IP Address and Pre-configuration Information

Ethernet Connectivity: Connect your workstation or device to the Digi Connect WAN via one of these methods:

- Direct from workstation to Digi Connect WAN via an Ethernet crossover cable.
- Via network hub or switch using a straight-thru Ethernet cable.

Ethernet Port IP Addressing: Follow the Quick Start Guide and assign the Digi Connect WAN an IP Address. In most cases a static IP address is desired.

DHCP Sever: The Digi Connect WAN/VPN includes a DHCP server and can provide IP address configuration to remote devices and/or workstations. DHCP server is on by default and is configured to provide workstation IP addresses starting at 192.168.1.100.

Static IP Addresses: If static IP addresses are used, disable the Digi Connect WAN DHCP server via *Configure>Network>DHCP Server Settings* and follow these directions:

1. In order to properly communicate via the Digi Connect WAN, your workstation should be in the same subnet as the Digi Connect WAN. The simplest way to accomplish this is to use the Digi Connect WAN's DHCP server. If you are using the DHCP server, and the Digi device is at IP address 192.168.1.1, you should configure your workstation to be something like:

- IP address: 192.168.1.2
- Subnet mask: 255.255.255.0
- Default gateway: 192.168.1.1 (i.e. the IP address of Digi Connect WAN)

2. As shown above, any device using the Digi Connect WAN as a gateway via the cellular wireless network must have its default gateway configured to the Digi Connect WAN's Ethernet port IP address.

3. DNS Server IP addresses: If you plan to "browse" the Internet or make other outbound connections that utilize DNS names (e.g., www.digi.com), the carrier's DNS server IP addresses should be entered into the workstation's IP configuration. DNS info can be confirmed once the Digi Connect WAN has connected to the cellular network using the Digi Connect WAN Web UI via *Administration>System Info>Mobile*.

Changing the Digi Connect IP Address: The Digi Connect WAN IP address settings can be changed using the built-in Web UI or via command line.

- **Via Command Line**: Use either the console port and a terminal emulation program or telnet to the Digi Connect WAN's IP address. Use the "`set net`" command similar to:

  ```
  set net ip=172.16.5.88 mask=255.255.0.0 gateway=172.16.5.88
  ```

  Type `set net` with no parameters to verify the settings. Reboot the Digi Connect WAN by either re-powering or via the `boot action=reset` command.

- **Via Web UI**: Point your browser to the Digi Connect WAN's Ethernet port IP address, select *Configuration>Network* and enter the desired settings, as shown below.

Press *Apply*, and then reboot the Digi Connect WAN for changes to take effect. You will lose connectivity to the unit until you reconfigure your workstation to be in the same subnet as the Digi Connect WAN; or use DHCP.
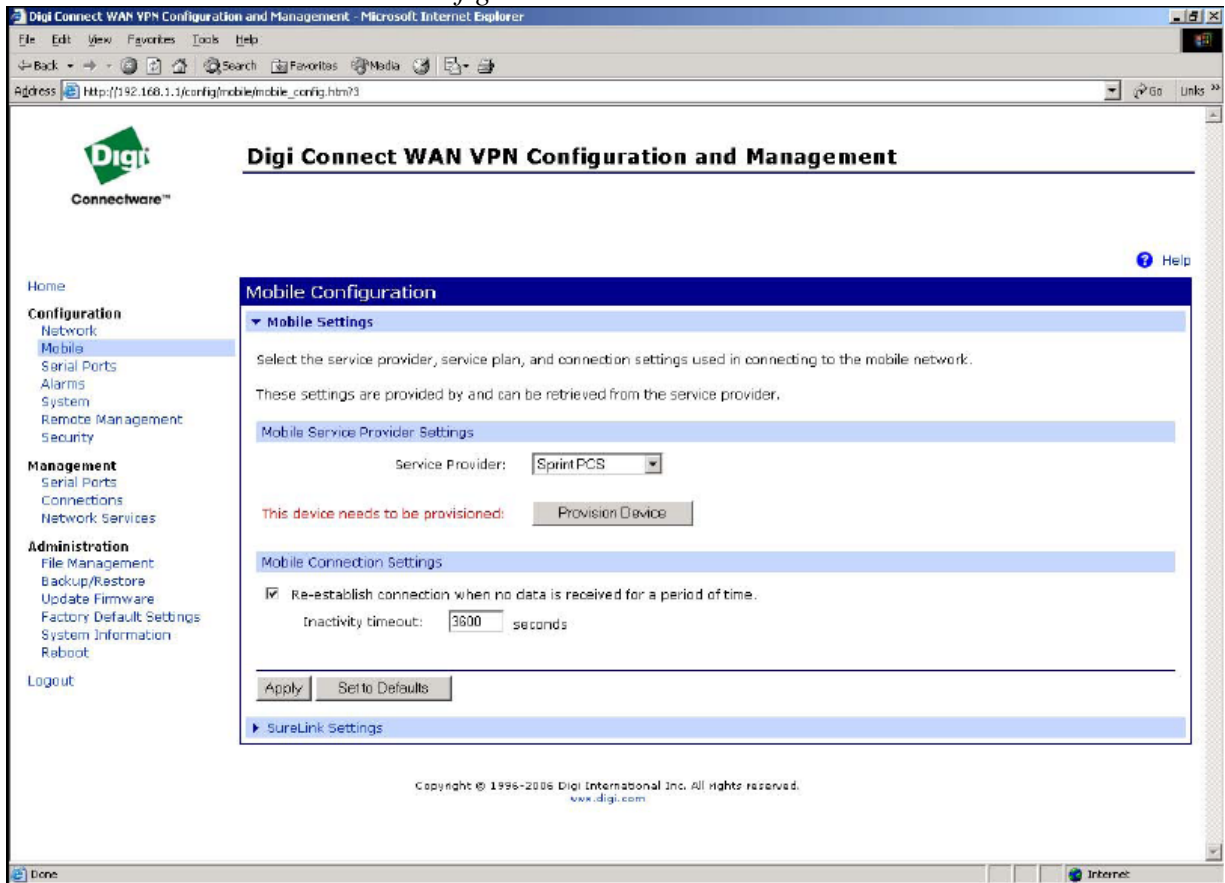
Modem Provisioning

In order to communicate on a CDMA wireless network, the Digi Connect WAN must be provisioned for use on the wireless network. Follow the steps below to configure the Digi Connect WAN for the Sprint network. These instructions assume that the modem's ESN has already been given to your wireless data plan provider for registration, and that you have received a Device Activation information sheet.

Connecting the Digi Connect WAN

1. Attach the antenna to the Digi Connect WAN. Place the Digi Connect WAN and/or antenna in a location that will ensure the best signal.

2. Connect the Digi Connect WAN Ethernet port to your workstation or device in the method mentioned above.

3. Apply power to the Digi Connect WAN. After a few minutes observe the following:

> a. The green Ethernet link LED located on the Ethernet port should be on. If not, make sure you are using the proper cable.

> b. Signal Strength LEDs on top of unit should show 2-4 LEDs. If not, try repositioning the antenna and unit if necessary. Do not extend the antenna cable. Instead, reposition the Digi Connect WAN unit itself via longer Ethernet cable connection.

> c. Activity LED will be on solid for a few moments then go off.

> d. The Wireless Link LED on top of unit should go on solid once the APN type is properly configured. If not, verify the provisioning information via *Configuration > Mobile*.


> e. Make sure it is set for the correct Service Provider. The proper selection in the Service Provider box is "Sprint PCS." Then, you must click the link to proceed to the next set of provisioning screens.

4. When you proceed, a configuration window will pop up. This is where you

will enter the rest of the provisioning information. On the first screen, select
"*Automatically provision the mobile device using a network-initiated
session*." Then, select *Next*.
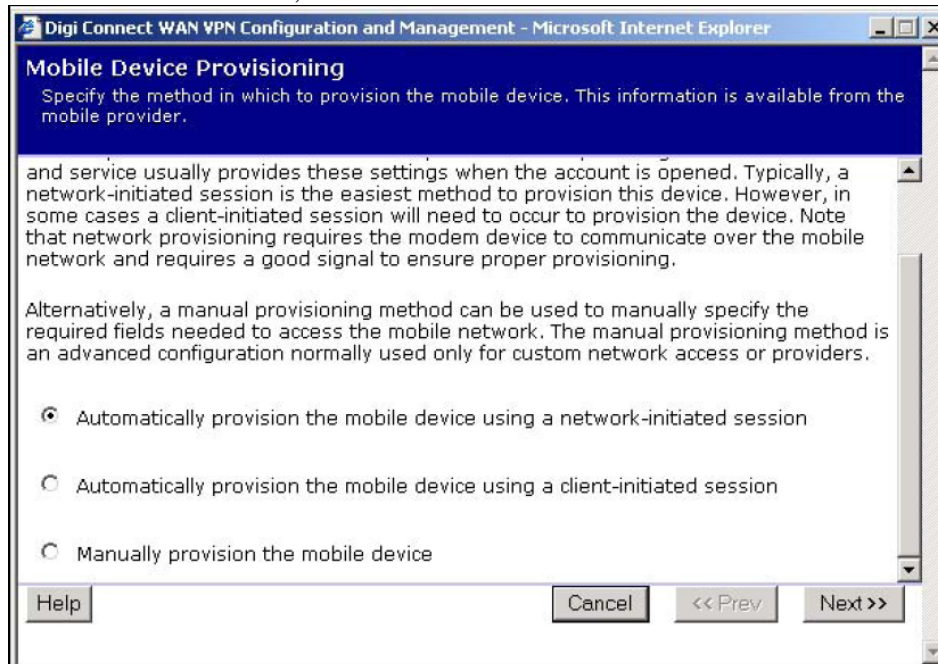
5. On the next screen, enter the following information. You will need to refer
to the registration and provisioning information supplied by wireless data
plan provider.
- o Service Programming Code (MSL): Supplied by wireless data plan
  provider
  *Note: In the case of the Digi Connect WAN, this number will always be
  "000000.")*
- o Mobile Directory Number: Supplied by wireless data plan provider.
- o MSID (IMSI_MS): Supplied by wireless data plan provider.
- o Select *Next.*

7. The device will now have its provisioning information written to its memory. Do not close this next window, or turn off the Digi Connect WAN while this is occurring. The dialog box will indicate when the process is finished.

8. Once the device has indicated that provisioning is finished, click the *Finish* button, and then *Reboot* the device.
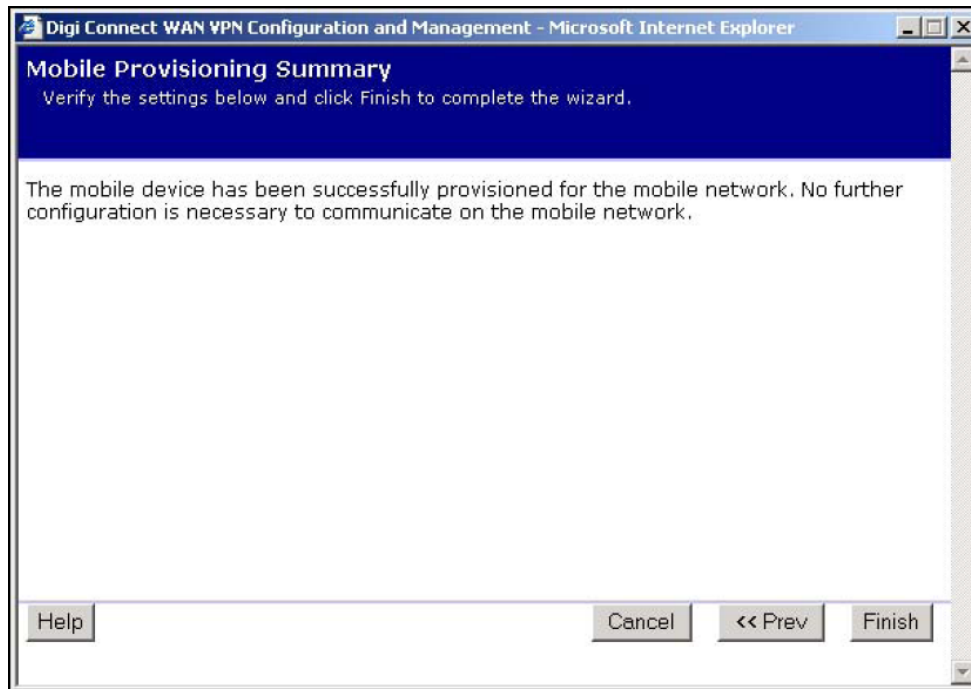
9. After the device restarts, and once the mobile link LED is on solid (which may take a few minutes), verify the mobile IP address from the Digi Connect WAN home page, via *Management>Connections*, or via *Administration>System Information>Mobile*, as shown below.
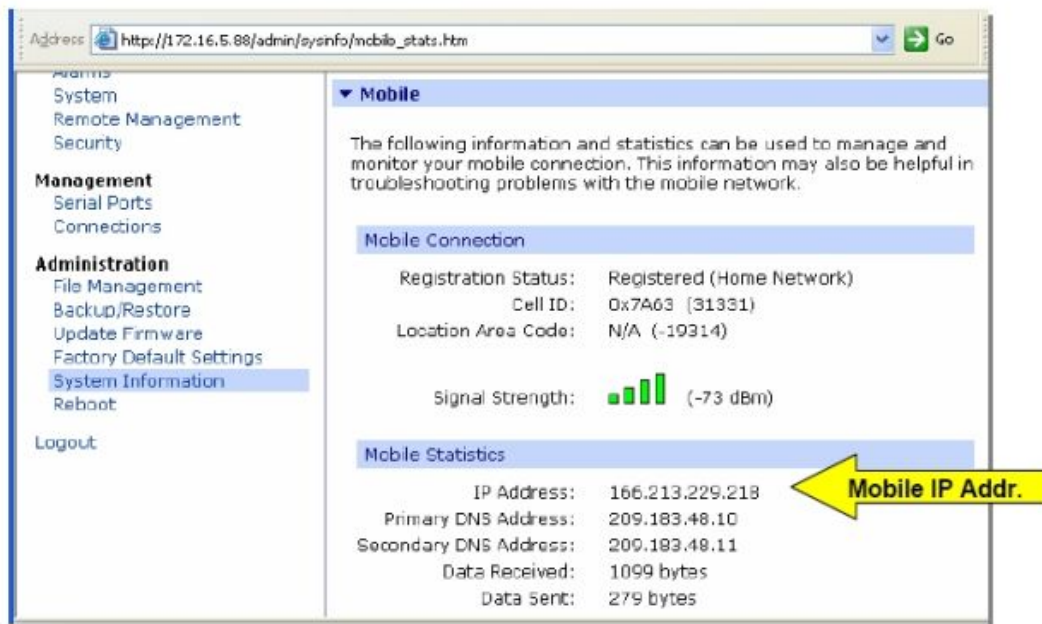

The Digi Connect WAN should now be ready to use.

Testing the Digi Connect from a Workstation

Once the Digi Connect WAN is connected to the cellular network and is accessible from network devices connected to its Ethernet port, you can do some simple tests to verify communications through the device.

A simple test is to connect *out* through the Digi Connect WAN to an Internet website like www.digi.com . Make sure your workstation's IP config is to use the Digi Connect WAN's Ethernet port IP as the default gateway and use the wireless provider's DNS server IP addresses (found via Administration > System Info > Mobile).
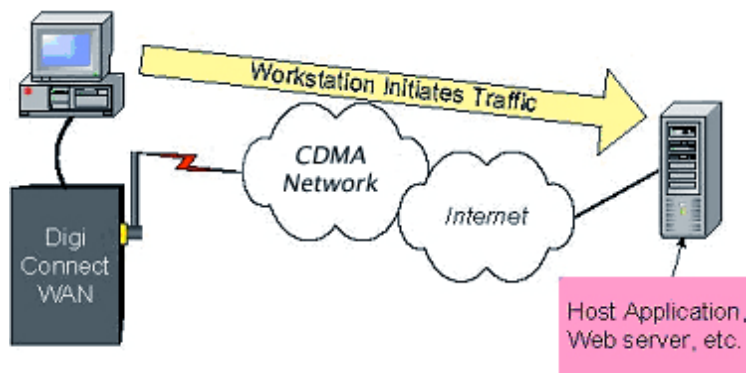
Inbound connections require additional configuration to test. First, not all APN types allow incoming connections. Second, the Digi Connect WAN uses NAT (Network Address Translation)* to route traffic from the Public IP address on the cellular interface to the Ethernet port's private IP network. NAT provides two main benefits:

> *Security:* NAT hides the private IP addresses of the devices on the Digi Connect WAN's Ethernet network.

> *IP Address Availability:* IP addresses are in short supply and cost money. The Digi Connect WAN need be provided only one IP address from the wireless carrier.

Port forwarding* entries are required to pass incoming traffic through the Digi Connect WAN to a device or workstation connected to the Digi Connect WAN's Ethernet port.

* Note that the Digi Connect Remote Gateway (RG) does not support NAT or port forwarding.

Refer to the Digi Connect WAN application guide on mobile terminated connections for details on setting up in-bound connections.

A simple test to verify the Digi Connect WAN is on the wireless network and is

accessible is to ping the mobile IP address from an Internet connected workstation. From the example above where the mobile IP address is 166.213.229.218: ping 166.213.229.218

If the request times out, try adding a "-w 5000" or "-w 10000" to the ping command: ping -w 5000 166.213.229.218

Other application scenario examples, such as using the Digi Connect WAN for a backup wireless WAN connection, are available from Digi International.

Finishing Up and Getting Assistance

Please register your Digi Connect WAN at http://www.digi.com/support/customer%20services/warranty.jsp .

If you have any questions or need assistance, please contact your Digi Connect WAN vendor or Digi International at 952-912-3444, or Digi technical support at http://www.digi.com/support/eservice/eservicelogin.jsp .