



# 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 IR1101 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
```




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**Note** Depending on how old the IR1101 is, the default baud rate is 9600 or 115200.

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- 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 IR1101
- 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:

```
IR1101-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:

```
IR1101-A#configure term
```

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

```
IR1101-A(config)#line 0/2/1
```

```
IR1101-A(config-line)#speed 9600
```

```
IR1101-A(config-line)#
```

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

```
IR1101-A#telnet 20.0.0.1 2051
```

```
Trying 20.0.0.1, 2051 ... Open
```

```
IR1101-B#
```

```
IR1101-B# <== to exit, press "Ctrl-Shift-6", then "x", then "disconnect"
```

```
IR1101-A#disconnect
```

```
Closing connection to 20.0.0.1 [confirm]
```

