How to Configure MB6800 WWAN-Serial Bridging

MB6800 has a configurable serial port (standard RS232 port). With this serial port, MB6800 can be used as DCE device to be connected with Cisco router's console port so that MB6800 can work as a backup WAN link. Here we also illustrate a sample using Cisco 831 router in this document.

Configurations on MB6800

There are only two steps to configure MB6800 to work in serial port bridging mode.

1. Set the baud rate for the serial port on the MB6800:

Go to the webGUI->"System"->"Administration" page, in the "General" section, select the proper baud rate to match that of your router (or other dialing devices). The default baud rate setting on MB6800 is 115200bps.

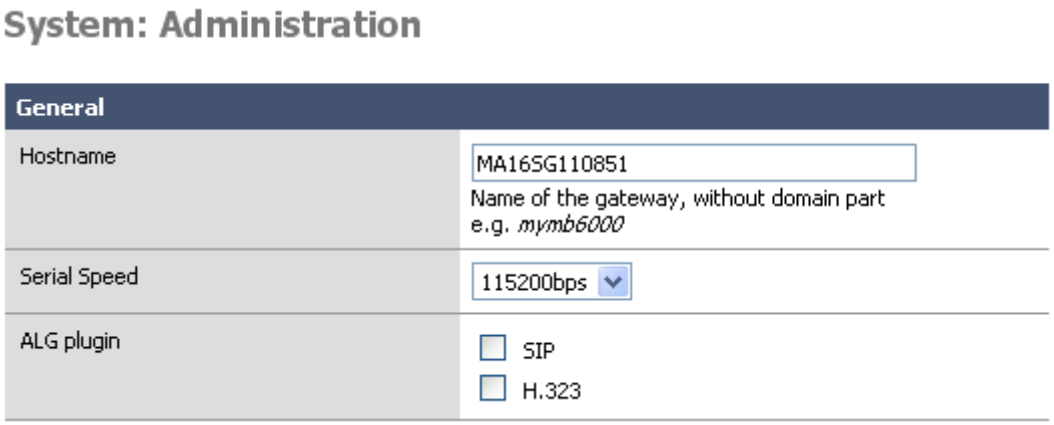

Figure 1. Configure the baud rate for serial port.

Click "Submit" button to save the changed settings.

2. Set the Bridge Mode on MB6800:

Go to MB6800 webGUI->"Interfaces"-> "Internet access"->"Networking"->"Connection mode":

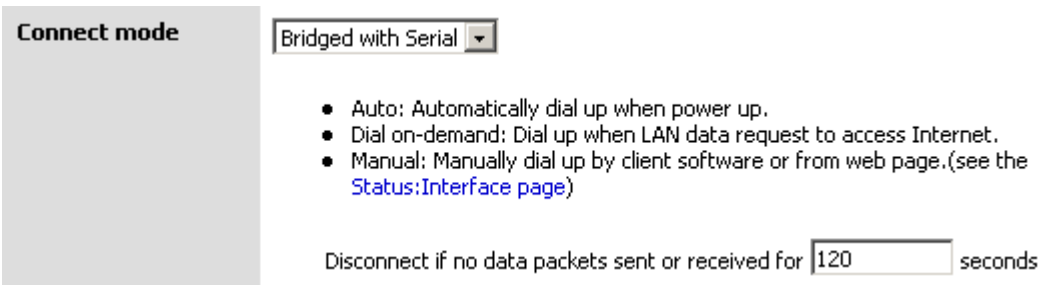

Figure 2. Configure Bridge-Mode

Select **"Bidged with Serial"** in the "Connection mode" drop-down menu. You can also specify a number in second to the box below, the PPP connection will terminate automatically if there is no

data traffic on this link. Click the "Submit" button to save the changed settings and then reboot the MB6800 unit following the instructions on the webGUI.

After getting this done, you can attach a DTE device such as Cisco router or PC with a serial cable, and then the PPP dialing can be initiated to dial up to the Internet.
MB6800 will dial up the 3G modem automatically when received a PPP connection request from a DTE device and disconnect it when received a PPP termination, it looks like a transparent modem. You will need to configure the username and the password to your router for the PPP dialing; you can obtain this information from your ISP.

Case Study

Here we will show a sample to illustrate the whole configuration in detail using a Cisco 831 router. The Cisco 831 router has an Ethernet WAN port for use with an external DSL or cable modem to connect to the Internet. For reliable access, the console port on Cisco 831 router can be used for dial backup with an external modem when the primary WAN connection fails.

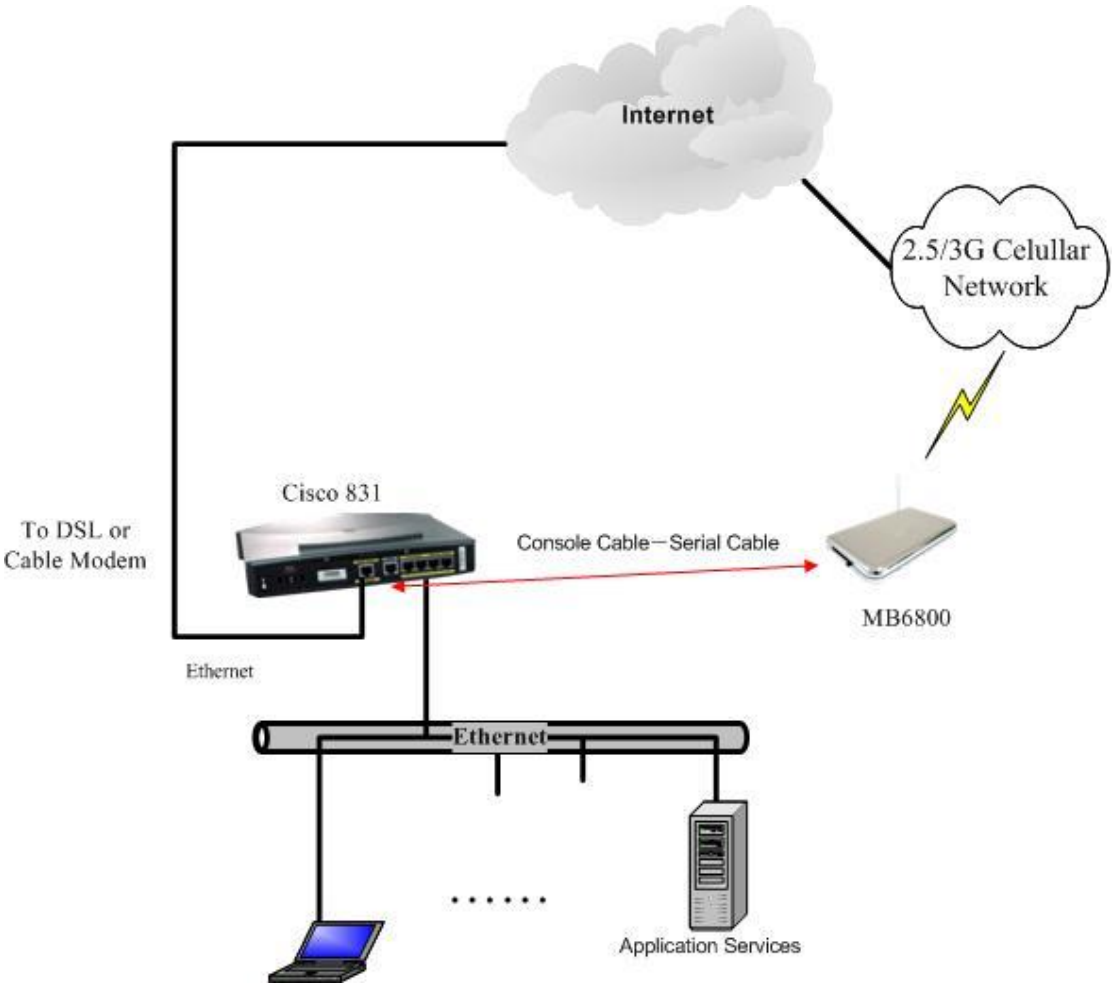

Figure 3. Topologic.

1. Attach a PC or Laptop to the MB6800 and then configure MB6800 to work in serial bridging mode following the instructions in “Configurations on MB6800” section in this document.
2. Connect your PC/Laptop to the Cisco 831 router and configure the router with:

```
!
version 12.3
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname 871-iPass
!
boot-start-marker
boot-end-marker
!
memory-size iomem 5
no logging console
enable secret 5 $1$/XzI$VYOtY1oNC/sjApP.r3xQE.
enable password password
!
username admin password 0 password
username card password 0 card
no aaa new-model
ip subnet-zero
!
!
ip dhcp excluded-address 192.168.1.1 192.168.1.10
!
ip dhcp pool 192.168.1.1/24
    network 192.168.1.0 255.255.255.0
    default-router 192.168.1.1
    domain-name ipass-lab
    dns-server 4.2.2.2
!
!
ip domain name ipass.com
ip ips po max-events 100
no ftp-server write-enable
!
!
interface Ethernet0
 ip address 10.4.212.1 255.255.255.0
 ip nat inside
```

```
 ip virtual-reassembly
!
interface Ethernet1
 no ip address
 shutdown
 duplex auto
!
interface FastEthernet1
 no ip address
 duplex auto
 speed auto
!
interface FastEthernet2
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface FastEthernet3
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface FastEthernet4
 description Outside Interface
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Async1
 description Dial backup physical interface
 no ip address
 no ip redirects
 ip local-proxy-arp
 ip nat outside
 encapsulation ppp
 no ip route-cache
 no ip mroute-cache
 dialer in-band
 dialer pool-member 1
 dialer-group 1
 async mode dedicated
```

```
 ppp authentication chap callback optional
 ppp timeout retry 10
 routing dynamic
!
interface Dialer1
 description D1: Dial backup to Internet
 bandwidth 53
 ip address negotiated
 ip nat outside
 encapsulation ppp
 no ip route-cache
 no ip mroute-cache
 dialer pool 1
 dialer-group 1
 no cdp enable
 ppp authentication chap callback optional
 ppp chap hostname card
 ppp chap password 0 card
 ppp pap sent-username card password 0 card
!
ip classless
ip route 0.0.0.0 0.0.0.0 Dialer1
!
no ip http server
no ip http secure-server
!
ip nat inside source list 1 interface Dialer1 overload
!
access-list 1 permit 10.4.212.0 0.0.0.255
access-list 101 permit ip any any
dialer-list 1 protocol ip list 101
!
!
control-plane
!
!
line con 0
 exec-timeout 0 0
 logging synchronous
 modem enable
 transport preferred ssh
 transport output all
 stopbits 1
 speed 115200
```

```
line aux 0
 exec-timeout 0 0
 modem InOut
 no exec
 transport preferred all
 transport input all
 transport output all
 stopbits 1
 speed 115200
 flowcontrol hardware
line vty 0 4
 password password
 logging synchronous
 login
 transport preferred ssh
 transport input telnet ssh
 transport output telnet ssh
!
scheduler max-task-time 5000
end
```

3. Connect the MB6800 unit and the Cisco 831 router with the serial cable. Plug one end of the serial cable (coming with the MB6800 box) to the MB6800's serial port, and the other end connecting with one end of the serial console cable (coming with the Cisco router).

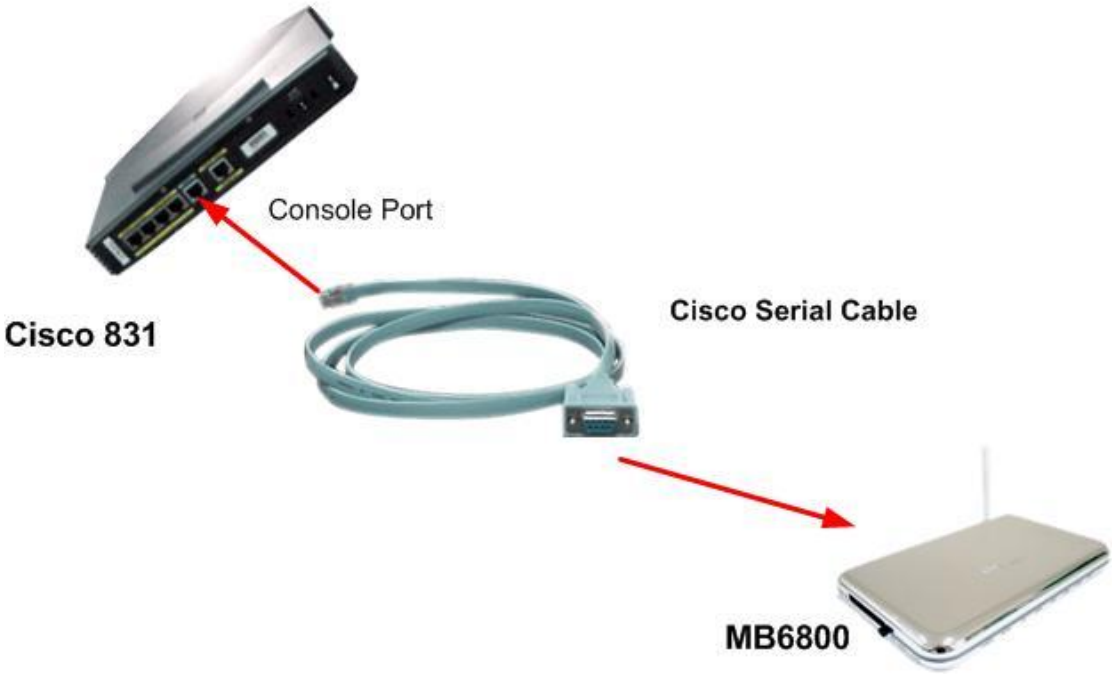

Figure 4. Device connection.

4. Power up the MB6800 and the Cisco router, the Cisco router will dial up via its console port to the Internet when the primary connection fails, and the MB6800 will act as a transparent modem.

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