AppResponse Xpert™ Rover Installation Instructions for Windows

These installation instructions apply to OPNET AppResponse Xpert Rover Release 8.5. The general workflow is as follows:

1) Procedure IN-1 Preparing for the Install on page ALR-IN-1

2) Procedure IN-2 Installing and Setting Up the AppResponse Xpert Virtual Appliance on page ALR-IN-3

3) Procedure IN-3 Configuring the Web Interface on page ALR-IN-8

4) Procedure IN-4 Verifying the Console Configuration on page ALR-IN-9

You can find the latest version of this document at the OPNET Support Center. Go to www.opnet.com/support, then navigate to the Product Updates page for AppResponse Xpert.

Note—This document presents a simplified workflow for installing and configuring AppResponse Xpert, and specifies a set of suggested default settings that might not be applicable for all situations. These instructions assume that
- You are installing ACE Live Rover on a host with *at least two* network interfaces:
    – One for the management port, and
    – One or more acting as a passive monitoring ports.
- Users on other hosts can communicate with the Rover host and can access the AppResponse Xpert web UI and console from their machines.

Procedure IN-1   Preparing for the Install

1 Download and extract the AppResponse Xpert Rover install files:

1.1 Go to www.opnet.com/support and navigate to the Product Updates page for AppResponse Xpert Rover.

1.2 Download the ZIP file for AppResponse Xpert Rover and extract the contents.

2 Download and install VMware Workstation if you have not already done so.

For information about supported VMware releases, go to www.opnet.com/support and navigate to the System Requirements page for AppResponse Xpert Rover.

For information about installing and setting up VMware Workstation, refer to the VMware documentation.

End of Procedure IN-1

In the following procedure, you will set up the AppResponse Xpert Rover virtual appliance so that it can communicate with the physical network. Figure IN-1 illustrates the virtual machine interfaces, virtual networks, and physical interfaces on a host that has two network interfaces: one used as a management port and the other used as a monitoring port.

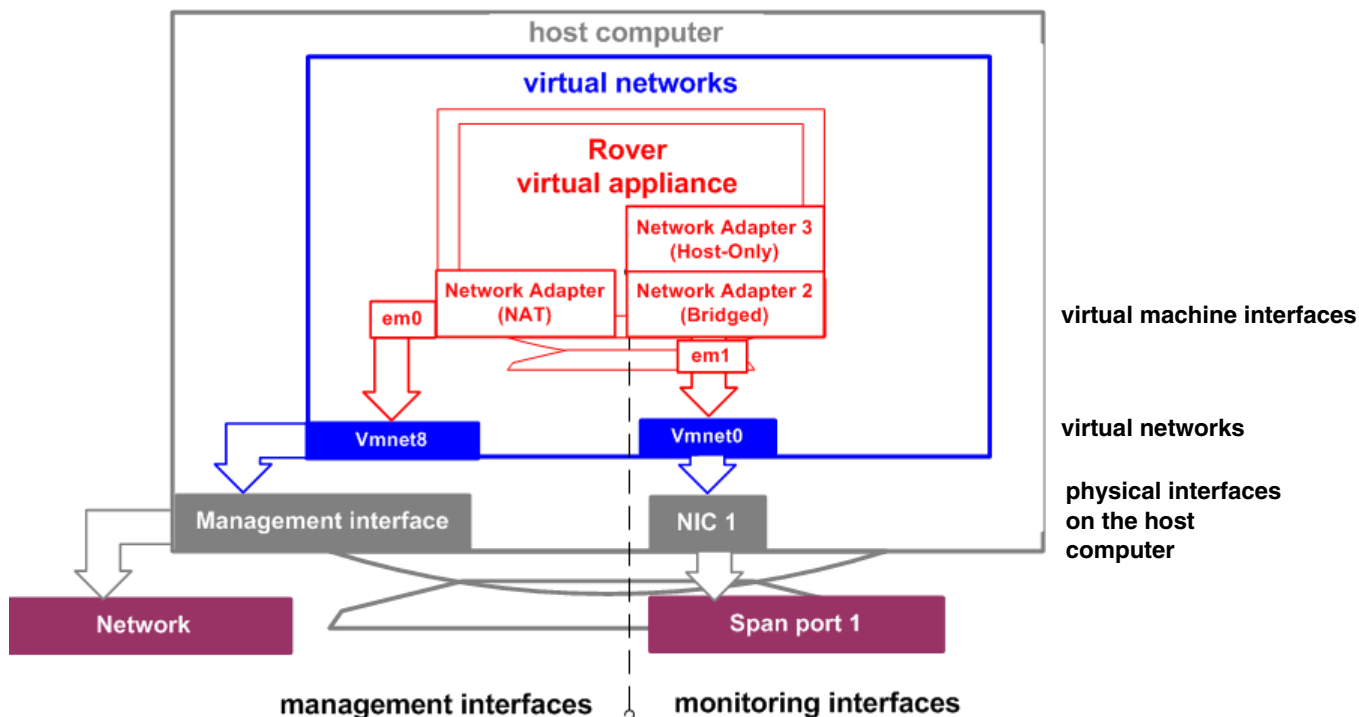**Figure IN-1   Interface Mapping: One Management Interface, One Monitoring Interface (Use Case 1)**

Figure IN-2 illustrates the mapping on a host that has a second network interface available for monitoring traffic. The mapping is identical to the previous use case, except that Network Adapter 3 on the virtual machine is now bridged to VMnet1 and then the second network interface card.

Figure IN-2   Interface Mapping: One Management Interface, Two Monitoring Interfaces (Use Case 2)
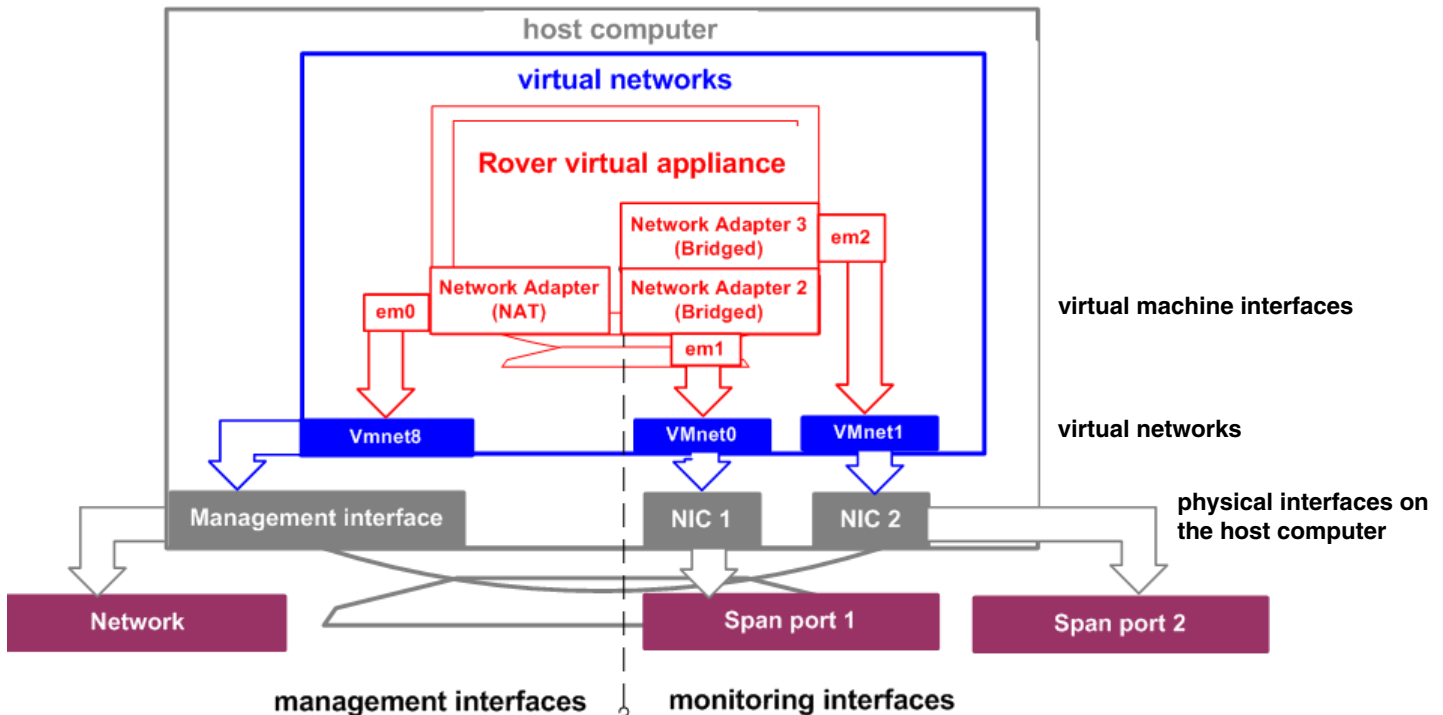
Procedure IN-2   Installing and Setting Up the AppResponse Xpert Virtual Appliance

1 Load the AppResponse Xpert Rover virtual machine:

  1.1 Start VMware Workstation.

  1.2 In the Welcome to VMware Workstation window, select Open a Virtual Machine.

  1.3 In the Open Virtual Machine file chooser, navigate to the directory where you extracted the Rover files in step 1.2.

  1.4 Select the Open Virtualization Format (OVF) file:

   OPNET_ACE_Live_*<rover_release>*_*<rover_build>*.ovf

   ➥ VMware Workstation opens the Rover virtual appliance.

  1.5 Specify a name and storage path for the virtual appliance.

2 Configure the network interfaces on the AppResponse Xpert Rover virtual machine:

  2.1 *VMware Workstation window:* Click "Edit virtual machine settings."

2.2 *Virtual Machine Settings dialog box:* Specify the following network adapters as follows:

- Network Adapter = NAT

- Network Adapter 2 = Bridged

If your physical host has an additional NIC that you want to use as a monitoring interface, set the following also:

- Network Adapter 3 = Bridged

Note–If you are hosting Rover on a laptop or other mobile device, select the "Replicate physical connection state" checkbox for the *Bridged* Network Adapter(s).

WARNING—Do not delete any devices or adapters in this window.

Click OK.

3 Log in to the AppResponse Xpert Rover virtual machine:

3.1 *VMware Workstation window:* click "Power on this virtual machine."

➥ VMware Workstation displays the AppResponse Xpert Rover CLI.

3.2 AppResponse Xpert *Rover CLI:* When the Welcome to AppResponse Xpert menu appears, accept the default option (`Boot FreeBSD`).

3.3 When the login prompt appears, log in with username **admin**; when prompted for a password, press Enter.

**3.4** When the login process finishes, enter **passwd** and specify a new password.

4 Find out the Subnet, Subnet Mask, and Gateway IPs for the VMnet8 network:

4.1 Run the Virtual Network Editor (Windows Start > VMware > Virtual Network Editor).

4.2 With VMnet8 selected in the table, click NAT Settings.

4.3 Write down the Subnet, Subnet Mask, and Gateway IPs for VMnet8. You will use this information in the following step.

Figure IN-3 Subnet, Subnet Mask, and Gateway IPs in NAT Settings (Example)
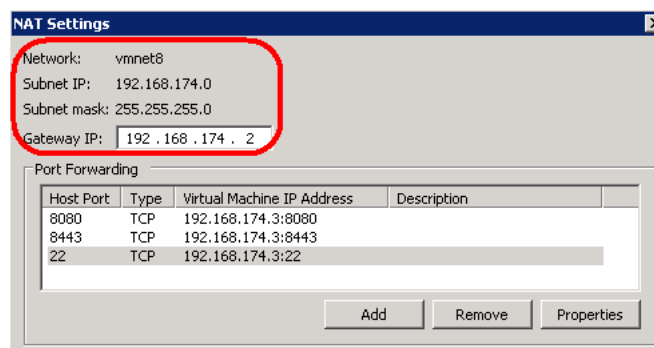
4.4 Click Cancel to return to the Virtual Network Editor. (You will return to this window in a later step.)

5 Configure the AppResponse Xpert Rover virtual machine:

    5.1 Return to the AppResponse Xpert Rover CLI.

    5.2 Enter **setup** at the command prompt and press Enter.

    5.3 Enter **config** and press Enter.

    5.4 The config script prompts you for information about the AppResponse Xpert Rover interface.:

- Hostname — The hostname for the AppResponse Xpert Rover virtual appliance (for example, myrover.mydomain.com)

- IP address — Enter *<vmnet8-subnet-address>*.3, where *<vmnet8-subnet-address>* is the subnet address that you wrote down in step 4.3. If the subnet address is 192.168.74.0, for example, enter **192.168.74.3**.

- Subnet mask — Enter **255.255.255.0**.

- Gateway — Enter *<vmnet8-subnet-address>*.2. If the subnet address is 192.168.74.0, for example, enter **192.168.74.2**.

- Domain — The domain for the AppResponse Xpert Rover virtual appliance (for example, mydomain.com)

    5.5 Enter **showall** and press Enter. Review the information you specified.

- If the information is incorrect, repeat step 5.3 and step 5.4.

- If the information is correct, enter **commit** and press Enter.

    5.6 When prompted, reboot the virtual machine.

    5.7 Wait for the system to reboot and for all the necessary processes to start. (This might take several minutes.)

6 Map the virtual networks to the physical interfaces on the host computer:

    6.1 Return to the Virtual Network Editor window.

    6.2 In the Virtual Network Editor, map the virtual networks as follows:

- VMnet8: NAT

- VMnet0: Bridged to *<network_interface_card_1>*

- VMnet1:

    If the host computer has another interface that you want to use for a monitoring interface, bridge this to *<network_interface_card_2>*.

    Otherwise, map it to Host-Only.

    Note—When you map a virtual network to a monitoring port, bridge the virtual network to a specific network interface card (i.e., select a specific interface, not Automatic, in the "Bridge to" pull-down menu).

Figure IN-4 Bridging a Virtual Network to a Physical Interface: Example
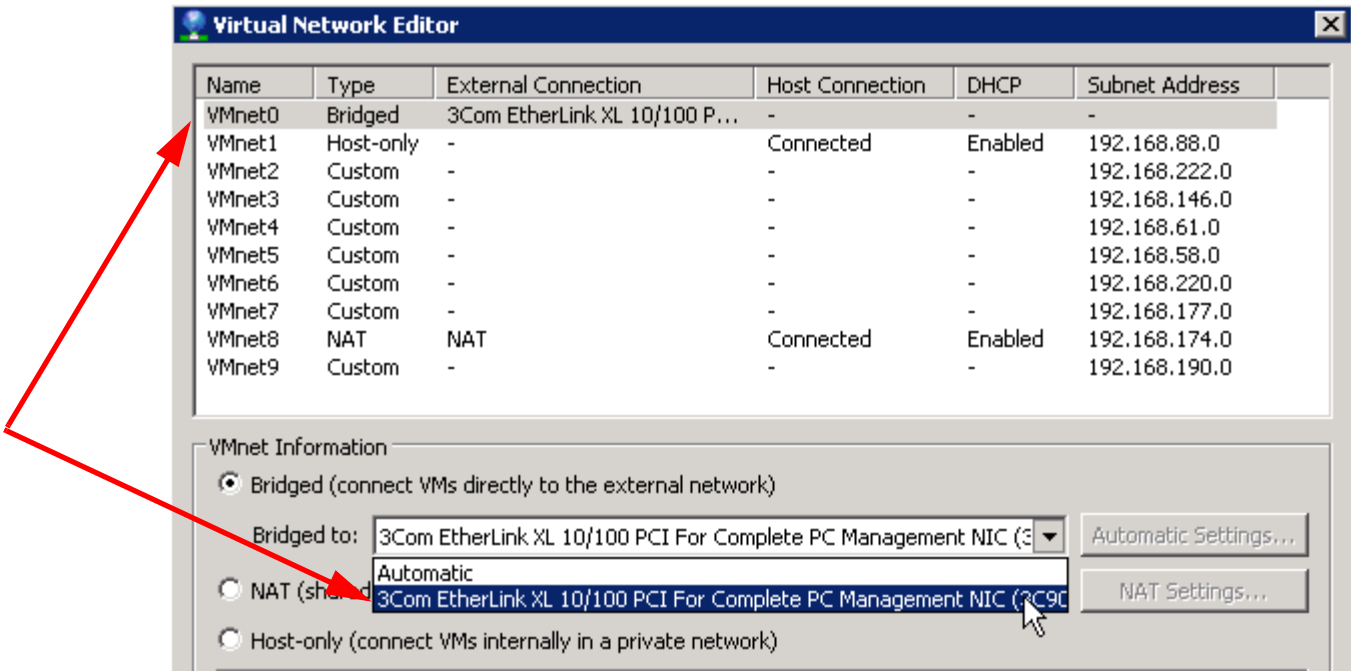

6.3 With VMnet8 selected in the table, click NAT Settings.

6.4 Add the following entries to the Port Forwarding Table. For the Virtual Machine IP, enter the IP address of the Rover VM you specified in step 5.4.

Table IN-1 Port Forwarding Entries for VMnet8 (Required)

Host Port	Type	Virtual Machine IP	Virtual Machine Port	Description
22	TCP	Rover IP address	22	SSH Port
8080	TCP	Rover IP address	8080	HTTP Port
8443	TCP	Rover IP address	8443	HTTPS Port

Figure IN-5 Port Forwarding Table
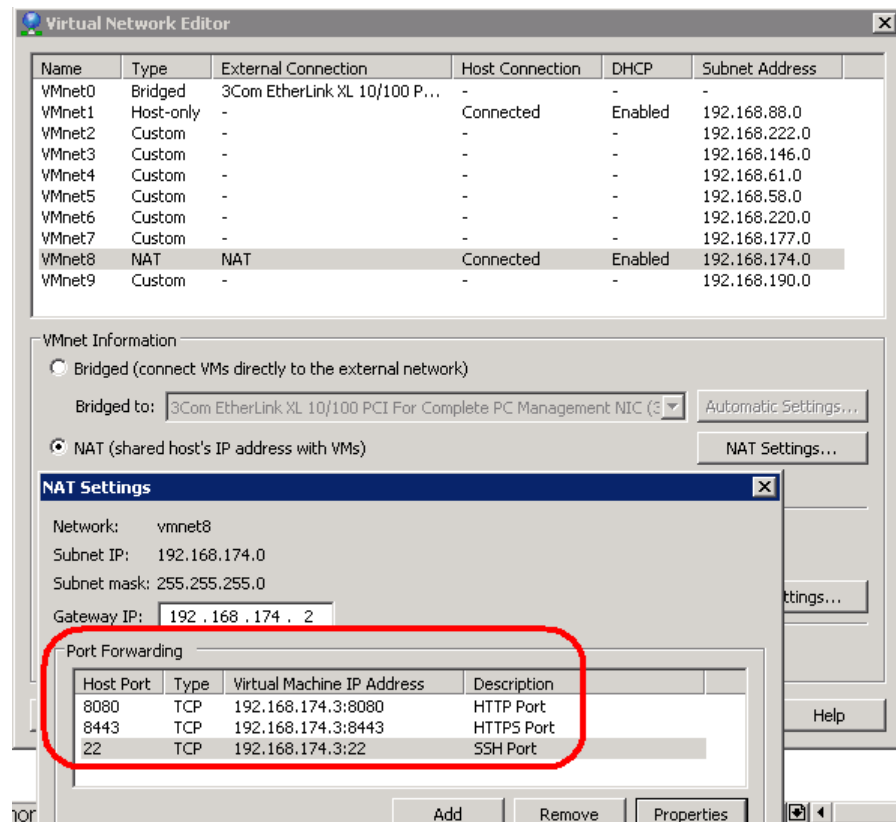
6.5 Click OK to close the NAT Settings dialog box, and OK again to close the Virtual Network Editor.

7 If you plan to use the host PC exclusively for hosting Rover, it is good practice to secure each monitoring port by disabling all network services except for the VMnet Bridge.

For each interface that will act as a monitoring port, do the following:

7.1 Go to the Windows Control Panel and select Network Connection.

7.2 Open the Properties box for the LAN connection of interest.

7.3 Unselect all network service for that connection, except VMware Bridge Protocol.

Note—The exact steps for editing the LAN connection depend on the specific version of Windows.

8 If the physical host has a firewall installed, make sure that the firewall permits connections on ports 22, 8080, and 8443. (You might need to create exceptions to the firewall to permit traffic on these ports.)

Figure IN-6 Windows Firewall Exceptions for Rover (Example)
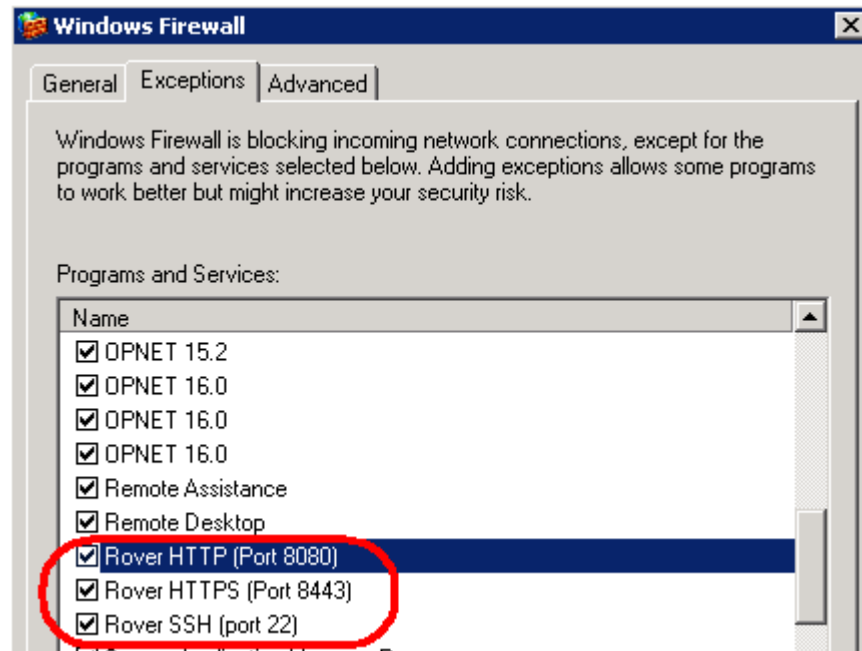
Note—The exact steps for configuring the firewall depend on the specific firewall running on the physical host.

9 Go to Procedure IN-3 Configuring the Web Interface on page ALR-IN-8

End of Procedure IN-2

Perform the following procedure after you complete Procedure IN-2 on page ALR-IN-3.

Procedure IN-3   Configuring the Web Interface

1 Log in to AppResponse Xpert:

    1.1 Open a web browser and point it to one of the following:

- `https://<ip_address>:8443`

- `http://<ip_address>:8080`

`<ip_address>` is the address you specified in `step 5.4` on `page 5`.

➥ The AppResponse Xpert login page appears.

    1.2 Log in with the username **admin** and the new password you specified in step 3.4 on page 4.

1.3 If the Sales and Licensing Agreement page appears, review the licensing information and then click Accept at the bottom of the page.

➥ The ACE Live home page appears.

2 Specify the DNS server(s) used in your network:

2.1 On the ACE Live home page, click the "System" link (top row).

➥ The System Configuration page appears.

2.2 Click the "setup" link (second row).

2.3 In the Domain Name Servers field (near the bottom of the page), specify the IP address of the DNS server(s) in your network.

NOTE—If your network has multiple DNS servers, you can specify multiple servers. Each IP address should appear on a separate line.

3 Under Internal addresses, enter the *internal address list*. This is a list of IP addresses within the local network. AppResponse Xpert uses this list to determine the direction of traffic flow (inbound or outbound) for the Total Traffic group. Inbound and Outbound for all other groups are relative to the group).

The default setting for the Internal Address List is all private address ranges: 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16.

4 Under Time Settings, enter the following:

• Local Time Zone in which the AppResponse Xpert Rover is used.

• Network Time Protocol (NTP) Servers used by the AppResponse Xpert Rover to synchronize its clock (entered as one server address per line).

5 Click Apply at the bottom of the page. This will cause the system to reboot.

6 Proceed to Procedure IN-4 Verifying the Console Configuration on page ALR-IN-9.

End of Procedure IN-3

Perform the following procedure after you complete Procedure IN-3 on page ALR-IN-8.

Procedure IN-4   Verifying the Console Configuration

1 If a supported version of Java is not currently installed, install it from the AppResponse Xpert web interface.

1.1 For a list of supported Java versions, go to www.opnet.com/support and navigate to the System Requirements page for AppResponse Xpert Rover.

2 Download the AppResponse Xpert console to your desktop:

2.1 On the AppResponse Xpert home page, click the "Launch" link (top row) and then the "AppResponse Xpert Console" link (second row).

➥ The AppResponse Xpert window appears with the AppResponse Xpert Welcome dialog box.

3 Click New.

➥ The AppResponse Xpert login dialog box appears.

4 Log in with the username **admin** and the new password you specified in step 3.4 on page 4. Then click OK.

5 In the AppResponse Xpert Insights window, click Total Traffic Dashboard.

6 In the Total Traffic Dashboard, check the Value and Units fields to see if any traffic is getting collected.

7 If no traffic is displayed, try the following:

7.1 Click Project Time to reset the project time; you might need to wait several more minutes after the system is booted before you see traffic.

7.2 Go to the AppResponse Xpert Rover CLI and enter the following command:
`netstat -i`

This command displays information about the Rover virtual interfaces that connect to the management and monitoring interfaces on the host computer.

7.3 Examine the `Ipkts` field for the `em1` and (if Rover is using a second monitoring port) the `em2` interfaces.

7.4 If `Ipkt` shows no traffic, this indicates that the connected SPAN port is not forwarding traffic to the monitoring interface. Configure the connected SPAN port to forward traffic of interest from the device to AppResponse Xpert Rover.

End of Procedure IN-4