PORTrockIT
Logical-In-Path
Setup Guide
Eli-v6.5.391

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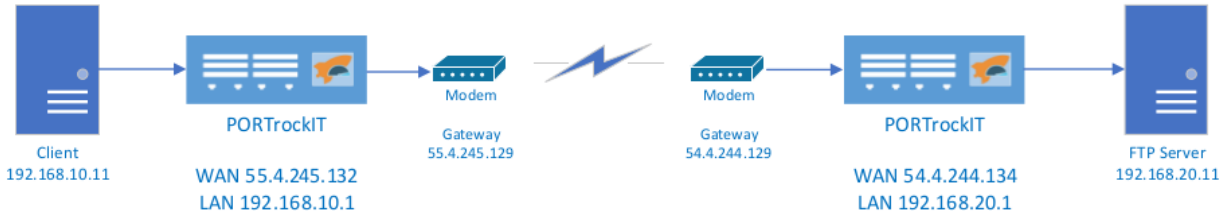
1 Introduction

This guide is to assist with configuring a Logical in Path installation of the PORTrockIT nodes. Please remember to substitute the IP Addresses shown with ones appropriate to your own networks and configuration.

As mentioned in the Topology Overview Guide this type of configuration should be used if the Nodes are being deployed on networks that are on different subnets or they are going to be used to configure an IPsec tunnel between nodes.

At the end of this guide there are several examples of different types of routed logical in path configurations which should cover most installation types. If your specific use case is not included, or you require further assistance please contact support@4bridgeworks.com.

For the purposes of the following configuration and setup instructions the topology below is going to be used.

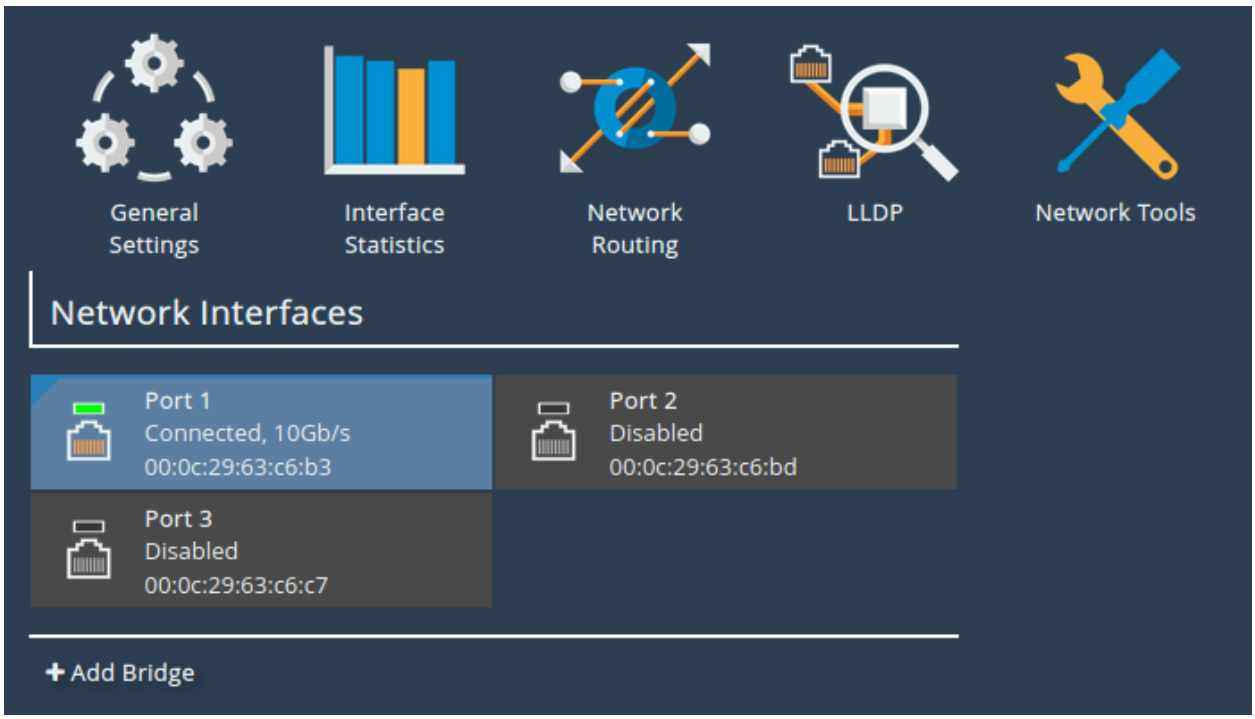


2 Setup

2.1 Configuring Networks

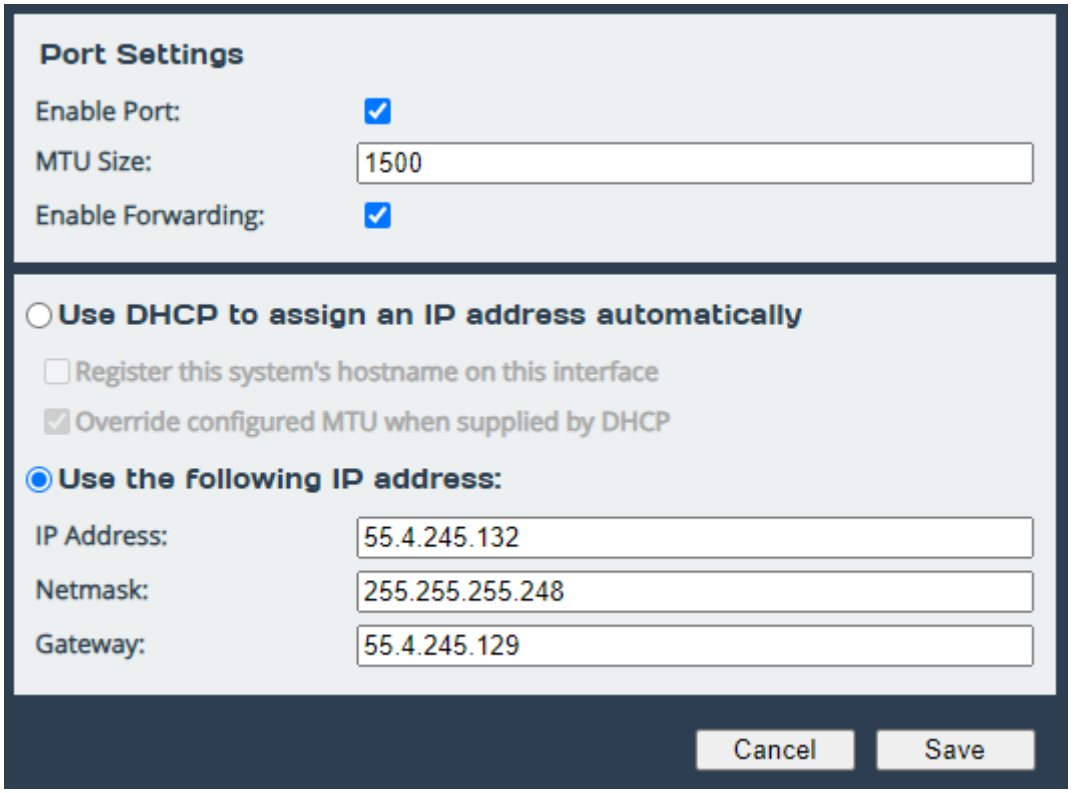
After logging in to the Node, from the Home page, select *Network Connections*.

This will show the available Ports on the PORTrockIT with Ports 2 and 3 showing as disabled.



To enable and configure the Ports select the port you wish to configure from the menu shown above.

Select *Enable Port* which will allow you to enter the configuration details for the port. This is for Port 2 which in this installation is the WAN address for the Node on the Client Side.

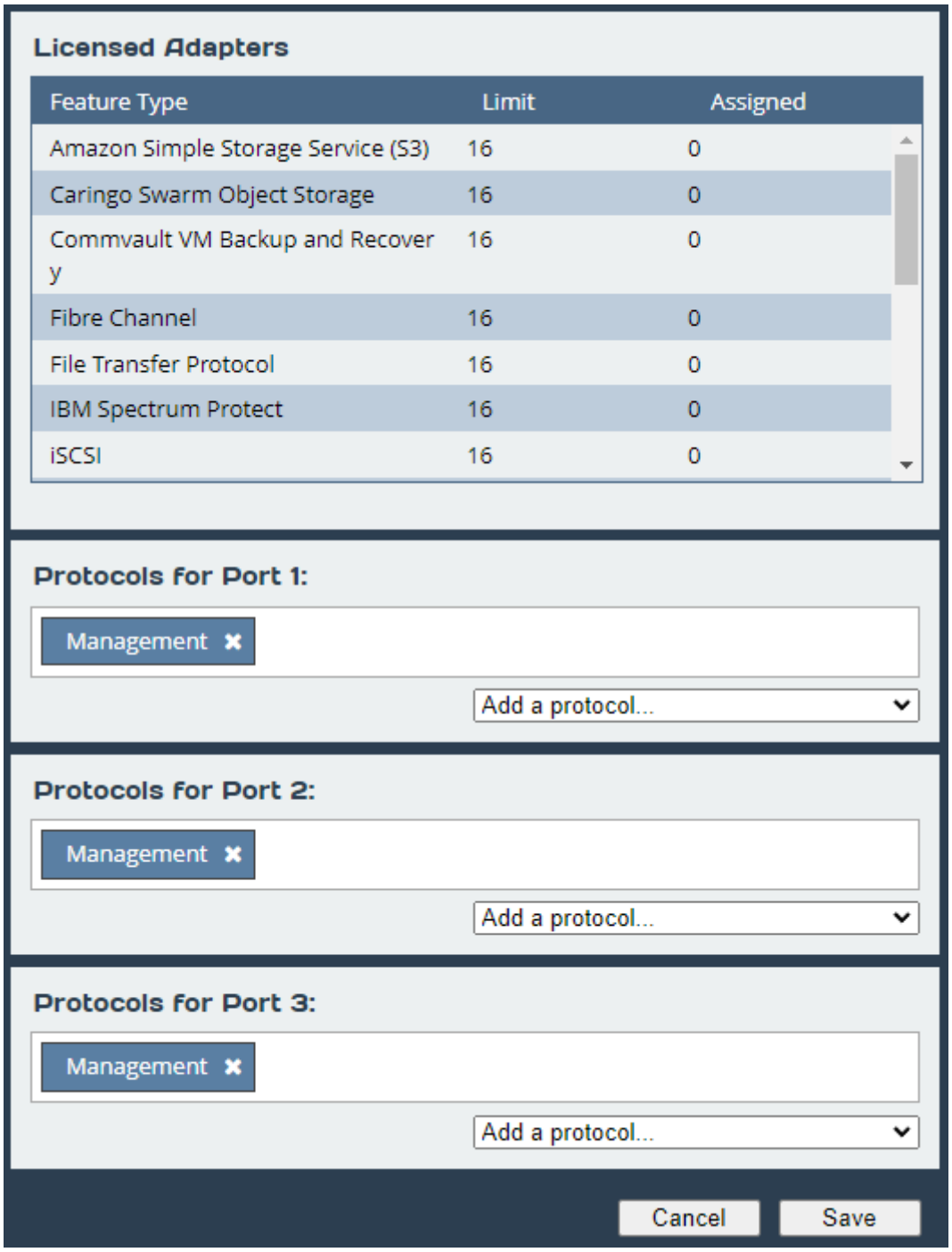


If you intend for all traffic, regardless as to whether it will be accelerated or not, to pass through the Node you should also tick *Enable Forwarding*.

Click *Save* and then configure the port settings for Port 3 (LAN port) before rebooting the Node which will commit the settings to memory. After the system has rebooted and you have logged on the ports will now be live.

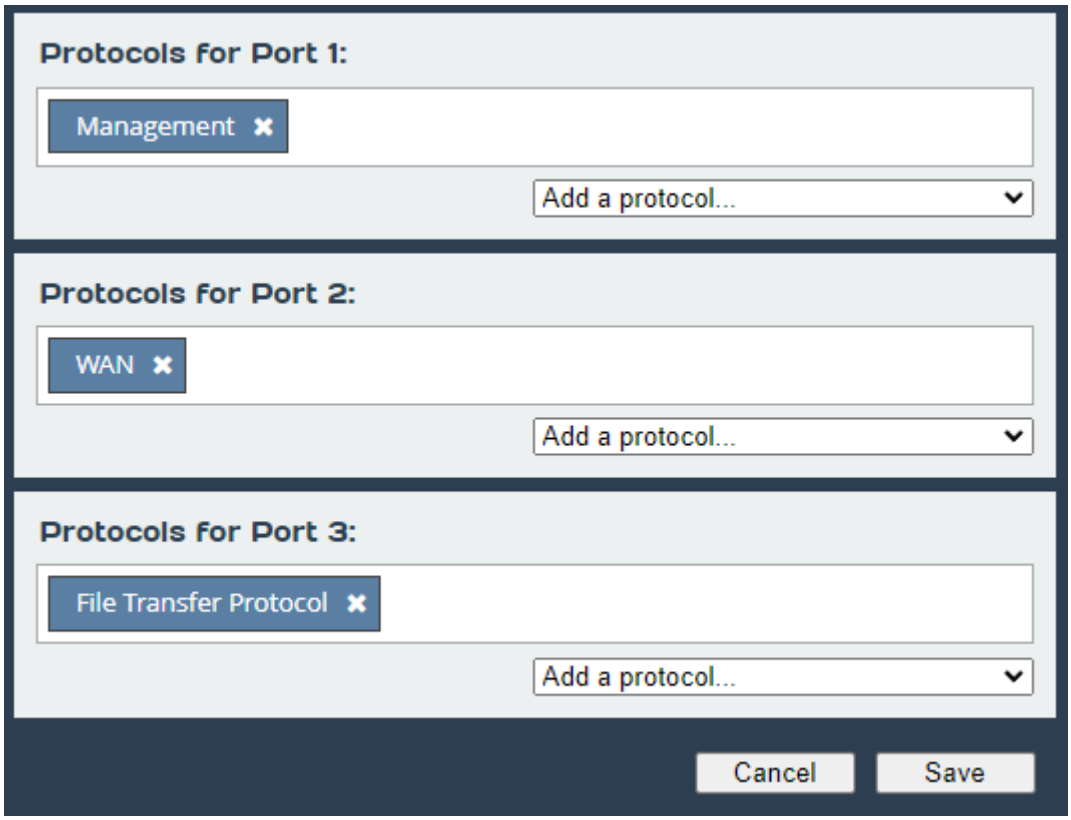
2.2 Port Mappings

With the Ports now live you can assign the relevant protocols to the corresponding Ports. Select *Port mappings* from the Home page and you will see the configuration screen for the Port Mappings. A list of Licensed Adaptors will be at the top of the page with the Ports listed below.



It is strongly advised that you remove the Management protocol from all ports other than Port 1 which, in this instance, is the management network and is separate to the local LAN (Port 3). Port 2 is the WAN and having management access direct from the WAN would be a security risk.

The configuration has been set as seen in the image below with the File Transfer Protocol assigned to Port 3 for acceleration.



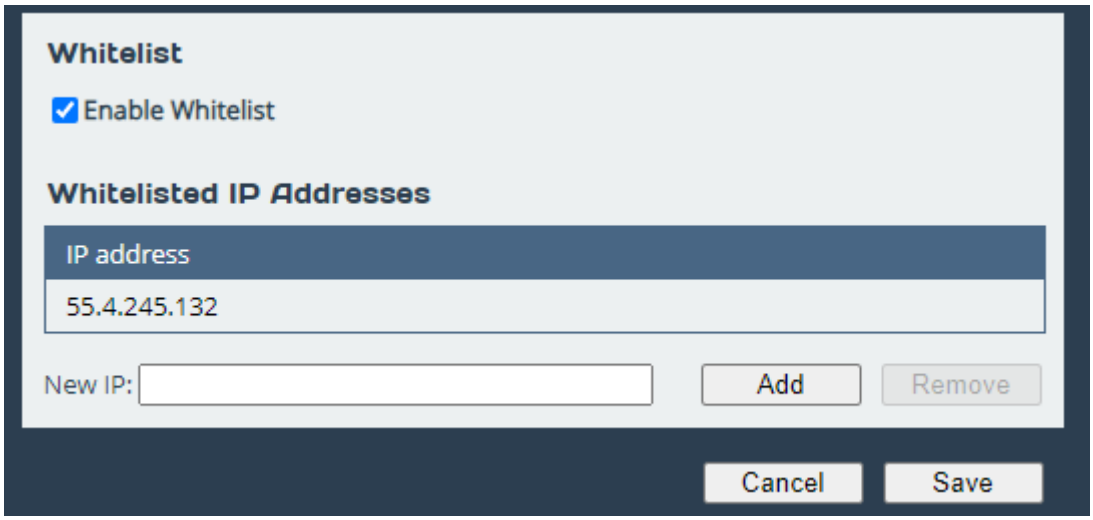
Select *Save* and reboot the system as advised

Repeat the network configuration steps for the remote (Server Side) Node before continuing.

2.3 Establishing a Link Between Nodes

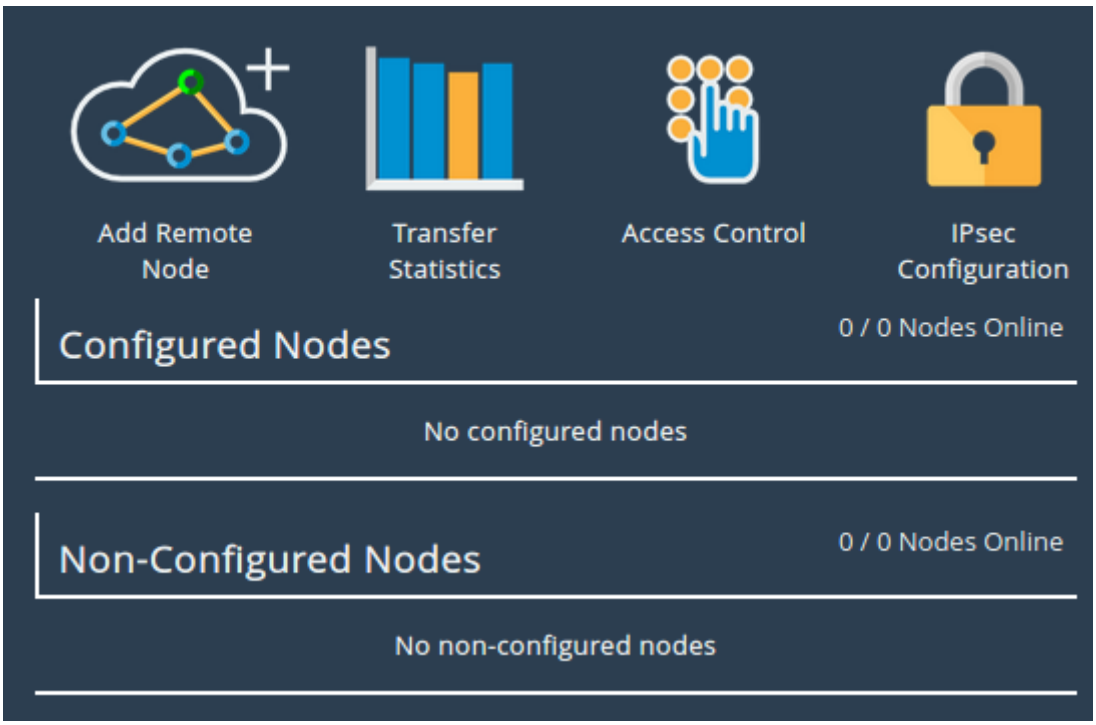
For the displayed configuration the Nodes are not behind a Firewall and NAT is not being used. In this configuration you will need to add the WAN IP of the opposite Node to the Access Control Whitelist.

From the Home page select *Node Management* and then click on the *Access Control* link. On the next screen you will see that the *Enable Whitelist* check box is already ticked with a text box where you can enter the WAN IP Address of the opposite Node you are going to link to. Enter the IP Address in the box and click Add then click *Save*.

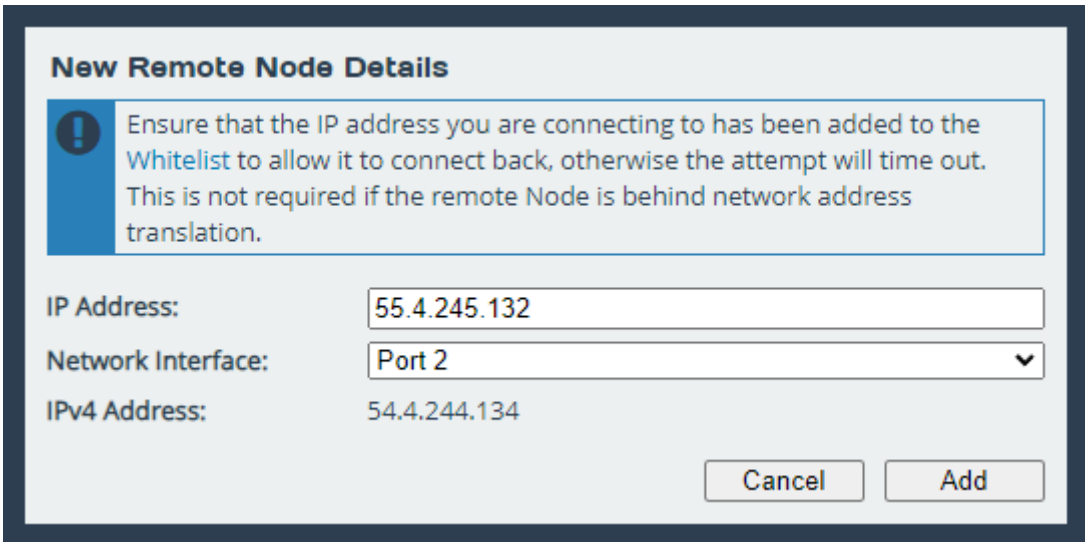


Complete the same step on the remote Node.

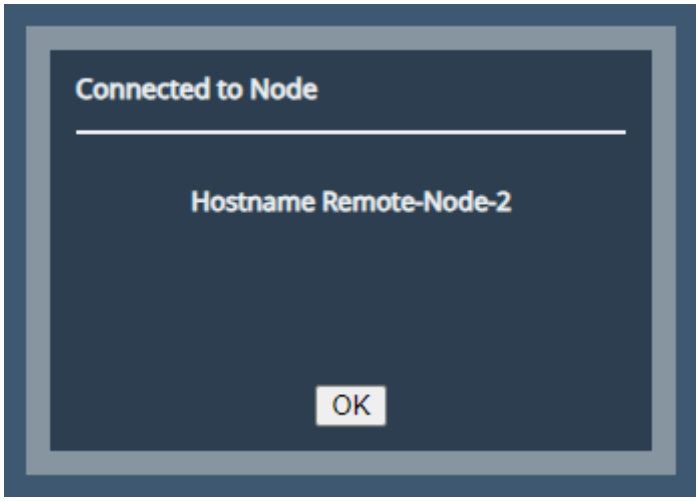
To link the Nodes select *Add Remote Node*.



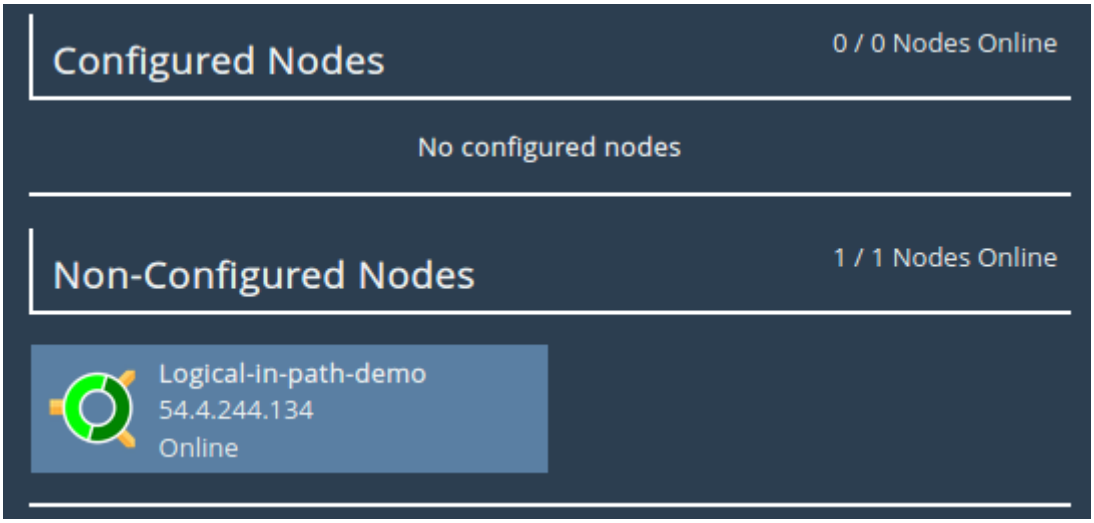
On the next screen enter the WAN IP Address of the opposite Node and click *Add*.



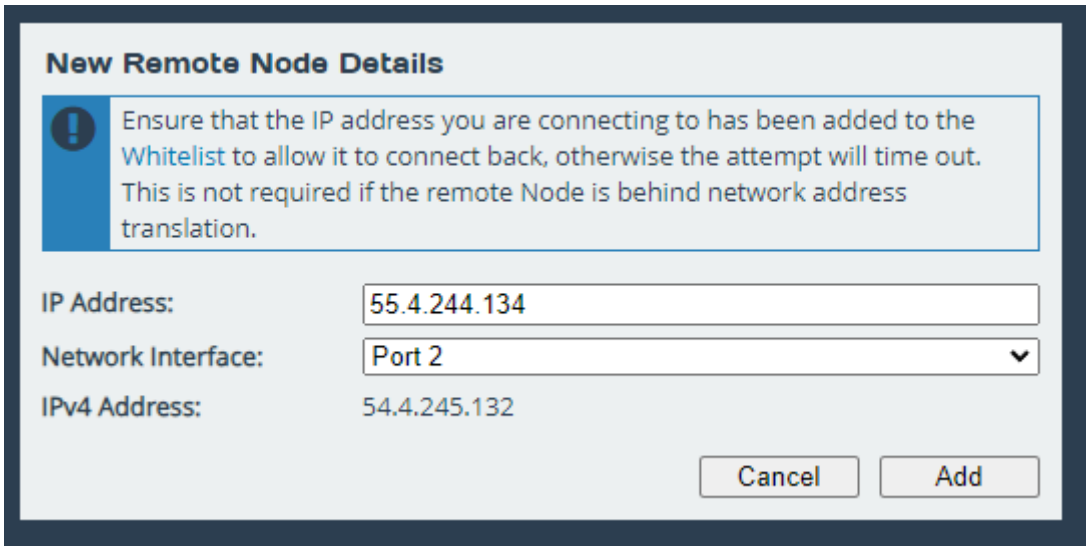
You should now see a pop up box that says *Connected to Node* and the Hostname of the Remote Node you've just connected to.



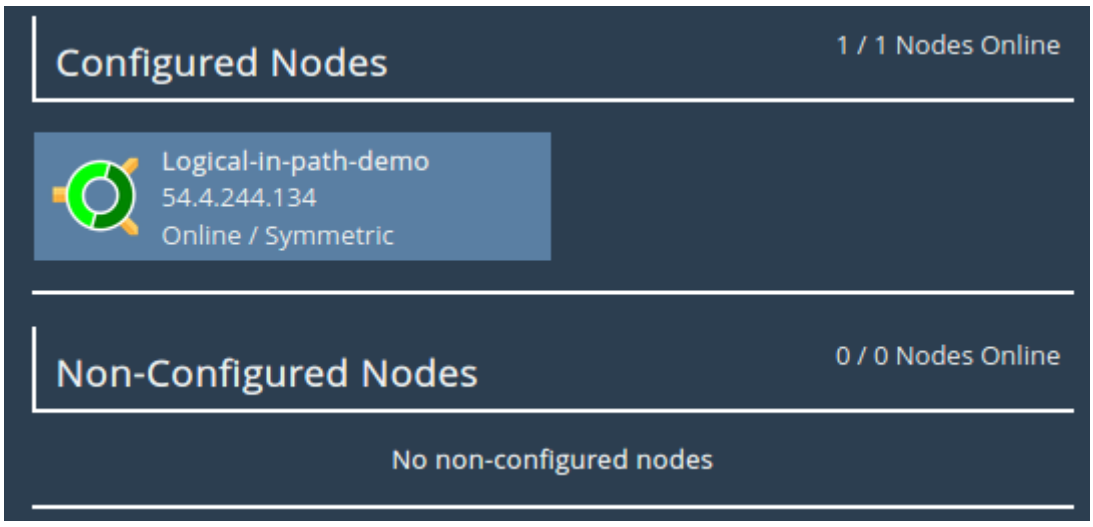
To complete the link login to the opposite Node and select *Node Management*. You should see there is a Node listed in the *Non-Configured Nodes* section.



Select the Node and then select *Add Node*. The *New Remote Node Details* screen will now appear, pre-populated with the IP Address of the Node you're connecting to.



Click *Add* and the *Connected to Node* dialogue will appear as before. Click *OK* and then *Cancel* to take you back to the *Node Management* screen where the Node will have moved up into the *Configured Nodes* section.



2.4 Routing to Remote Endpoints

In this configuration the following policies should be added to ensure traffic flows between the Client and Server. For the purposes of this setup Windows Server systems have been configured as the Client and Server.

On the Client a policy is needed to direct any traffic destined for the Server to the LAN gateway of the PORTrockIT Node. This should be added as a persistent route as follows:

```
Route Add -p 192.168.20.11 mask 255.255.255.255 192.168.10.1
```

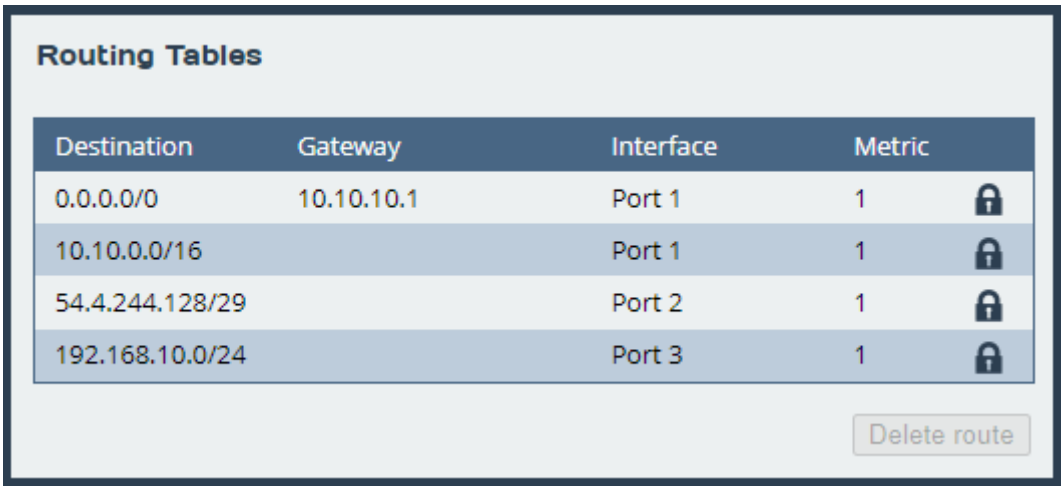
If the transfer is to be bi-directional then the recursive route will need adding. In this instance the

following route should be added to the server:

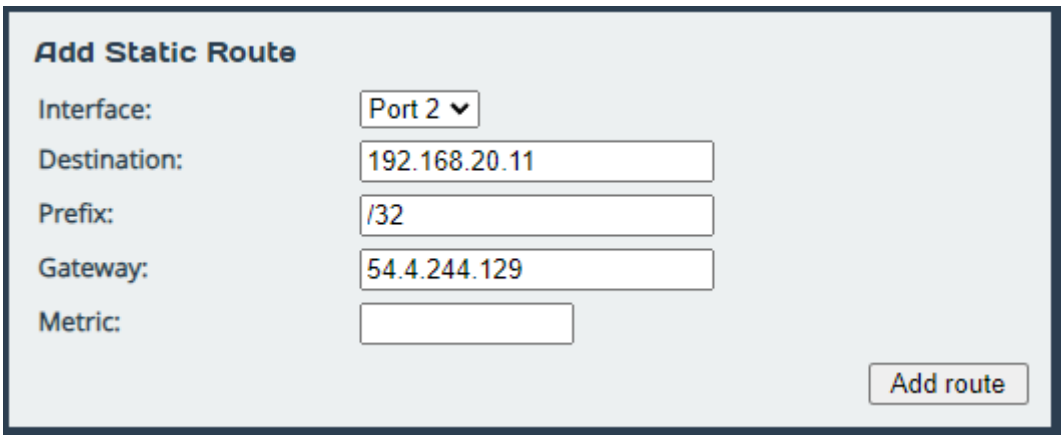
```
Route Add -p 192.168.10.11 mask 255.255.255.255 192.168.20.1
```

Static routes will also need adding to the Nodes to ensure the flow of traffic between them. On the client side Node select *Network Connections* and then click on *Network Routing*.

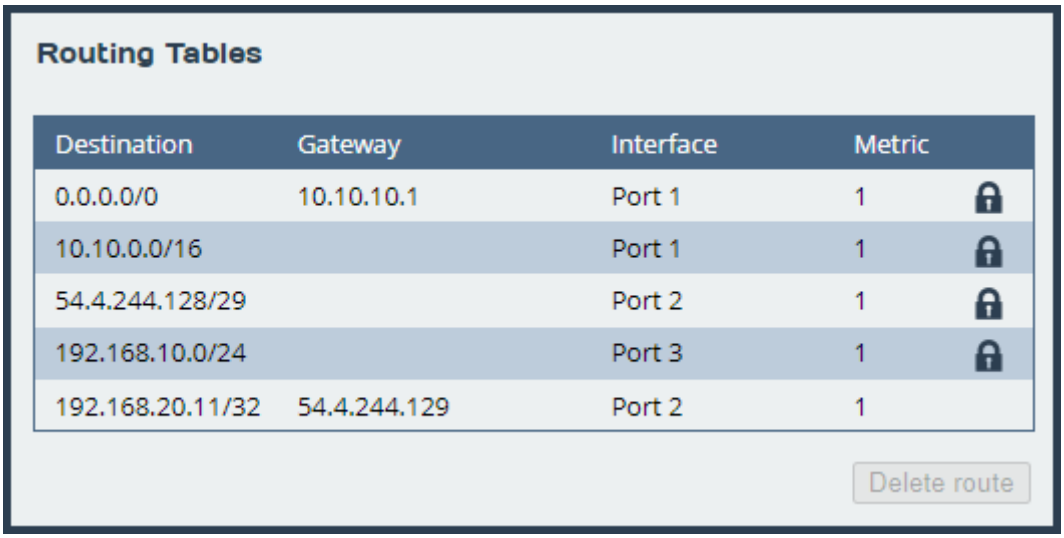
The default routing rules will be shown in the Routing Tables and you will notice they are all locked and cannot be altered or changed.



Below this section is where you can enter any static routes required to route traffic as needed. Here we are adding the WAN IP as the next hop for traffic being sent to the server on 192.168.20.11



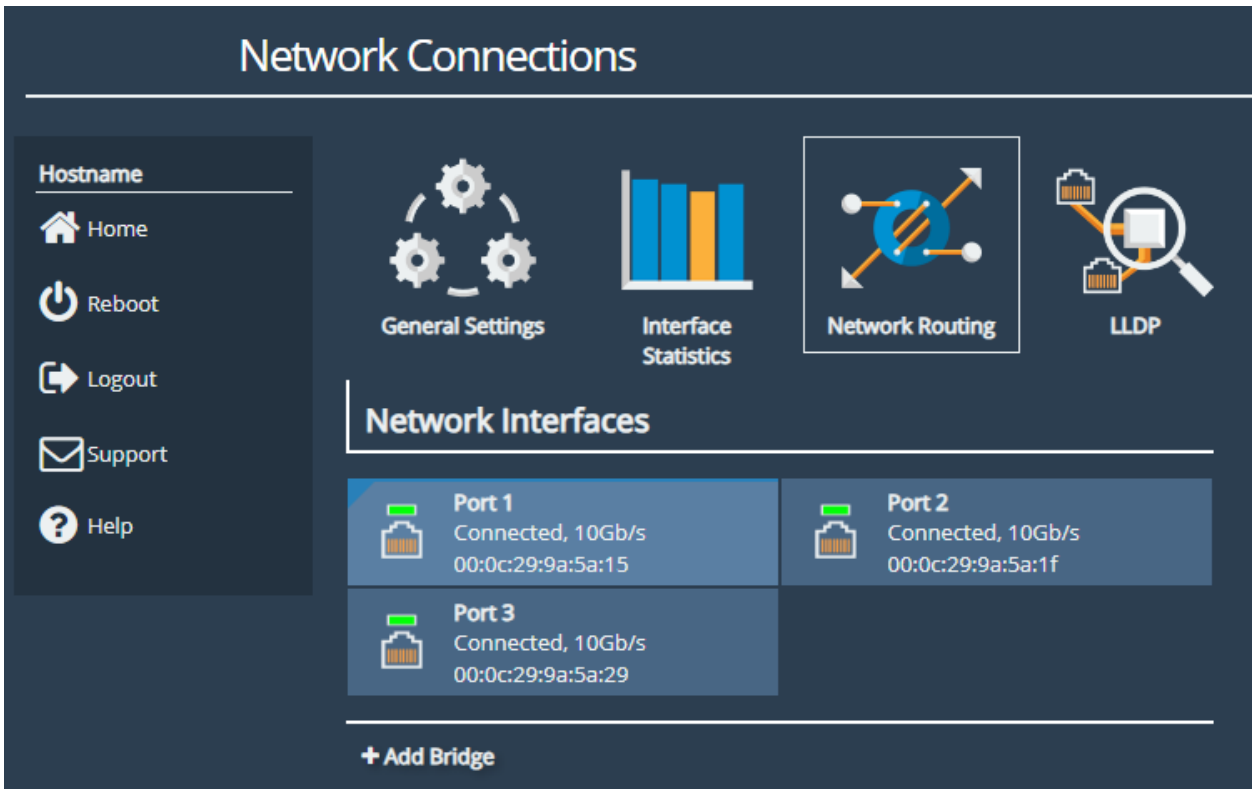
After adding the route it will appear in the routing table without a padlock icon which identifies it as a manually added route which can either be altered or removed.



The same steps should be repeated on the opposite Node if the connection is to be bi-directional. With the routing in place you will now be able to send both accelerated and non-accelerated traffic between the client and the server.

2.5 Routing for Relationships

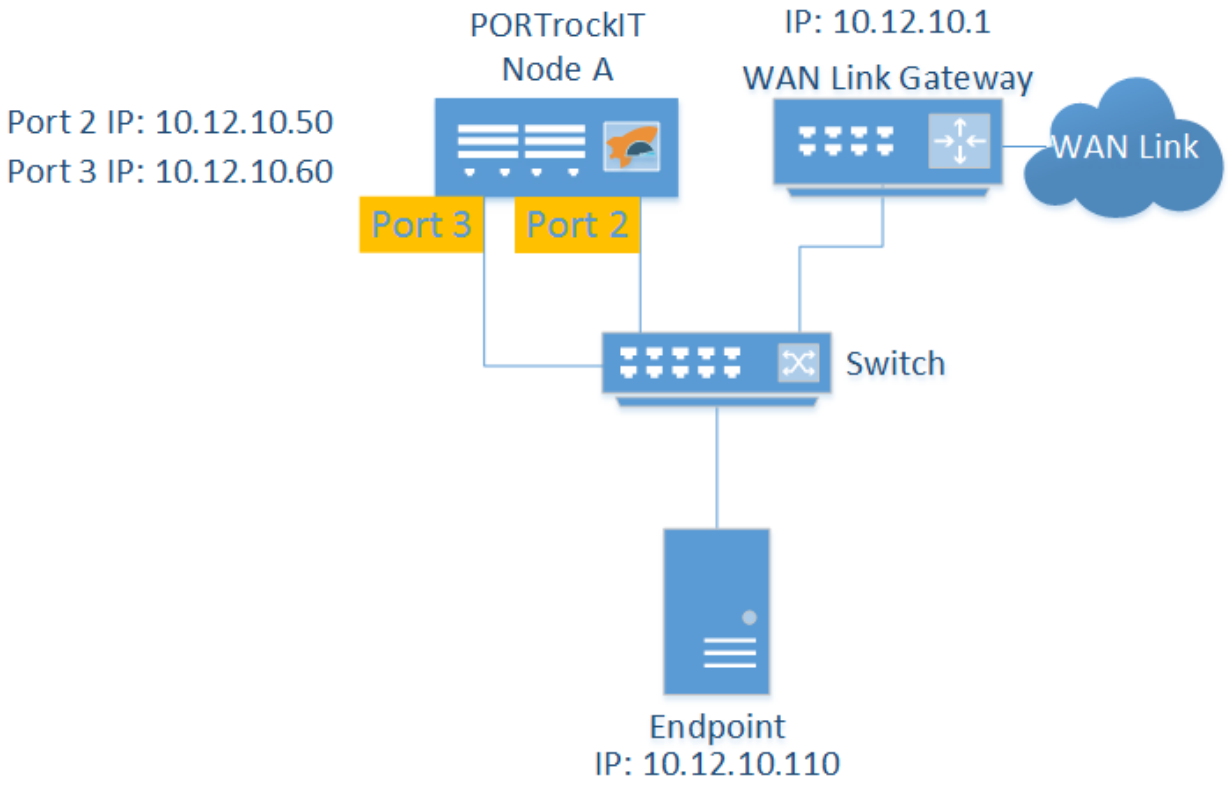
In certain configurations, additional routing will have to be set on the PORTrockIT Node for network traffic to know how to reach its destination. In order to add routing rules, navigate to the *Network Routing* page, which can be found on the *Network Connections* page as shown below:



The following section contains example topologies with routing rules. Please substitute the IP addresses in the examples with your own. If your use case is not explained, or you need further assistance please contact support@4bridgeworks.com.

2.5.1 Example 1 - WAN and LAN on the same subnet

In this example the PORTrockIT Node has two interfaces on the same subnet where one is the WAN interface (Port 2) and the other as the LAN interface (Port 3). By default, traffic destined for anything on the subnet will be sent out of Port 2, so a routing rule is necessary to use Port 3 for sending network traffic to the endpoint.



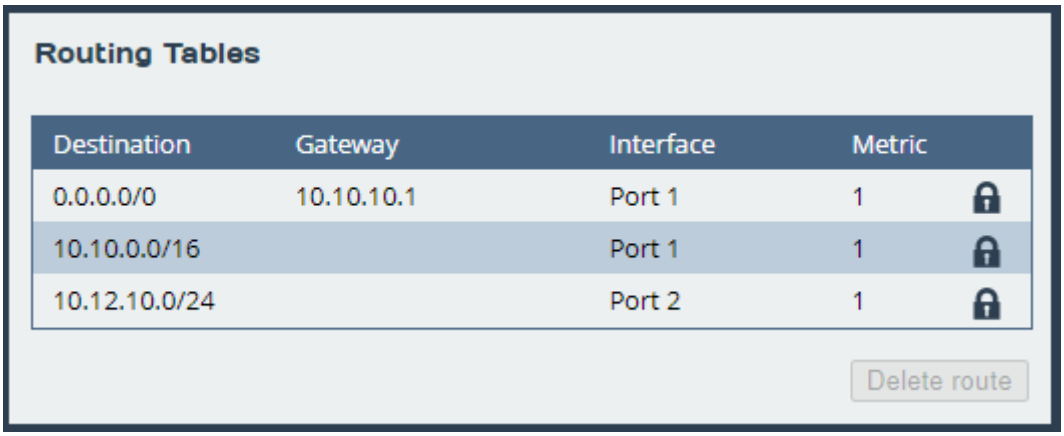
This example explains the routing needed on Node A, which has the following 3 ports:

Port 1 Management interface and default route

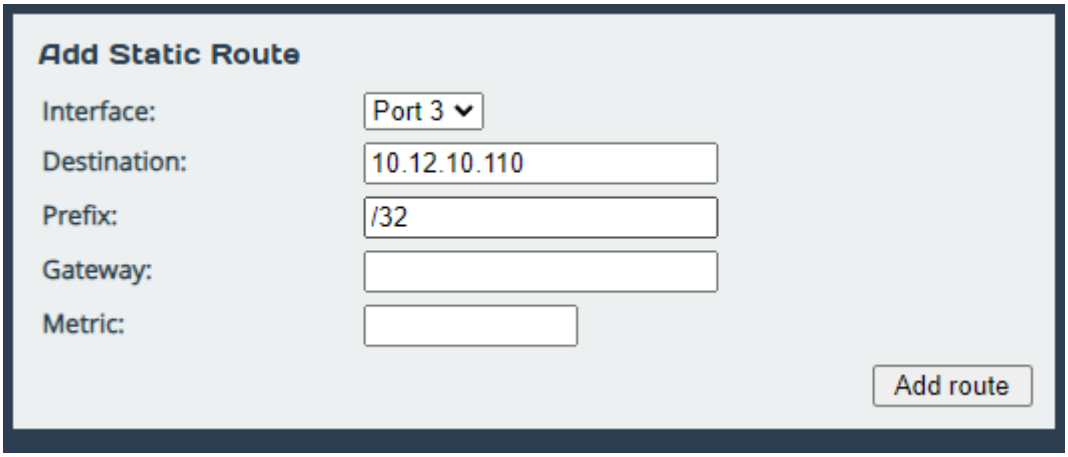
Port 2 WAN interface (10.12.10.50)

Port 3 LAN interface (10.12.10.60)

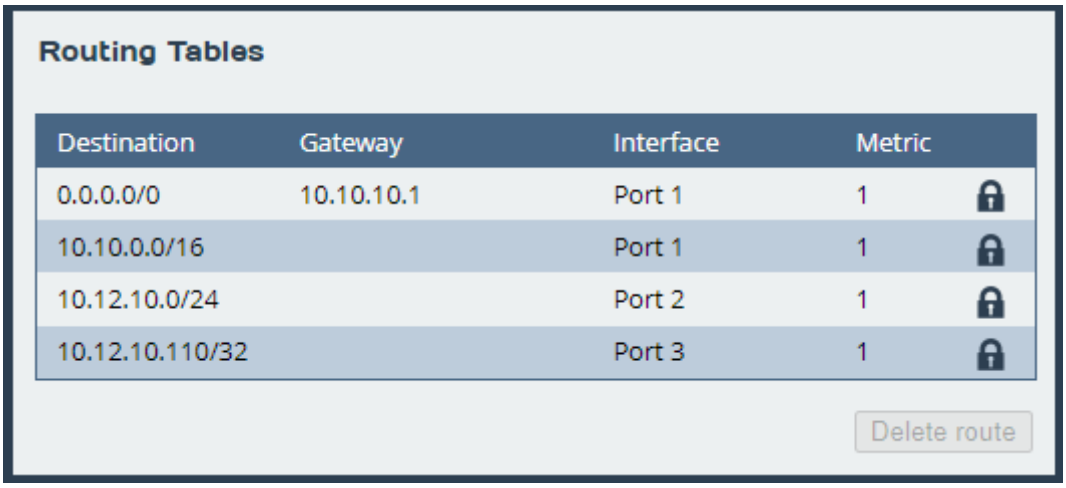
The default routing for Node A is shown below.



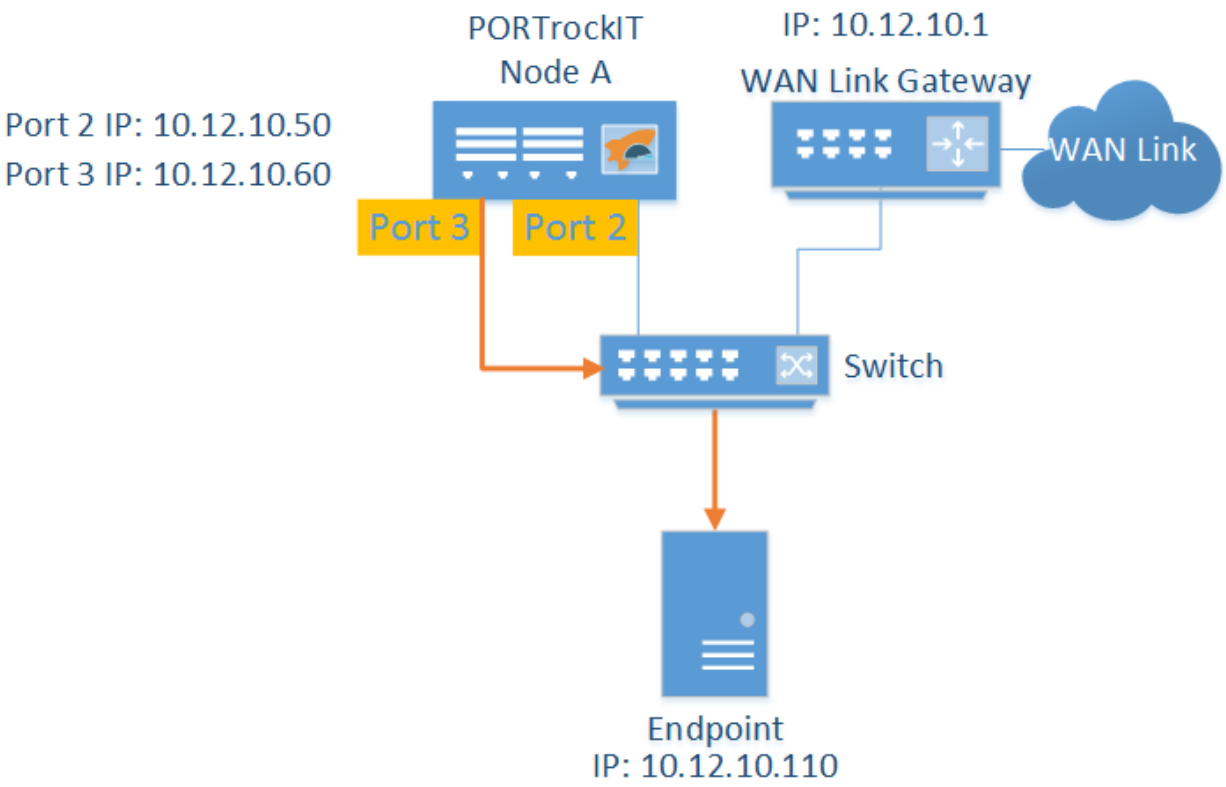
Currently Node A will be sending traffic destined for the Endpoint from Port 2 instead of Port 3. To resolve this, a static route needs to be added.



Clicking *Add route* will add the route and it will now be displayed in the *Global Routing Table* as shown below.

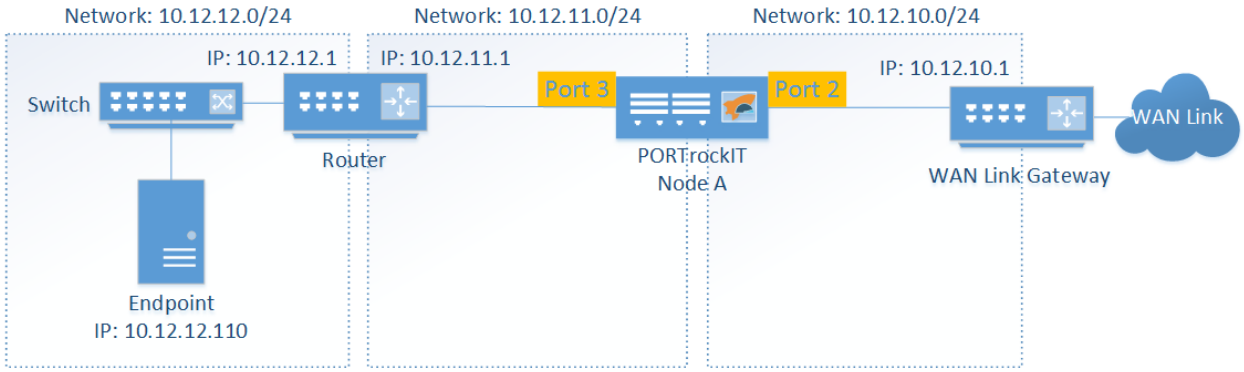


Network traffic for the Endpoint will now go through Port 3.



2.5.2 Example 2 - Endpoint on different subnet to LAN interface

In this example the PORTrockIT Node does not know how to send traffic to the 10.12.12.0/24 subnet. Routing rules need to be configured so the Node knows to send traffic to the router and not the WAN link gateway.



This example explains the routing needed on Node A, which has the following 3 ports:

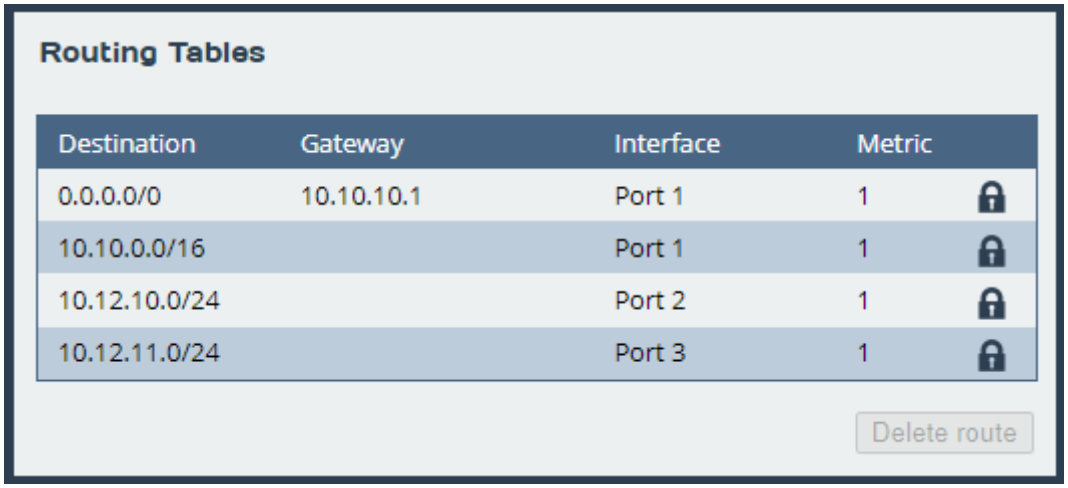
Port 1 Management interface and default route

Port 2 WAN interface on the 10.12.10.0/24 network

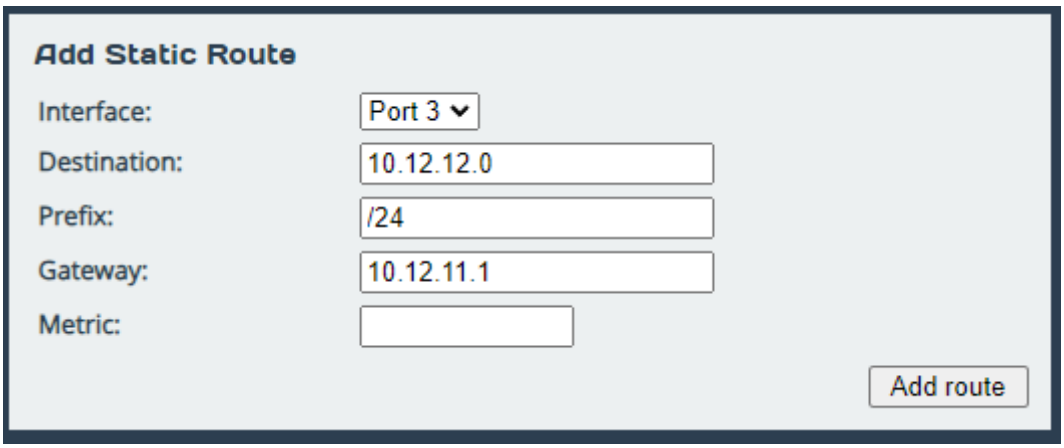
Port 3 LAN interface on the 10.12.11.0/24 network

The router, between Node A and the switch attached to the Endpoint, has two ports with IPs 10.12.11.1 and 10.12.12.1, and knows how to route traffic between the 2 subnets on either side.

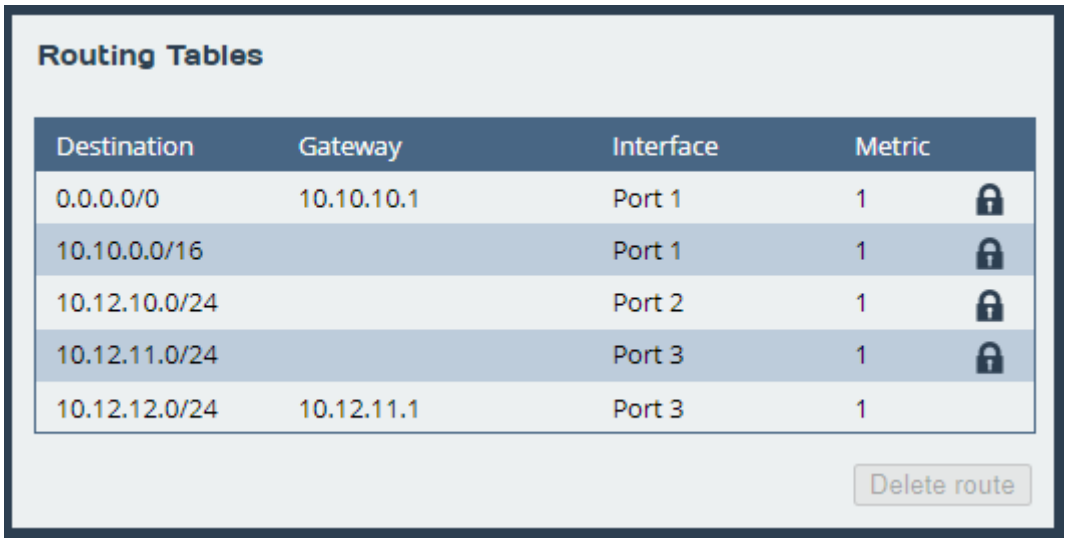
The default routing for Node A is shown below.



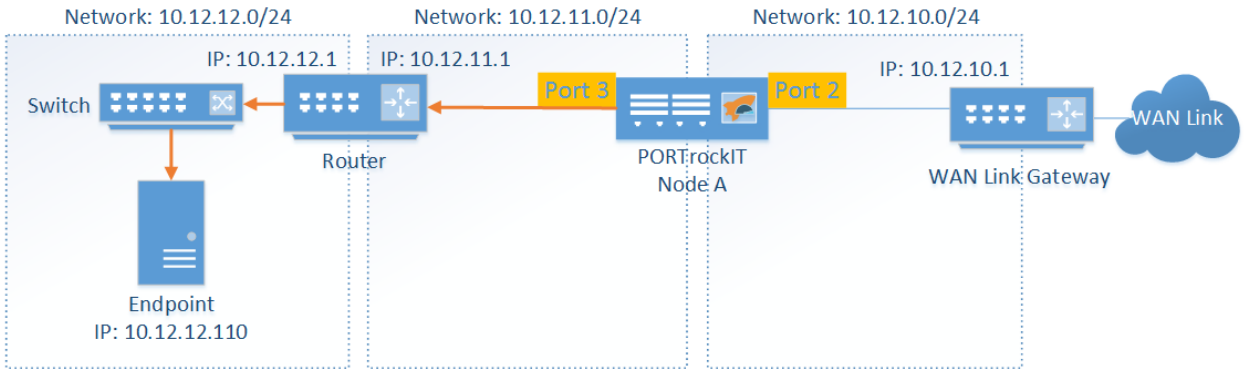
Currently Node A doesn't know how to reach the 10.12.12.0/24 network so traffic for the Endpoint will be lost. To resolve this, a static route needs to be added.



Clicking *Add route* will add the route and it will now be displayed in the *Global Routing Table* as shown below.



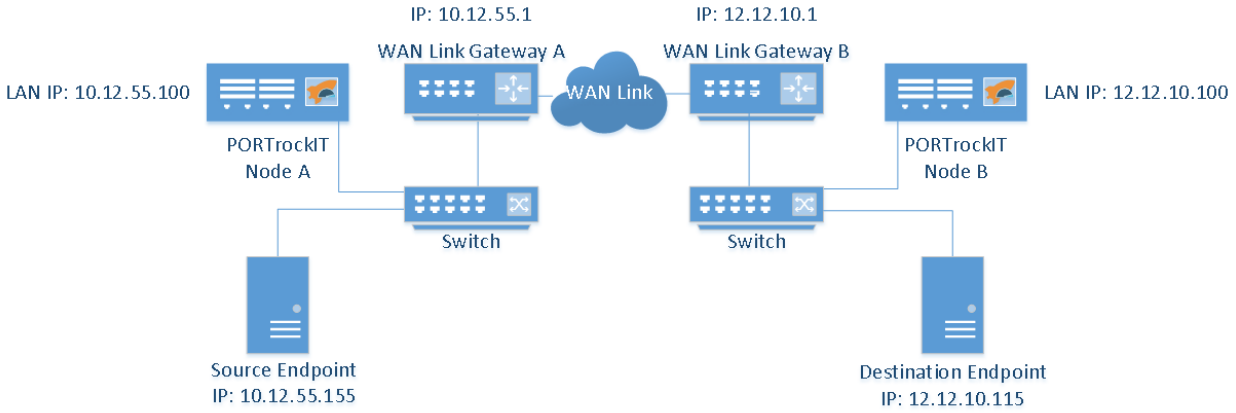
Network traffic for the Endpoint will be sent from Port 3 and be directed through the router.



2.6 Routing to the PORTrockITs

Now that the PORTrockIT software configuration is complete, you must configure your network's routing policy to route the traffic to be accelerated to the LAN IP address of the PORTrockIT unit to complete the set up.

This section provides some examples of how to route traffic, which is to be accelerated, into a PORTrockIT unit for the following topology.



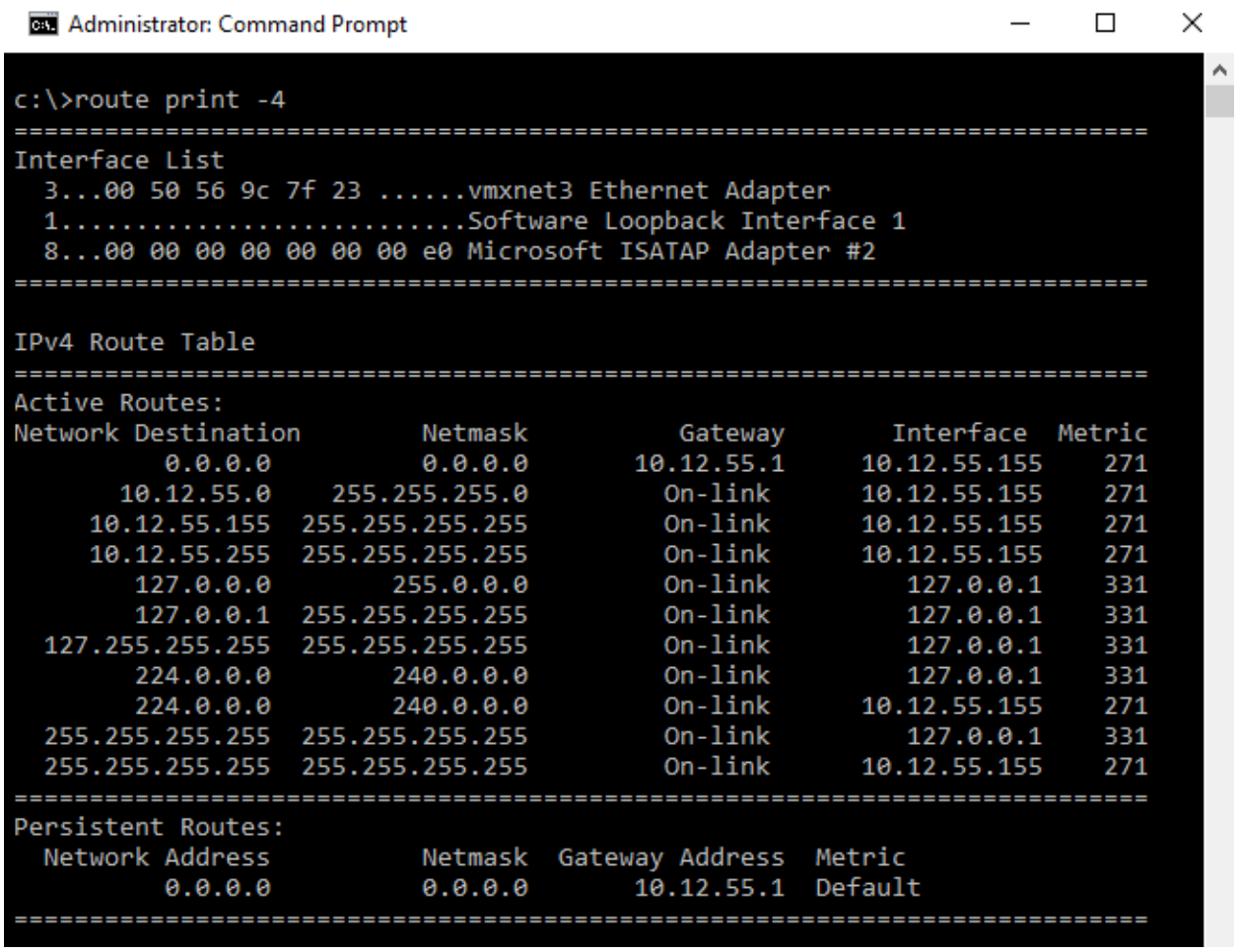
In this configuration, routing rules are added to the host to make the IP address of the PORTrockIT's LAN port the gateway for either a specific Endpoint or the default gateway.

The routing covered here will be from the point of view of the Source Endpoint wanting to accelerate data transfer to the Destination Endpoint.

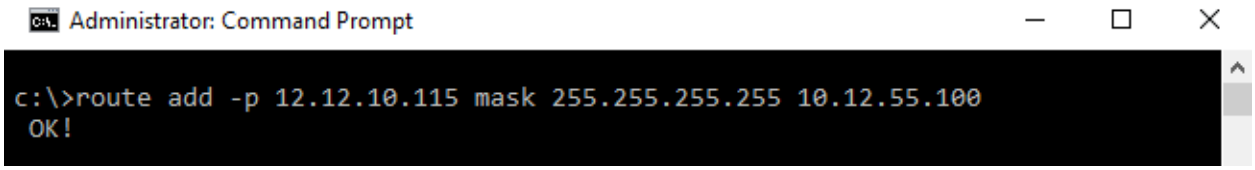
2.6.1 Adding Routes on Windows

This example uses a Windows host for the Source Endpoint. It has a single network interface with a static IP configuration of 10.12.55.155 and a default gateway of 10.12.55.1. The route will be added on the command line using Command Prompt.

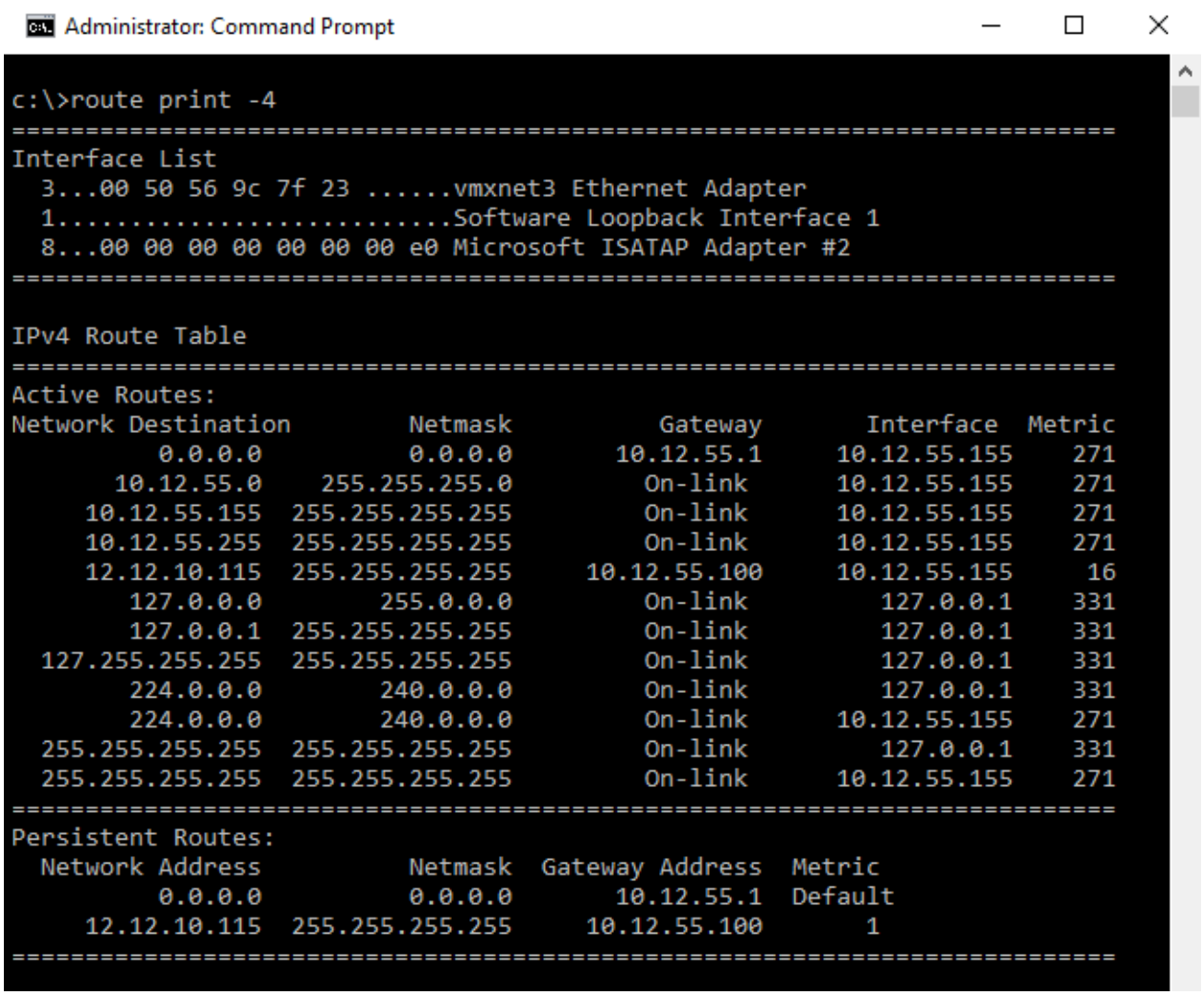
Current IPv4 routes can be displayed using `route print -4`. Below shows the command being used on the Windows host.



A persistent route can be added to Windows using the `route` command. For this example, a route is added to direct traffic for Destination Endpoint through PORTrockIT Node A using its LAN IP address.



The route is then added to the routing table and appears in the *Persistent Routes* section as shown below.



2.6.2 Adding Routes on Linux

These instructions apply to Red Hat Enterprise Linux (RHEL).

This example uses a Linux host for the Source Endpoint. It has a single network interface named eth0 with a static IP configuration of 10.12.55.155 and a default gateway of 10.12.55.1. The route will be added on the command line.

Current IPv4 routes can be displayed using `ip -4 route show`. Below shows the command being used on the Linux host.

```
# ip -4 route show
default via 10.12.55.1 dev eth0 proto static metric 100
10.12.55.0/24 dev eth0 proto kernel scope link src 10.12.55.155 metric 100
```

The route is then added to the routing table as shown below.

```
# ip -4 route show
default via 10.12.55.1 dev eth0 proto static metric 100
```

```
10.12.55.0/24 dev eth0 proto kernel scope link src 10.12.55.155 metric 100
12.12.10.115 via 10.12.55.100 dev eth0
```

In order to make the route persistent, it must be added to the file `/etc/sysconfig/network-scripts/route-eth0` as shown below.

```
# echo '12.12.10.115 via 10.12.55.100 dev eth0' >> \
    /etc/sysconfig/network-scripts/route-eth0
```

3 Useful Links

Further documentation and support is available through our website: https://support.4bridgeworks.com/

If your question is not answered in our documentation, please submit a ticket: https://support.4bridgeworks.com/contact/