

Out Of Band Management

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Out Of Band Management (OOB) Overview

OOB offers a method for connecting two routers together with a USB cable for extra redundancy in case of 4G failure. This allows you to retain out-of-band connectivity by connecting the USB port for Router A to the USB console of Router B, as well as the ability to access Router B console port from Router A.

This feature will need to be implemented with IOS CLI. The user should be able to do a reverse telnet via tty line (/dev/ttyUSB) to another router's USB console.

OOB Topology

The following graphic illustrates the physical connection between two routers:

Figure 1: Topology



The blue line above is a USB 2.0 Type A to USB 2.0 mini USB Type B cable. Refer to this topology for the following configuration.

Feature Caveats

Prior to configuring each router, ensure that both routers have a basic serial configuration:

```
line con 0
 stopbits 1
 speed 9600
```

Note Depending on how old the router is, the default baud rate is 9600 or 115200.

- Plug and Play is not supported. Cable must be installed prior to configuration.
- OOB only works for async0/2/1, which is the USB port. Async0/2/0 is the serial interface on the router.
- To exit from the feature, press “Ctrl-Shift-6”, then “x”, then “disconnect”.

OOB Configuration

Refer to the previous figure for examples of Router A and Router B. To access Router B console from Router A:

Power on Router A and configure the following:

```
interface Async0/2/1
 ip address 20.0.0.1 255.0.0.0
 encapsulation relay-line
!
line 0/2/1
 transport input all
 transport output all
```

Make sure that the speed of line 51 is the same speed as the console on Router B:

```
Router-A#show line

   Tty Line Typ     Tx/Rx    A Modem  Roty AccO AccI  Uses  Noise Overruns  Int
*     0    0 CTY              -    -      -    -    -     4      0    0/0      -
  0/0/0    2 TTY      0/0     -    -      -    -    -     0      0    0/0      -
  0/2/0   50 TTY   9600/9600  -    -      -    -    -     4      0    0/0      -
  0/2/1   51 TTY   9600/9600  -    -      -    -    -     4      0    0/0      -
     74   74 VTY              -    -      -    -    -     3      0    0/0      -
     75   75 VTY              -    -      -    -    -     1      0    0/0      -
     76   76 VTY              -    -      -    -    -     0      0    0/0      -
     77   77 VTY              -    -      -    -    -     0      0    0/0      -
     78   78 VTY              -    -      -    -    -     0      0    0/0      -
     79   79 VTY              -    -      -    -    -     0      0    0/0      -
     80   80 VTY              -    -      -    -    -     0      0    0/0      -
     81   81 VTY              -    -      -    -    -     0      0    0/0      -
     82   82 VTY              -    -      -    -    -     0      0    0/0      -
     83   83 VTY              -    -      -    -    -     0      0    0/0      -
     84   84 VTY              -    -      -    -    -     0      0    0/0      -
     85   85 VTY              -    -      -    -    -     0      0    0/0      -
     86   86 VTY              -    -      -    -    -     0      0    0/0      -
     87   87 VTY              -    -      -    -    -     0      0    0/0      -
     88   88 VTY              -    -      -    -    -     0      0    0/0      -

 Line(s) not in async mode -or- with no hardware support:
1, 3-49, 52-73, 89-735
```

Configure line 0/2/1 on Router A:

```
Router-A#configure term
Enter configuration commands, one per line.  End with CNTL/Z.
Router-A(config)#line 0/2/1
Router-A(config-line)#speed 9600
Router-A(config-line)#
```

Telnet to Router B via Router A IP, port 2051:

```
Router-A#telnet 20.0.0.1 2051
Trying 20.0.0.1, 2051 ... Open


Router-B#

Router-B#   <== to exit, press “Ctrl-Shift-6”, then “x”, then “disconnect”

Router-A#disconnect
Closing connection to 20.0.0.1 [confirm]
```