



Orbit MCR CELL INTERFACE Basic Configuration

Introduction

This document describes how to setup the cellular interface on Orbit MCR by configuring basic settings like access point name (APN).

Scope

This bulletin is intended for system engineers and end users who are familiar with the Orbit command line interface (CLI) and are interested in configuring basic settings of cellular interface on Orbit. Please refer to Orbit MCR technical manual for details on how to access Orbit CLI.

Firmware Compatibility

This bulletin is applicable to Orbit MCR devices running firmware version 1.5.1 or greater.

Terms

APN Access Point Name
CLI Command Line Interface
OTA Over The Air
PDN Packet Data Network

General Notes

All examples below assume a factory default configuration on each Orbit device.

The commands listed in this bulletin can be copied and pasted into a text file. Change any details necessary to match your network configuration (**highlighted** below), and then copy and paste the commands into the CLI (after entering “configuration” mode as shown below) for quick and convenient configuration.

NOTE: Do not forget to turn off CLI auto-wizard as shown below. Otherwise, copy-paste of commands might not work properly.

```
(none) login: admin
Password:
```

```
admin connected from 127.0.0.1 using console on (none)
```

```
admin@(none) 21:12:32> set autowizard false
```

```
admin@(none) 21:12:32> config
Entering configuration mode private
[ok][2014-05-06 21:12:33]
```

```
[edit]
admin@(none) 21:12:33%
```

ORBIT MCR-4G LTE (Verizon Wireless Only)

The MCR-4G for Verizon Wireless comes pre-configured to connect to Verizon Wireless network in U.S. using APN of “**vzwinternet**”. It attempts to set up a data connection towards Verizon's internet PDN that provides internet connectivity. For this data connection to succeed, a SIM card provisioned for internet access needs to be obtained from Verizon Wireless and installed in the unit.

If a private network (PN) account has been setup with Verizon wireless, a SIM card will be issued from that account. When the modem is powered up with such a SIM, the default APN on the modem is automatically updated to the one that identifies the user's private network. This procedure is called OTA APN update. However, **this procedure might not always succeed**, and hence, may require manual update of the APN. Use following commands to update APN (e.g., to “**MYAPN.GW6.VZWENTP**”):

```
set interfaces interface Cell cell-config connection-profile VZW bearer-config apn  
MYAPN.GW6.VZWENTP
```

```
commit
```

NOTE: Ask your wireless carrier representative for the exact APN name applicable to your SIM card.

ORBIT MCR-3G GSM/UMTS/HSPA+

The MCR-3G (GSM/UMTS/HSPA+) is shipped out of factory **with cellular interface disabled**. This model is carrier agnostic and is designed to work on GSM/UMTS/HSPA+ (3G) networks around the world.

Use the following configuration commands to create a connection profile to allow the cell to connect to, for example, AT&T's 3G GSM network with an APN "**Broadband**":

```
set interfaces interface Cell enable true  
set interfaces interface Cell cell-config connection-profile AT&T bearer-config apn Broadband  
commit
```

NOTE: Ask your wireless carrier representative for the exact APN name applicable to your SIM card.

Testing Connectivity

1. Validate that the cell interface is connected.

NOTE: The example below shows cell status of Orbit MCR-4G LTE (Verizon Wireless) when connected to the Verizon Wireless network:

```
admin@(none) 13:47:58% run show interfaces-state interface Cell cell-status
```

```
cell-status imsi 311480023786469
cell-status imei 990000947614196
cell-status iccid 89148000000234127091
cell-status mdn 5854724645
cell-status apn VZWINTERNET
cell-status app-sw-version 0.0.5
cell-status modem-sw-version "4.08.02 SVN 0 [2012-12-21 10:52:58]"
cell-status sim-state ready
cell-status modem-state connected
cell-status roaming-state home
cell-status service-state lte
cell-status rssi -52
```

NOTE: The example below shows cell status of Orbit MCR-3G GSM/UMTS/HSPA+ when connected to the AT&T network:

```
admin@(none) 13:47:58% run show interfaces-state interface Cell cell-status
```

```
cell-status imsi 310410635138718
cell-status imei 351579050793072
cell-status iccid 89014103276351387185
cell-status mdn 15857544129
cell-status apn ccspbsc210.acfes.org
cell-status app-sw-version 0.0.5
cell-status modem-sw-version 12.00.024
cell-status sim-state ready
cell-status modem-state connected
cell-status roaming-state home
cell-status service-state hsdpa
cell-status rssi -71
```

2. Validate that "www.google.com" can be pinged. (Assumes the cell data plan allows general internet access).

```
admin@(none) 13:47:58% run ping www.google.com
PING www.google.com (173.194.77.104) 56(84) bytes of data.
64 bytes from ob-in-f104.1e100.net (173.194.77.104): icmp_req=1 ttl=46 time=180 ms
64 bytes from ob-in-f104.1e100.net (173.194.77.104): icmp_req=2 ttl=46 time=141 ms
```

Check IP address assigned to Cell interface

The IP address highlighted in **bold** text below is the address assigned by wireless network to the cell interface of Orbit.

```
admin@(none) 13:47:58% run show interfaces-state interface Cell ipv4
ipv4 forwarding true
ipv4 mtu 1500
PREFIX
IP LENGTH ORIGIN
-----
166.130.200.173 32 static

LINK LAYER
IP ADDRESS ORIGIN STATE
-----
0.0.0.0 19:00:00:00:d0:60 dynamic reachable
```

End of application bulletin.