

Document No. FO1005	Issue Date:	Draft:
Work Group: FibreOP Technical Team	July 23, 2013	Final: ✓
Title: Single Static IP – Troubleshooting Guide		Version 1.0

Summary:

This document provides a guide to troubleshooting your Bell Aliant Single Static IP Configuration in the FibreOP Actiontec RG.

Illustration:

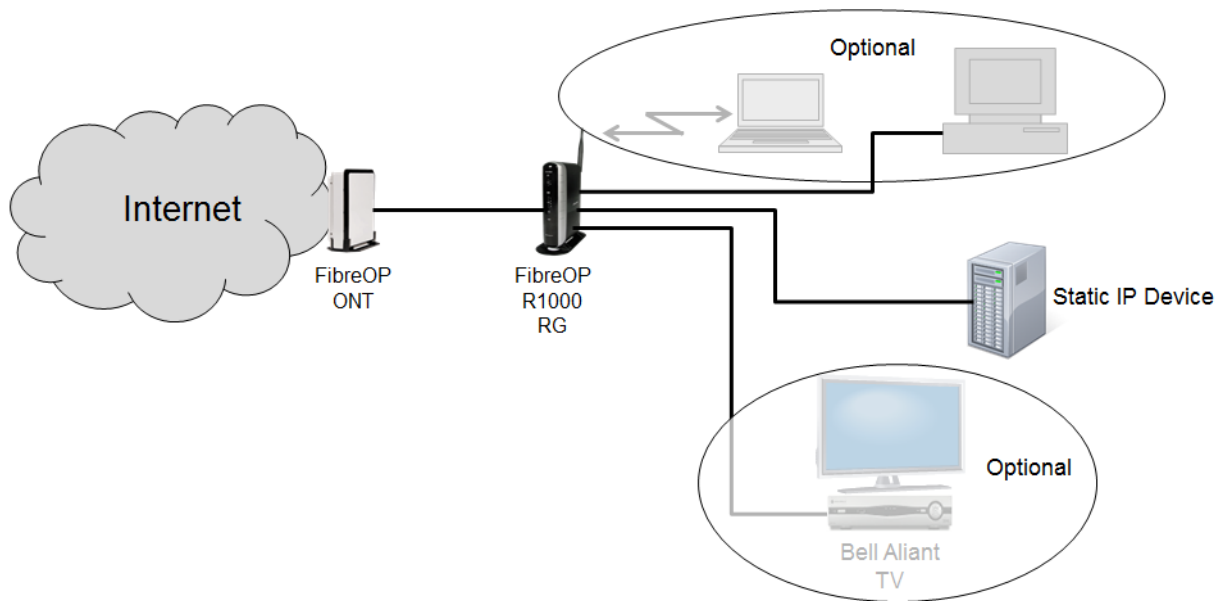


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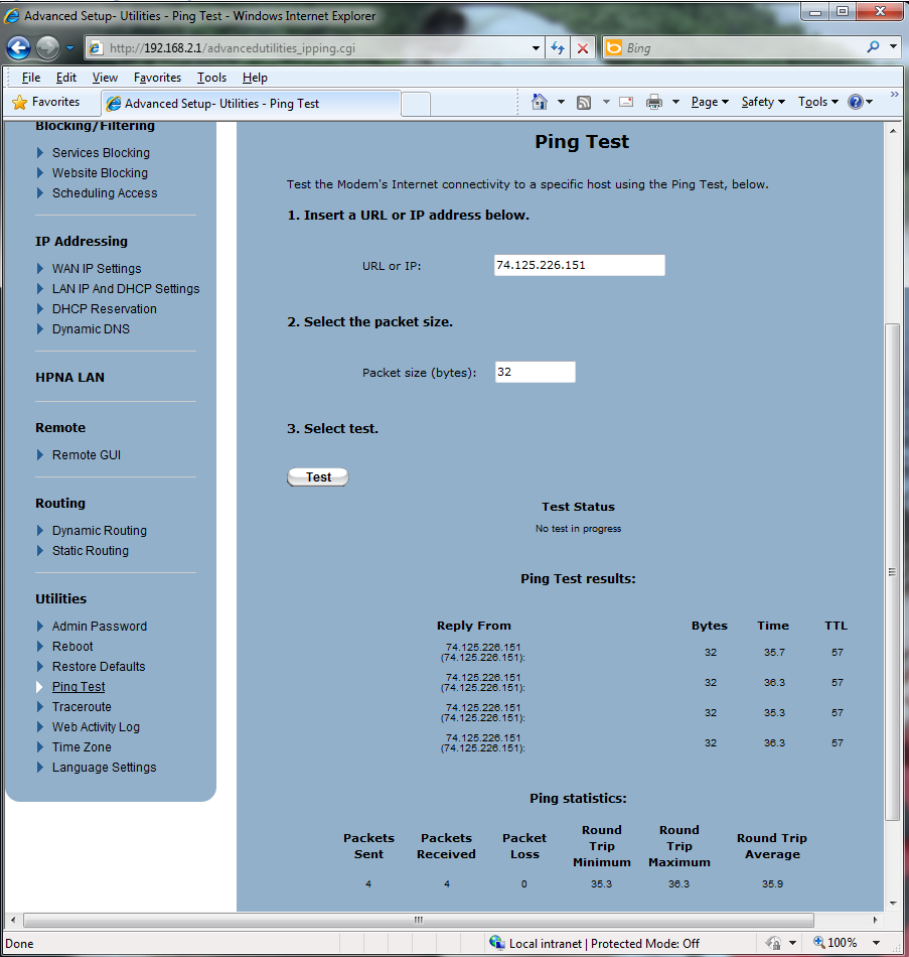
Prerequisites and Assumptions

Prerequisites

- Bell Aliant owned Actiontec Routing Gateway configuration according to Configuration Notes FO1001.
- Other related features are configured based on Configuration Notes FO1002 through FO1004 as required.

Troubleshooting a FibreOP Actiontec RG

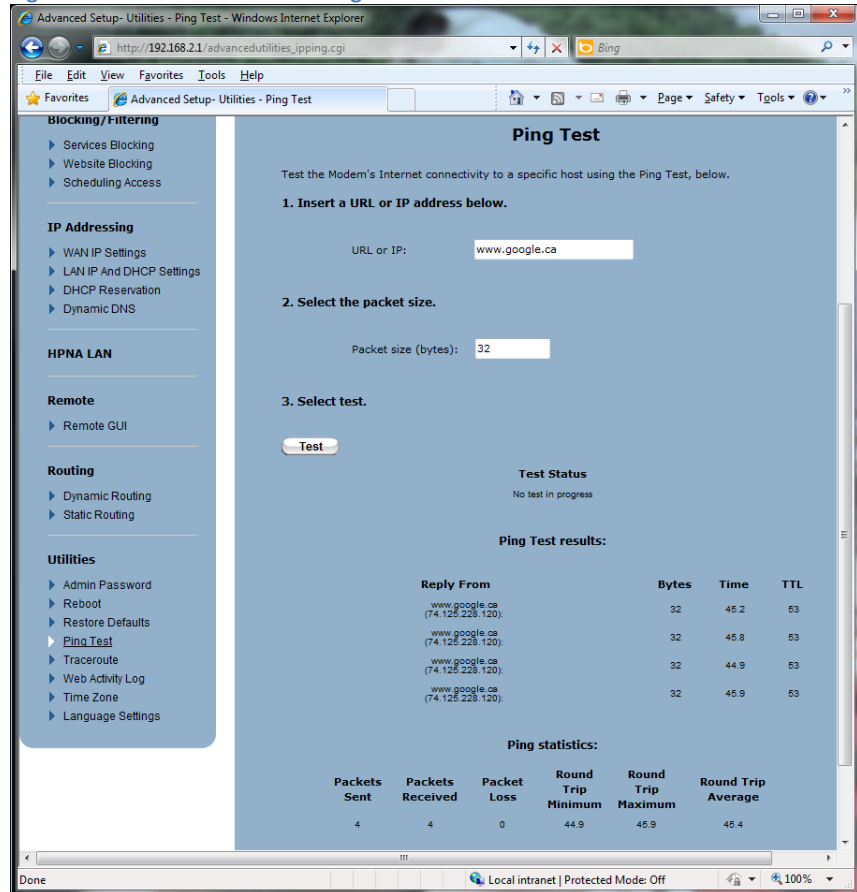
Use the following tests to assist in troubleshooting connectivity issues on a network containing a FibreOP Actiontec RG.

Function being Tested	How to Test
FibreOP Actiontec RG has power	Confirm Power LED is solid green
FibreOP Actiontec RG has WAN connectivity	Confirm WAN Ethernet LED is lit or flashing
FibreOP Actiontec RG has Internet connectivity	Confirm the Internet LED is lit
FibreOP Actiontec RG has LAN connectivity	Confirm LAN Ethernet LEDs for the LAN connections are lit or flashing
FibreOP Actiontec RG has Internet connectivity	<ol style="list-style-type: none"> 1. Connect to the FibreOP Actiontec RG management interface. 2. Select Advanced Setup > Ping Test 3. Add 74.125.226.151 to the URL or IP field shown in figure 1 to confirm the FibreOP Actiontec RG can ping the IP. <p>Figure 1 Ping test by IP</p> 
DNS is working to the	<ol style="list-style-type: none"> 1. Connect to the FibreOP Actiontec RG management interface.

FibreOP Actiontec RG

2. Select **Advanced Setup > Ping Test**.
3. Add www.google.ca to URL or IP field shown in figure 2 to confirm the FibreOP Actiontec RG can resolve to the address.

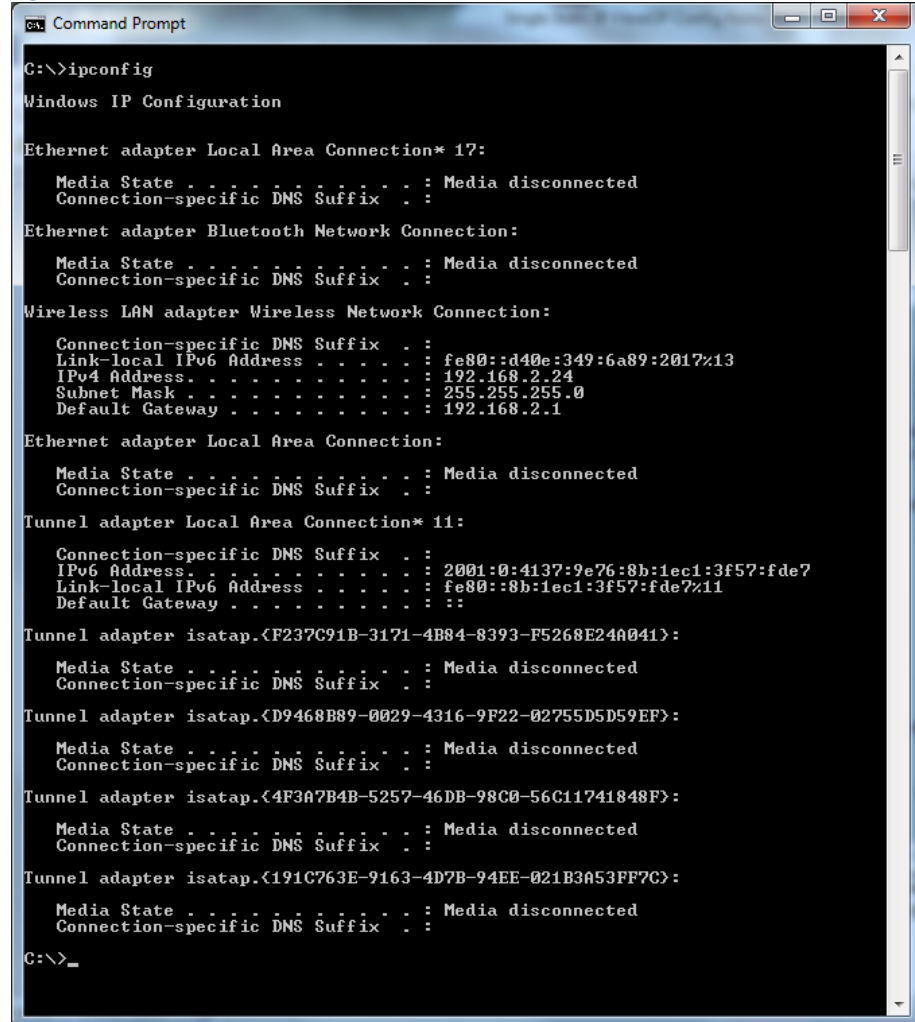
Figure 2 Confirm DNS is functioning



Static IP devices can get an IP address via DHCP from the FibreOP Actiontec RG

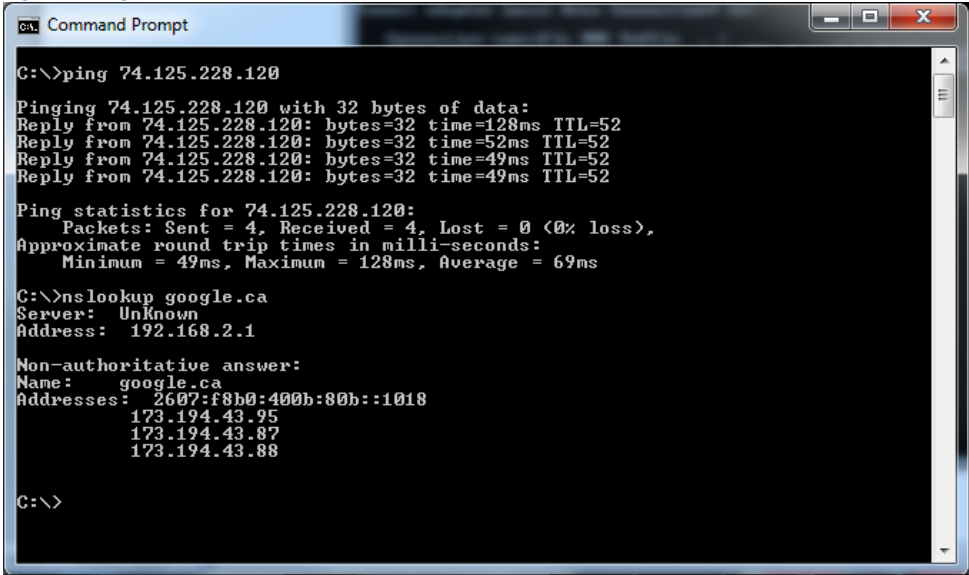
1. Connect a PC directly to the static IP LAN.
2. Perform an ipconfig command from a command window
3. Confirm that the PC receives an IP from the FibreOP Actiontec RG. Figure 3 shows the PC obtained 192.168.2.24.

Figure 3 DHCP confirmation



Prove the PC can ping the internet

1. Connect a PC directly to the static IP LAN.
2. Perform a ping command from a command window to an internet IP address.

<p>Prove DNS is working to the PC</p>	<ol style="list-style-type: none"> 1. Connect a PC directly to the static IP LAN. 2. Performing an nslookup, from the command line of a pc connected to the static IP LAN, as shown in figure 4. <p>Figure 4 Ping and NSLOOKUP</p>  <pre> C:\>ping 74.125.228.120 Pinging 74.125.228.120 with 32 bytes of data: Reply from 74.125.228.120: bytes=32 time=128ms TTL=52 Reply from 74.125.228.120: bytes=32 time=52ms TTL=52 Reply from 74.125.228.120: bytes=32 time=49ms TTL=52 Reply from 74.125.228.120: bytes=32 time=49ms TTL=52 Ping statistics for 74.125.228.120: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 49ms, Maximum = 128ms, Average = 69ms C:\>nslookup google.ca Server: Unknown Address: 192.168.2.1 Non-authoritative answer: Name: google.ca Addresses: 2607:f8b0:400b:80b::1018 173.194.43.95 173.194.43.87 173.194.43.88 C:\> </pre>
<p>Prove the speed to the customer network is as expected</p>	<ol style="list-style-type: none"> 1. Run a web browser based speed test to http://speedtest.bellaliant.net
<p>Prove your server application is working properly from the RG LAN</p>	<ol style="list-style-type: none"> 1. Establish a LAN device running server software (example: web server) 2. From a PC connected to the same LAN as the server (example: RG LAN or customer router LAN), try to access the application running on the server locally.
<p>Prove your Port Forwarding Rules are configured and working in the FibreOP Actiontec RG.</p>	<ol style="list-style-type: none"> 1. From the Internet, attempt to access the LAN server application. Example: type the following in your web browser on a PC out in the Internet to verify a web server application on the LAN: <code>http://<insert IP of the customer RG></code>.

Additional Information

Even when an application works for other devices on the local LAN, sometimes firewall rules on the server will prevent access from the Internet even when port forwarding rules are configured correctly. The customer will have to monitor firewall logs on their server to verify if this issue is a problem.