an IP address to the bridge group.
spanning-disabled - This optional parameter disables spanning tree protocol on the configured interface.
priority - This optional parameter sets the bridge port priority on the configured interface.
path-cost - This optional parameter sets the port's path cost (values 1-65535) on the configured interface.

Examples

bridge-group 1 - Adds the interface to group 1

bridge-group 2 spanning-disabled - Adds the interface to group 2 and disables spanning tree protocol

C

cbr {*peak*} {*cell*} {*rate*}

Description

Constant bit rate, or cbr, specifies a constant available bit rate for the interface

Parameters

peak - peak

cell - cell

rate - rate

Examples

cbr - Set the cbr

crc {0/1/2}

Description

Sets the length of the Cyclic Redundancy Check (CRC). This is used to validate data transmitted across the link and must match the other side.

Parameter

0 - Sets the CSU / DSU to do no CRC checking

1 - Sets the CSU / DSU to do 16-bit CRC checking

2 - Sets the CSU / DSU to do 32-bit CRC checking

Example

crc 0 - Disable all CRC checking

D

debug {hardware|protocol} {1|2|3|4|5|6|7|8|9}

Description

Used to set the debugging level for protocol or hardware layers

Parameters

hardware - Set debug level for hardware
 protocol - Set debug level for protocol
 1 - Module information only
 2 - Adds hardware details (Default)
 3 - Adds port state change
 4 - Adds port error details
 5 - Adds advanced hardware details
 6 - Adds tx & rx packet counts
 7 - Adds lock debugging
 8 - Adds function entry/exit debugging
 9 - Turns on everything possible

Examples

debug hardware 9 - Display all hardware debugging information

debug protocol 1 - Display protocol module load/unload

default-router *IPv4_Address*

Description

Set the default route, or gateway, associated with this pool of dhcp addresses. Generally this will be the IP address of the interface providing dhcp.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

Examples

default-router 192.168.42.254 - Sets the DHCP server to hand out 192.168.42.254 as the gateway.

description *string*

Description

Used to add a comment (description) for tracking what is attached to a particular interface.

Parameter

string - Any alpha-numeric characters are allowed.

Example

description Link to CO - Documents this interface as connecting to CO

dctype {0|1|2}**Description**

Several WANic series cards allow for software setting of the hardware interface type. Valid only for cards with a multi-interface daughtercard (WANic 524, 604 and 608 only)

Parameters

0 - V.35 (Default)
1 - RS-422
2 - RS-232

Example

dctype 2 - Set the interface to RS-232

disable-hdlc-processing**Description**

Valid only for 600 and 800 series cards. Disables HDLC frame processing for that particular interface on the WAN card for non-IP or non-framed data applications. Typically used with the driver suite's character mode operation (encapsulation type "none").

Parameters

None

Example

disable-hdlc-processing - Disables HDLC frame processing for the configured interface.

dns-server <IPv4_Address> [IPv4_Address]**Description**

Set the DNS server(s) for the DHCP server to hand out in a given pool. A maximum of two servers are allowed.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

Examples

dns-server 192.168.42.254 192.168.42.42 - Set the dhcp server to hand out 192.168.42.254 and 192.168.42.42 as dns servers.

domain-name *domain*

Description

Set the domain name for the DHCP server to hand out to a given pool.

Parameters

domain - DNS Domain name, usually something similar to COMPANY.COM

Examples

domain-name mydomain.com - Set the DHCP server to hand out mydomain.com

duplex {auto|full|half}

Description

Set the ethernet interface to either full or half duplex. If this option is not specified, the interface will auto negotiate.

Parameters

auto - Auto-negotiate full or half duplex.

full - Sets the interface to full duplex (Send and receive at the same time).

half - Sets the interface to half duplex (Send or receive at a given time).

Example

duplex half - Sets the interface to half duplex.

E

encapsulation

{frame-relay|hdlc|none|ppp|raw|x25|atm|aal5snap|aal5autopp}

Description

Set the protocol for a serial interface.

Parameters

frame-relay - Frame Relay protocol (Uses IETF standard)

hdlc - High-Level Data Link Control (HDLC) protocol for serial interface. This encapsulation method provides the synchronous framing and error detection functions of HDLC without windowing or retransmission

none - Raw character device read/write for external applications

ppp - Point-to-Point Protocol

raw - Raw IP encapsulation

x25 - X.25 protocol

atm - ATM VC multiplex encapsulation

aal5snap - ATM Aal5snap encapsulation (valid only on an atm sub-interface)

aal5autopp - ATM Aal5autopp encapsulation (valid only on an atm sub-interface)

Examples

encapsulation frame-relay - Set the protocol on the interface to frame-relay.

encapsulation raw - No protocol, an external program will process the raw data from the line.

F

frame-relay interval *LMI_Interval*

Description

Set the LMI interval in Mhz

Parameters

LMI_Interval - LMI Interval in Mhz, for more information on LMI, see the Wikipedia

Examples

frame-relay interval 200 - Sets LMI to 200Mhz

frame-relay lmi-type {ansi|ccitt|cisco}

Description

Set the lmi type for an interface. Valid only in main interface configurations and not in subinterfaces.

For more information on LMI, see the Wikipedia

Parameters

ansi - Annex D defined by ANSI standard T1.617 (Default)

ccitt - ITU-T Q.933 Annex A

cisco - LMI type defined jointly by Cisco, DEC, StrataCom and NorTel (Northern Telecom).

Examples

frame-relay lmi-type ccitt - Set the system to use ccitt frame-relay

frame-relay map ip *IPv4_Address* *DLCI*

Description

Maps an IP address to a frame relay dlcid number. Provided for backwards compatibility only. Configure PVCs using subinterfaces instead of using frame-relay map ip statements.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

DLCI - Positive integer used to identify a PVC. This is normally assigned by telco.

Examples

frame-relay map ip 192.168.42.2 3 - Attaches the address 192.168.42.2 to DLCI number 3

frame-relay mode {*dte*|*dce*}

Description

Sets the frame-relay mode to dte or to dce

Parameters

dte - Data Terminal Emulation, normally used by customer equipment (Default)

dce - Data Carrier Emulation, commonly the setting used by Telco equipment.

Examples

frame-relay mode dce - Set the line to dce mode

G

H

host *IPv4_Address* hardware-address *MAC_Address*

Description

Associates a MAC address with a specific IP address in a DHCP pool. As MAC addresses must be unique on a given LAN, it effectively assigns it to the device.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

MAC_Address - Series of six hex numbers 0 - 255, separated by colons

Examples

host 192.168.42.1 hardware-address 00:08:02:0C:C8:EA - Assign the IP address 192.168.42.1 to the system identified by the MAC address 00:08:02:0C:C8:EA

I

ip address *IPv4_Address IPv4_Netmask* [secondary]

Description

To set IP addresses for an interface, use the ip address command.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

IPv4_Netmask - Four integers from zero to 255 separated by periods

secondary - Specifies additional IP addresses (aliases)

Examples

ip address 10.1.1.199 255.0.0.0 - Assigns the interface the IP address 10.1.1.199 with a Class A network mask

ip address 192.168.1.254 255.255.255.0 secondary - Assigns the interface the alias IP address 192.168.1.254 with a Class C network mask

ip dhcp excluded-address *IPv4_Address IPv4_Address*

Description

Sets a range of addresses to be excluded from use in the address pool. You should exclude the IP address of the interface which is providing DHCP service at a minimum.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

Examples

ip dhcp excluded-address 192.168.42.250 192.168.42.254 - Set DHCP to not hand out addresses from 192.168.42.250 to 192.168.42.254

Turns on debugging in a dhcp pool

ip dhcp debug

Description

Enables debug information for the dhcp service.

Parameters

None

Examples

ip dhcp debug - Turn on debug.

ip dhcp pool *pool_ID* [shared-network <name>]

Description

Required command to create the DHCP pool.

Parameters

pool_ID - Positive integer used to identify the group of addresses(or pool)

shared-network *name* - Required parameter when configuring multiple DHCP pools on a single interface. Each pool sharing an interface must have the same shared-network name parameter specified.

Examples

ip dhcp pool 1 - creates a dhcp pool and assigns it pool ID 1

ip dhcp pool 2 shared-network WirelessCustomers1 - creates a shared dhcp pool with ID 1 and shared network name *WirelessCustomers1*

ip dhcp pool 3 shared-network WirelessCustomers1 - creates a second dhcp pool on the shared network *WirelessCustoemrs1*

ip pim candidate-bsr

Description

Configures the router as a potential BootStrap Router (BSR).

Parameters

None

Examples

Basic PIM setup with router as a candidate RP and BSR:

```
interface Ethernet0
 ip pim sparse-mode
 ip address 192.168.109.1 255.255.255.0
!
interface Ethernet1
 ip pim sparse-mode
 ip address 192.168.110.1 255.255.255.252
!
# We want to be a Candidate RP using our Ethernet0 IP advertising every 15 seconds for the (default)
# full Class D group
# Priority: smaller value means higher priority

ip pim candidate-rp 192.168.109.1 priority 0 interval 15

# We want to be a Candidate BSR using our Ethernet0 IP
# Priority: larger value means higher priority

ip pim candidate-bsr 192.168.109.1 priority 10
```

More advanced example with multicast boundaries:

```
interface Ethernet0
 ip pim sparse-mode
 ip address 192.168.109.1 255.255.255.0
!
interface Ethernet1
 # Don't allow 239.0.0.0 and 224.0.1.39 to be forwarded to this interface
 ip pim sparse-mode deny 239.0.0.0 255.255.255.0 deny 224.0.1.39 255.255.255.0
 ip address 192.168.110.1 255.255.255.252
!

# Be a candidate RP for 239.0.1.0 and 239.0.2.0
```

```
ip pim candidate-rp 192.168.109.1 priority 0 interval 15 group 239.0.1.0 255.255.255.0 group 239.0.2.0 255.255.255.0
ip pim candidate-bsr 192.168.100.141 priority 5

# Switch from shared tree to spt at 50 Kbps
ip pim spt-threshold 50

# Enable PIM debugging to syslog
ip pim debug
```

ip pim candidate-rp

Description

Configures the router as a potential Rendezvous Point (RP).

Parameters

None

Examples

Basic PIM setup with router as a candidate RP:

```
interface Ethernet0
 ip pim sparse-mode
 ip address 192.168.109.1 255.255.255.0
!
interface Ethernet1
 ip pim sparse-mode
 ip address 192.168.110.1 255.255.255.252
!
# We want to be a Candidate RP using our Ethernet0 IP advertising every 15 seconds for the (default)
# full Class D group
# Priority: smaller value means higher priority

ip pim candidate-rp 192.168.109.1 priority 0 interval 15
```

ip pim debug

Description

Enables global syslog debugging output for PIM sparse-mode multicast routing.

Parameters

None

Examples

ip pim debug - Turn on debug.

ip pim sparse-mode

Description

Enables PIM sparse-mode multicast routing on the selected interface.

Parameters

None

Examples

Basic PIM setup:

```
interface Ethernet0
 ip pim sparse-mode
 ip address 192.168.109.1 255.255.255.0
!
interface Ethernet1
 ip pim sparse-mode
 ip address 192.168.110.1 255.255.255.252
!
```

The router will learn the multicast Rendezvous Point (RP) automatically.

ip route *IPv4_Address IPv4_Netmask Destination [metric metric]*

Description

To set IP addresses for an interface, use the ip address command.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

IPv4_Netmask - Four integers from zero to 255 separated by periods

Destination - Can be either an IPv4_Address or a device name.

metric metric - The metric keyword is used to denote a preference setting for multiple routes, the metric value actually assigns preference. 1 would be first choice, 2 would be second choice, etc.

Examples

ip route 0.0.0.0 0.0.0.0 Serial0 metric 1 - Set the gateway or default route to Serial0 and make it the first choice.

ip route 0.0.0.0 0.0.0.0 Serial1 metric 2 - Set the gateway or default route to Serial1 and make it the second choice.

ip route 192.168.1.0 255.255.255.0 192.168.0.1 - Route 192.168.1.0/24 to 192.168.0.1

J

K

L

lease *time* {minutes|hours}

Description

Set the lease time, or duration for clients to keep their addresses in a specific pool before they request configuration again.

Parameters

time - Positive integer.

minutes - Specifies that *time* is measured in minutes.

hours - Specifies that *time* is measured in hours.

Examples

lease 50 minutes - The DHCP lease expires in 50 minutes

lease 5 hours - The DHCP lease expires in 5 hours

loopback

Description

Sets the card into loopback mode

Parameters

No parameters

Examples

loopback - Enables loopback mode

M

mtu *MTU_Size*

Description

Configure the maximum transfer unit(MTU) size for this interface. 800 series cards default to 4470 byte MTU. All other cards default to a 1500 byte MTU. The `mtu` command is valid in Serial, Bonded and Ethernet devices. 10 Mbps and 100 Mbps Ethernet do not support an MTU above 1500. Gigabit Ethernet supports larger MTU sizes.

Parameters

MTU_Size - positive integer, default values are set per interface type

Examples

`mtu 3000` - Sets the MTU to 3000 bytes

multilink-group *group_id*

Description

Sets the group number of the multilink device, this number names the multilink interface which binds the group together. i.e. group 1 would be bound to Multilink1

Parameter

group_id - Identifies the multilink group this interface is part of.

Examples

`multilink-group 3` - Assigns the interface to group 3

N

netbios-name-server *IPv4_Address*

Description

Set the netbios nameserver for DHCP to hand out to clients in the configured pool. This is used by Windows to resolve SMB hostnames.

Parameters

IPv4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

Examples

netbios-name-server 192.168.42.254 - Assign the IP address 192.168.42.1 to the system identified by the MAC address 00:08:02:0C:C8:EA

network *IPv4_Address IPv4_Netmask*

Description

Sets the range of addresses to be used by the DHCP server in a given pool.

Parameters

IPv4_Network - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

IPv4_Netmask - Series of four numbers 0 - 255, separated by periods. The netmask indicates which addresses are local, and which are not. for more information see the Wikipedia

Examples

network 192.168.42.0 255.255.255.0 - Tells the DHCP server to hand out any address between 192.168.42.1 and 192.168.42.254.

O

P

pointtopoint address *IPV4_Address*

Description

Configure the destination address for this interface. For use with PPP connections when the destination router will not negotiate this setting.

Parameter

IPV4_Address - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

Example

pointtopointaddress 192.168.2.253 - Sets the far side of a point to point link to 192.168.2.253

pvc [*name*] *vci*/*<vpi>*

Description

Sets up a PVC, or Permanent Virtual Circuit, using a specified VPI and VCI identifier- The name field is present for compatibility reasons. It is not required and is not used.

Parameters

name - Specifies a name for the pvc. Unused by the system.

vci - vci

vpi - vpi

Example

pvc home 3/30 - Use vci 3 and vpi 30 for this PVC

ppp multilink

Description

Enables multilink on a device using the PPP protocol.

ppp multilink fragmentation {enabled|disabled}

Description

Parameters

enabled - Turn on the feature(Default)

disabled - Turn off the feature

Examples

ppp multilink fragmentation disabled - Turns off multilink fragmentation (Common when dealing with Cisco routers)

Q

R

rate-limit *bits_per_second* {input|output} [*latency milliseconds*] [*buffer kilobytes*]

Description

Restricts data rates on the interface to the bits per second value specified

Parameters

bits_per_second - Non-negative integer which represents how much data an interface can push
input - Applies the rate-limiting policy to packets received on this interface only
output - Applies the rate-limiting policy to packets sent on this interface only
latency *milliseconds* - Highest allowed latency value on the interface (affects buffer size and packet drop rates)
buffer *bytes* - Highest allowed buffer value on the interface (affects latency and packet drop rates)

Examples

rate-limit 500000 input latency 50 buffer 50000 - Limits device input to 500Kbps with a maximum latency of 50ms and a maximum buffer of 50Kb

rate-limit 400000 output latency 40 buffer 40000 - Limits device output to 400Kbps with a maximum latency of 40ms and a maximum buffer of 50Kb

S

service-module ds3 clock source <line / internal>

Description

Set the clock clock or line sync for an interface

Parameter

line - Set the interface to sync from the line.
internal - Set the interface to generate sync on the line.

Example

service-module ds3 clock source internal - Sets the internal CSU/DSU to generate clock signal for the connection

service-module ds3 scrambling {on|off}

Description

Turn scrambling mode on the DS3 CSU on or off.

Parameter

on - Enable CSU scrambling mode. Larscom compatible.
off - Disable CSU scrambling mode.

Example

service-module ds3 scrambling - Enable CSU scrambling
service-module ds3 scrambling on - Enable CSU scrambling

service-module e1 clock source <line | *internal*>

Description

Set the clock clock or line sync for an interface

Parameter

line - Set the interface to sync from the line.
internal - Set the interface to generate sync on the line.

Example

service-module e1 clock source internal - Sets the internal CSU/DSU to generate clock signal for the connection

service-module e1 crc4

Description

Enables the generation of CRC4 (per ITU recommendation G.703 and G.704) to improve data integrity. NOTE: The 550 and N2 series cards do not support this option.

service-module e1 data-coding <Data_code>

Description

Set the internal CSU's coding to normal or inverted

Parameter

<Data_code> - Either 'inverted' or 'normal'. Inverted switches the data coding. Normal does not.

Example

service module e1 data-coding inverted - Sets the internal CSU/DSU to use inverted line coding

service-module e1 egl

Description

Enable the equalizer on the integrated CSU

service-module e1 framing <Line_frame>

Description

Set the internal CSU's framing to CAS or CCS

Parameters

<Line_frame> - Can be set to either 'CAS' or 'CCS'

Example

service module e1 framing cas - Sets the internal CSU/DSU to use cas

service-module e1 linecode < hdb3 / *ami* >

Description

Set the inline coding on the CSU

Parameters

ami - AMI is Alternate Mark Inversion.

hdb3 - HDB3 is High Density Bipolar of order 3 code.

Examples

service module e1 linecode ami - Sets the internal CSU/DSU to use AMI linecoding

service-module e1 timeslots <Timeslot_range>

Description

Set timeslot usage and speed per timeslot of the internal CSU. E1 lines have thirty two 64Kbit channels.

Parameters

<Timeslot_range> - Can either be 'all', or a range using the syntax 'range <range> '.

Example

service-module e1 timeslots range 1-4,10,12,14,16 - Sets the internal CSU/DSU to use timeslots 1, 2, 3, 4, 10, 12, 14, and 16 for a total of 512Kb bandwidth

service-module e1 unstructured

Description

Sets unstructured mode on the e1 CSU/DSU, making all 32 timeslots available for use. NOTE: The 550 and N2 series cards do not support this option.

service-module e3 clock source <Clock_source>

Description

Set the clock clock or line sync for an interface

Parameter

<Clock_source> - Either 'internal' or 'line'. Internal causes the card to generate line sync. Line pulls sync from the line.

Example

service module e3 clock source internal - Sets the internal CSU/DSU to generate clock signal for the connection

service-module e3 egl

Description

Enable the equalizer on the integrated CSU

service-module e3 lbo

Description

Enable line build-out on the internal CSU. Use only if the cable between your card's TX connector to the demarcation point is greater than 225 feet.

service-module t1 clock source <line / *internal*>

Description

Set the clock clock or line sync for an interface

Parameter

line - Set the interface to sync from the line.
internal - Set the interface to generate sync on the line.

Example

service-module t1 clock source internal - Sets the internal CSU/DSU to generate clock signal for the connection

service-module t1 data-coding [normal|inverted]

Description

Set the internal CSU's coding to normal or inverted

Parameter

normal - Leaves t1 data unmodified.
inverted - Inverts t1 data coding.

Example

service module t1 data-coding inverted - Sets the internal CSU/DSU to use inverted line coding

service-module t1 egl

Description

Enable the equalizer on the integrated CSU

service-module t1 framing [esf | sf]

Description

Set the internal CSU's framing to SuperFrame(SF) or Extended SuperFrame(ESF)

Further Reading

http://en.wikipedia.org/wiki/Extended_Super_Frame
http://en.wikipedia.org/wiki/Super_Frame

Parameters

esf - Extended super frame
sf - Super frame

Example

service module t1 framing sf - Sets the internal CSU/DSU to use SuperFrame

service-module t1 lbo {0|-7|-15|-22.5}

Description

Set the internal CSUs line buildout. Use only if the cable between your cards TX connector to the demarcation point is greater than 225 feet

Parameters

0 - Set line buildout to 0db.
 -7.5 - Set line buildout to -7.5db.
 -15 - Set line buildout to -15db.
 -22.5 - Set line buildout to -22.5db.

Example

service-module t1 lbo -7.5 - Set the buildout to -7.5db

service-module t1 linecode [b8zs / *ami*]

Description

Set the inline coding on the CSU.

Further Reading

<http://en.wikipedia.org/wiki/B8ZS>
http://en.wikipedia.org/wiki/Alternate_Mark_Inversion

Parameters

b8zs - B8ZS is Bipolar with 8 Zeros Substitution
ami -AMI is Alternate Mark Inversion.

Examples

service module t1 linecode ami - Sets the internal CSU/DSU to use AMI linecoding

service-module t1 timeslots {all | *Timeslot_range*} [speed {64|56}]

Description

Set timeslot usage and speed per timeslot of the internal CSU. T1 lines have twenty four timeslots at either 56Kbit or 64Kbit. NOTE: use of speed 56 requires the use of sf or d4 framing

Parameters

all - Use all twenty four timeslots available on the line.

Timeslot_range - Range of timeslots using the syntax such as *start-stop,slot* .

64 - Set the interface to 64Kbit timeslots

56 - Set the interface to 56Kbit timeslots

Example

service-module t1 timeslots range 1-4,10,12,14,16 - Sets the internal CSU/DSU to use timeslots 1, 2, 3, 4, 10, 12, 14, and 16 for a total of 512Kbps bandwidth

service-module t1 timeslots range 1-4,10,12,14,16 speed 56 - Sets the internal CSU/DSU to use timeslots 1, 2, 3, 4, 10, 12, 14, and 16 for a total of 448Kbps bandwidth

service-module t3 egl

Description

Enable the equalizer on the integrated CSU

service-module t3 lbo

Description

Enable line build-out on the internal CSU. Use only if the cable between your card's TX connector to the demarcation point is greater than 225 feet.

shutdown

Description

Shutdown an interface.

speed < auto / 100 / 10 >

Description

Set the speed of an ethernet interface. If this option is not specified, the device will auto negotiate.

Parameters

100 - Set the interface to 100Mbps.

10 - Set the interface to 10Mbps.

auto - auto-negotiate the speed of the interface.

Example

speed 10 - Sets the ethernet interface to 10Mbps

T

transport < e1 | t1 | e3 | ds3 > <g751>

Description

This command sets the mode of operation for the interface. Default setting and valid options are dependant on the card. 440, 431, and 530-TEJ cards are t1/e1 and default to t1. While 530-DE cards are t3/e3 and default to t3.

Parameter

e1 - specify e1 mode.

t1 - specify t1 mode.

e3 - specify e3 mode.

ds3 - specify t3 mode.

g751 - specifies g751, only valid with "transport e3"

Example

transport e1 - Sets the interface to use e1 mode (if allowed).

transport e3 - Sets the interface to use e3 mode (if allowed).

transport e3 g751 - Sets the interface to e3 g751 mode.

tunnel destination <IPv4_Address> <port>

Description

Set the IP Address and Port used by the other side of the tunnel.

Parameters

<IPv4_Address> - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

<port> - The port used by the other side of the tunnel.

Examples

tunnel destination 192.168.42.42 1104 - Connect to 192.168.42.42:1104

tunnel key <key>

Description

Set the key used for tunnel encryption.

Parameters

<key> - 32 character hex value used to encrypt the tunnel. Not strictly required for a tunnel, but without it there is no encryption.

Examples

tunnel key 8232f92562b8e187af624312cc643147 - use '8232f92562b8e187af624312cc643147' as the tunnel key

tunnel mode openvpn <mode>

Description

Set the tunnel to client, server, or peer to peer mode.

Parameters

<mode> - Choices are 'server', 'client', or blank. Server and client are server and client mode respectively, blank sets peer to peer mode.

Examples

tunnel mode openvpn server - Sets the interface to server mode.
tunnel mode openvpn - Sets the interface to peer to peer mode.

tunnel options <tunnel_options>

Description

Specify command line options to OpenVPN, any command line option can be passed this way. You should be familiar with OpenVPN before using this command, as not all options are valid on all types of tunnels.

Parameters

<tunnel_options> - Command-line options to be passed to openvpn. This can be used to circumvent limitations in the wan.conf command structure.

Examples

tunnel options --push "route 192.168.42.0 255.255.255.0" - Tell the other side to send traffic to 192.168.42.0/24 here.

tunnel source <IPv4_Address> <port>

Description

Set the IP Address and Port used by this side of the tunnel.

Parameters

<IPv4_Address> - Series of four numbers, 0 to 255, separated by periods. For more information see the Wikipedia

<port> - The port used by the other side of the tunnel.

Examples

tunnel source 192.168.42.42 1104 - Connect from 192.168.42.42:1104

U

ubr

Description

Sets Unspecified Bit Rate parameters.

Parameters

No parameters

Examples

ubr - Set the system to use unspecified bit rate

V

vbr <pcr> <cdvt> <scr> <mbs>

Description

Sets Variable Bit Rate parameters.

Parameters

<pcr> - peak cell rate

<cdvt> - cell delay variation tolerance

<scr> - sustainable cell rate

<mbs> - maximum burst size

No Parameters - If no parameters are set the vbr command will use the bandwidth command to calculate the pcr and cdvt values

Examples

vbr - Sets the vbr using the bandwidth command to calculate the pcr and cdvt

vbr 8500 50 8500 10 - Sets vbr using the following parameters; pcr to 8500 the cdvt to 50 the scr to 8500 and the mbs to 10

W

X

x21-clockmode

Description

Valid only for cards using an RS422 interface. Setting this clocking option on cards using an RS422 interface and the standard X.21 DB26-DB15 cable disable the use of the carrier signal (DCD) and enables the dual clocking required for X.21 interfaces. Note: Remember to set "dctype 1" to set RS422 mode on cards that allow for software setting of the hardware interface type.

Y

Z