Digi ConnectPort® WAN Application Guide

Configuring the Connect WAN for IP pass-through operation

Scenario

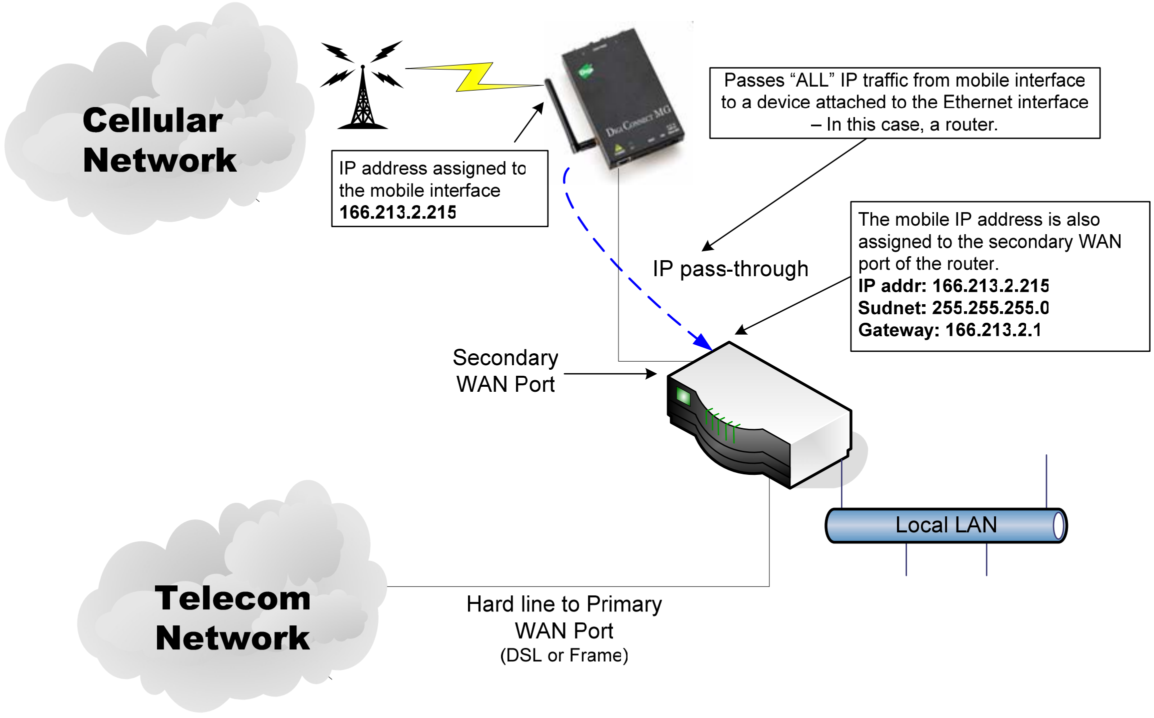
There are many customer application scenarios where a router is used to decide upon alternative routes using a primary and a secondary (or backup) interface. In many of these configurations, the router is required to use a public IP address as assigned by the network over which it is communicating. This is mostly due to the fact that the router will need to establish a VPN tunnel over that interface and it uses the public IP address as part of the VPN authentication. The IP pass-through feature will allow a cellular device server to provide bridging functionality similar to that of a cable or DSL modem where it becomes "transparent" to the router (or connected device). In this case; the router's WAN interface believes it is connected directly to the mobile network and has no knowledge that the Connect WAN is the mechanism providing that connectivity.

Feature Description

The configured for IP pass-through, the ConnectPort WAN (or Connect WAN) will pass its mobile IP address directly through and to the Ethernet device (router or PC) that is attached to it via the Ethernet port. The ConnectPort WAN will essentially become transparent from the perspective of the connected device, similar to the behavior of a cable or DSL modem, in order to provide a bridge from the mobile network directly to the end device attached to the ConnectPort WAN.

Since the mobile network address is effectively "passed-through" to the local device connected to the Ethernet port of the ConnectPort WAN, all network access to the ConnectPort WAN will be bypassed with some specific exceptions. The ConnectPort WAN employs a concept known as a "pinhole." This simply means that the user may configure the ConnectPort WAN to listen on specific TCP ports and terminate those connections at the ConnectPort WAN for purposes of managing the ConnectPort WAN. Those ports will not be passed on to the device connected to the Ethernet port of the ConnectPort WAN. The ports and services configurable for remote management include: telnet, SSH, HTTP, HTTPS and SNMP. Connectware Manager and SureLink ports are automatically setup as "pinholes" so that they continue to work with the ConnectPort WAN. In addition, the ConnectPort WAN utilizes a private address on the Ethernet interface strictly for use in configuration or local access. This allows a user on the local

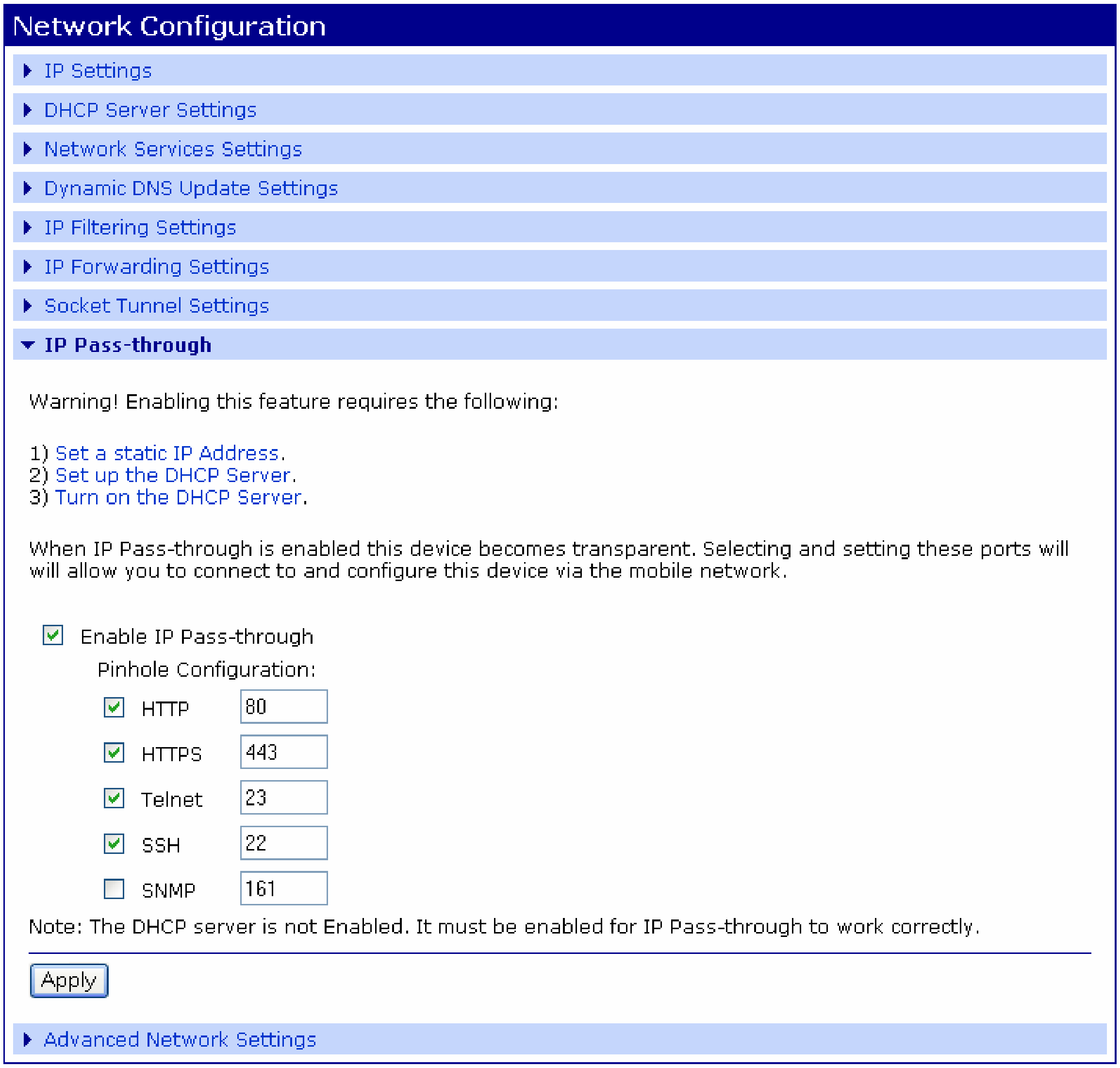
Sample diagram:


Cellular Network
Passes "ALL" IP traffic from mobile interface to a device attached to the Ethernet interface – In this case, a router.
IP address assigned to the mobile interface
166.213.2.215
The mobile IP address is also assigned to the secondary WAN port of the router.
IP addr: 166.213.2.215
Sudnet: 255.255.255.0
Gateway: 166.213.2.1
IP pass-through
Secondary WAN Port
Local LAN
Telecom Network
Hard line to Primary WAN Port
(DSL or Frame)

Configuration

When the IP pass-through mode is enabled, the Digi ConnectPort WAN will effectively disable all router and IP service functionality. The serial port will be enabled as a console port to the CLI for the Digi ConnectPort WAN. The ConnectPort WAN will accept TCP/IP connections for purposes of configuration by means of a "pinhole" on the mobile interface. In addition, the ConnectPort WAN will be accessible to a device on the local Ethernet segment via the default IP address of 192.168.1.1. With the exception of this special configuration access and the serial console port access, the ConnectPort WAN will effectively be transparent to all IP activity.

The following is a screen shot of the IP pass-through configuration screen, illustrating how easy it is to enable this feature:



Warning! Enabling this feature requires the following:

1) Set a static IP Address.
2) Set up the DHCP Server.
3) Turn on the DHCP Server.

When IP Pass-through is enabled this device becomes transparent. Selecting and setting these ports will will allow you to connect to and configure this device via the mobile network.

☑ Enable IP Pass-through

Pinhole Configuration:

☑	HTTP	80
☑	HTTPS	443
☑	Telnet	23
☑	SSH	22
□	SNMP	161

Note: The DHCP server is not Enabled. It must be enabled for IP Pass-through to work correctly.

For example: If a Cisco router's WAN interface is attached to the ConnectPort WAN's Ethernet port and the ConnectPort WAN's mobile interface receives the IP address 166.213.2.215, the Cisco's WAN port will be assigned the same IP address 166.213.2.215. If the Cisco router is receiving the IP address dynamically; the DNS server addresses, subnet mask and default gateway information will be filled in automatically. If the Cisco router will be configured manually; you will need to find out the DNS information from the mobile service provider and enter that automatically. The subnet mask will be 255.255.255.0 and the default gateway will be the same as the mobile IP address with ".1" for the last octet. In other words: if the mobile IP address is 166.213.2.215, the default gateway will be 166.213.2.1.

Remote device management

As illustrated above, the ConnectPort WAN allows the user to enable "pinholes" for specific ports in order to provide remote users the capability to manage the ConnectPort WAN from the mobile network or open internet. The ConnectPort WAN will retain its remote management capabilities using Connectware Manager – necessary pinholes are automatically defined when the ConnectPort WAN is configured for IP Pass-through. This will provide administrators with the same remote management capabilities that exist today in Digi remote devices.