



NetStream Primo

Quick Link Configuration Guide



Date: 21-October-2017 | Rev. 1-0

Note:

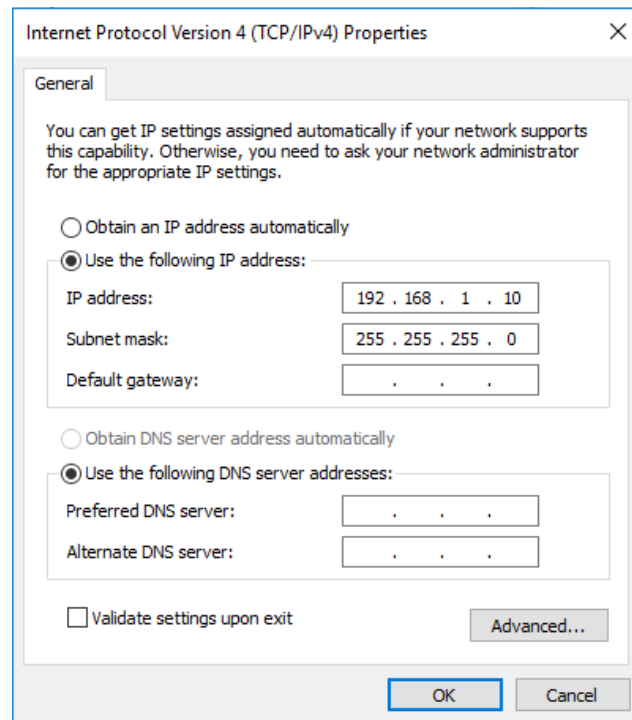
This technical guide is to help you with quick and easily configuration and link setup of NetStream Primo. For detail configurations please read the user manual.

Contents

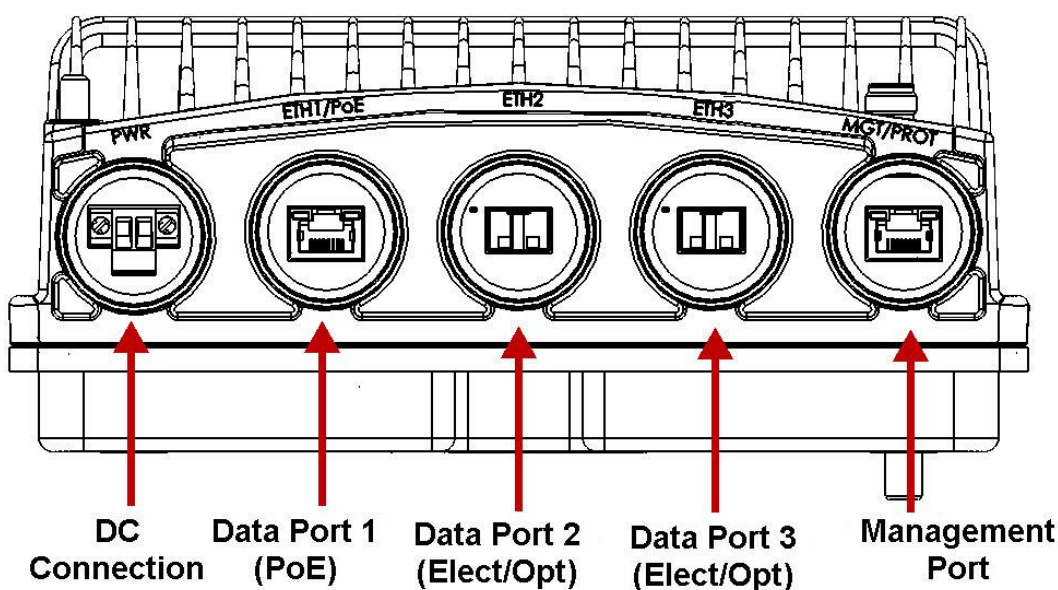
Setup PC/Laptop and Logon:	4
Activating Demo Mode:	6
Changing the Management IP:	8
Setting up a Quick PIPE:	9
Unmuting the Radios:	14
Enabling Management via Ethernet Port:	17

Setup PC/Laptop and Logon:

To obtain contact between the PC and the NetStream Primo unit, it is necessary to configure an IP address on the PC within the same subnet as the NetStream Primo unit. The default NetStream Primo IP address is 192.168.1.1. Set the PC address to e.g. 192.168.1.10 and subnet mask to 255.255.255.0.



1. Locate the MNG port on the unit and connect your PC to this port with an Ethernet cable.



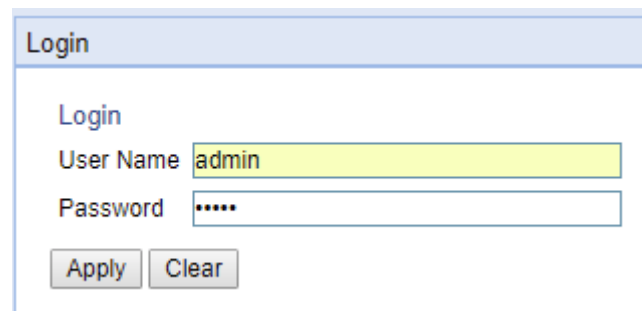
Important note:

NetStream Primo is a carrier class device and as required by carrier industry the unit is not by default manageable via Eth1 or Eth2 port.

The unit by default DOES NOT respond to PING on Eth1 and Eth2 ports. Ping is only possible via MNG port by default.

If you are unable to ping, please do check the firewall is not blocking this service. Try pinging another laptop using nothing but an Ethernet cable in between and once you could ping the other laptop then try pining the unit when connected to Management Port.

2. Open an Internet browser (Internet Explorer or Mozilla Firefox).
3. Enter the default IP address “192.168.1.1” in the Address Bar. The Login page



The screenshot shows a web browser window with a title bar that says "Login". Inside the window, there is a form with the following elements:

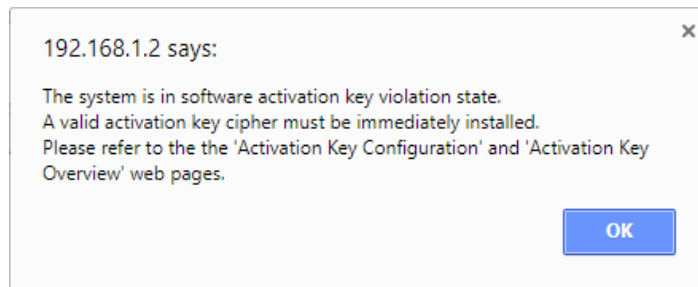
- A label "Login" above the form fields.
- A "User Name" label followed by a text input field containing the text "admin".
- A "Password" label followed by a password input field containing five asterisks "*****".
- Two buttons at the bottom: "Apply" and "Clear".

Note: If you are unable to ping, please do check the firewall is not blocking this service.

4. The default credentials are below:
Username: admin
Password : admin

Activating Demo Mode:

You will be notified of the activation key violation. This means that you need to enter the required activation keys (licenses) for your link parameters like capacity, MRMC, 2nd Core activation, XPIC etc.



For now you can activate demo mode. Demo mode is available, which enables all features for 60 days. When demo mode expires, the most recent valid activation key goes into effect. The 60-day period is only counted when the system is powered up. 10 days before demo mode expires, an alarm is raised indicating that demo mode is about to expire.

To activate demo mode:

- 1 - Select Platform > Activation Key > Activation Key Configuration. The Activation Key Configuration page opens.
- 2 - In the Demo admin field, select Enable.

Important note:

Each unit has a limited number of hours for Demo licenses.

The Demo hours are calculated based the number of hours the unit has been powered on while the demo mode is enabled.

Please make sure the number of hours of demo activation are spent when you are actually using the unit for demonstration.

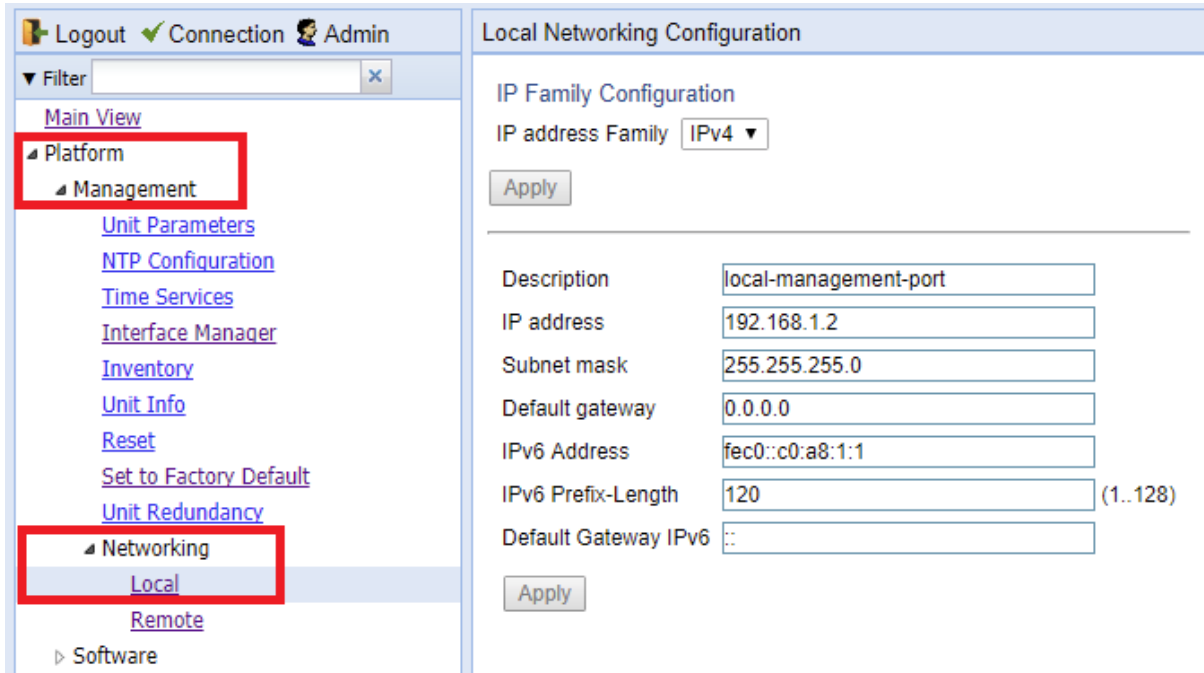
You can disable the demo mode when you are not using the features controlled by the demo mode and you can enable demo mode again at any time.

3 Click Apply.

The Demo timer field displays the number of hours that remain before demo mode expires.

Changing the Management IP Address:

1. Select Platform > Management > Networking > Local. The Local Networking Configuration page opens.



The screenshot shows the Netronics web interface. On the left, a navigation menu is visible with 'Platform' expanded to 'Management', which is further expanded to 'Networking', and 'Local' is selected. The main content area is titled 'Local Networking Configuration'. Under 'IP Family Configuration', 'IP address Family' is set to 'IPv4'. Below this, there are several input fields: 'Description' (local-management-port), 'IP address' (192.168.1.2), 'Subnet mask' (255.255.255.0), 'Default gateway' (0.0.0.0), 'IPv6 Address' (fec0::c0:a8:1:1), 'IPv6 Prefix-Length' (120), and 'Default Gateway IPv6' (::). There are 'Apply' buttons for both the IP Family Configuration and the main configuration section.

2. Optionally, in the Description field, enter descriptive information about the unit.
3. In the IP address field, enter an IP address for the unit. You can enter the address in IPv4 format in this field, and/or in IPv6 format in the IPv6 Address field. The unit will receive communications whether they are sent to its IPv4 address or its IPv6 address.
4. In the Subnet mask field, enter the subnet mask.
5. Optionally, in the Default gateway field, enter the default gateway address.
6. Click **Apply**.

Important note:

The Management IP Address is the only way the unit can be managed if the inbound management is not activated or a VALN switch with management VLAN is not available at site.

Please make sure you note down the management IP address you entered and make sure another colleague in your organization knows about it.

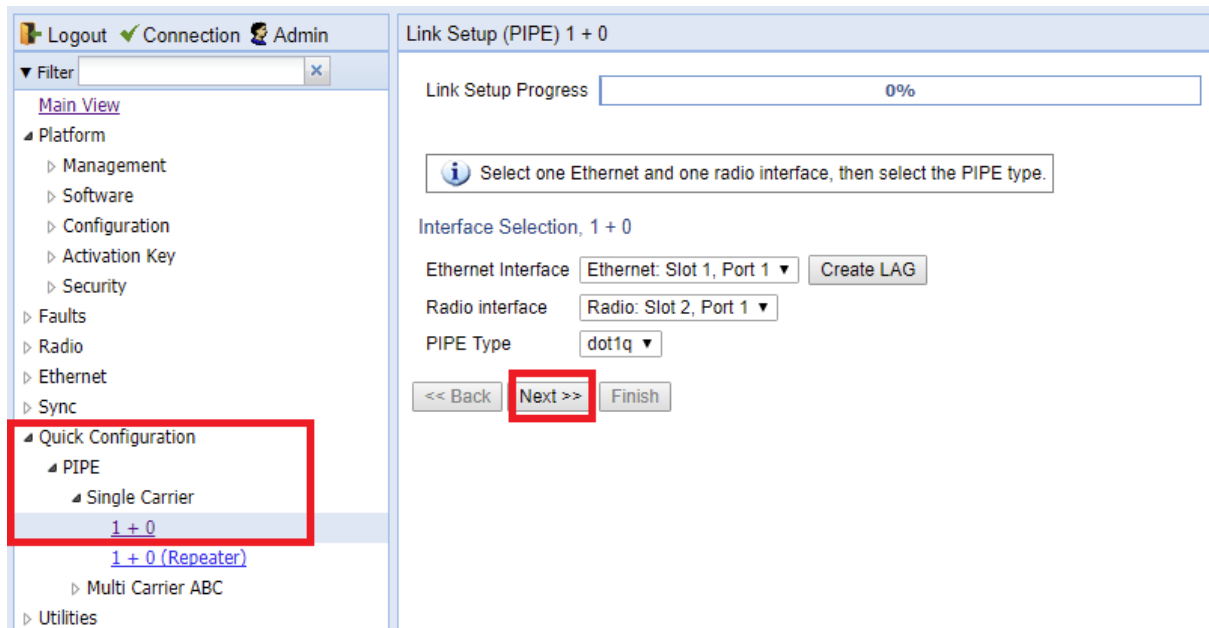
If management IP address is lost the recovery process should be taken which involves use of a special cable. For details please contact Netronics Support.

Setting up a Quick PIPE:

Depending on your configuration type and device type, you can select the configuration. For this guide, we will use a simple configuration that is Single carrier 1+0.

To configure a 1+0 link using the Quick Configuration wizard:

1. Select Quick Configuration > Link Setup (PIPE) > 1+0.



Logout ✓ Connection Admin

Filter [x]

Main View

- Platform
 - Management
 - Software
 - Configuration
 - Activation Key
 - Security
- Faults
- Radio
- Ethernet
- Sync
- Quick Configuration**
 - PIPE**
 - Single Carrier**
 - 1 + 0**
 - 1 + 0 (Repeater)
 - Multi Carrier ABC
 - Utilities

Link Setup (PIPE) 1 + 0

Link Setup Progress

Select one Ethernet and one radio interface, then select the PIPE type.

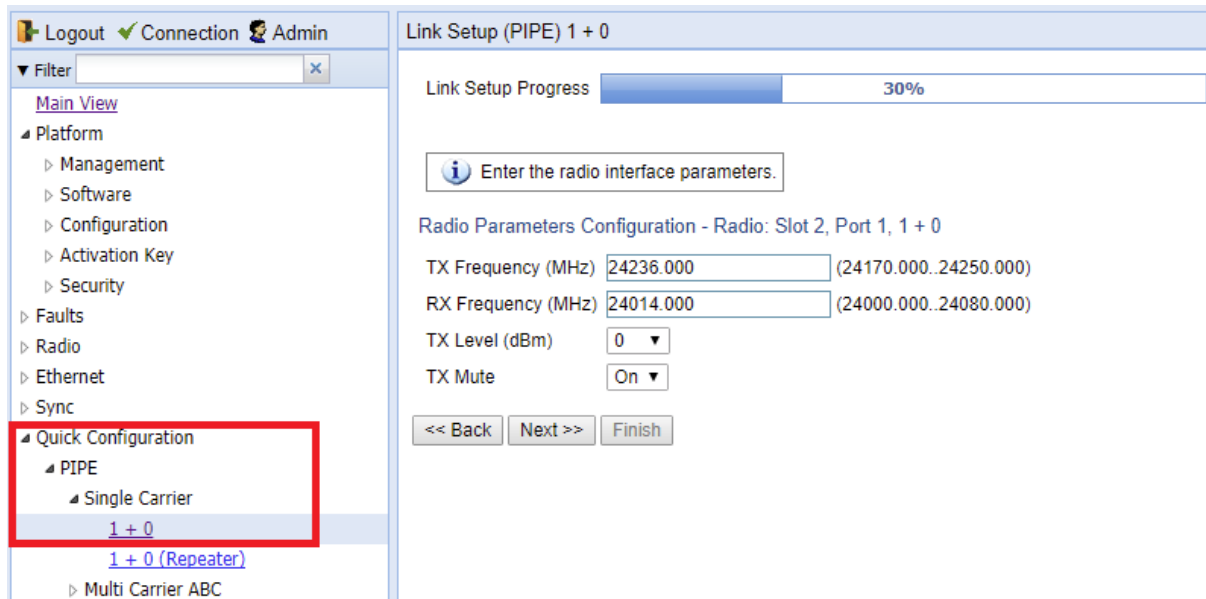
Interface Selection, 1 + 0

Ethernet Interface

Radio interface

PIPE Type

2. Page 1 of the 1+0 Quick Configuration wizard opens.
3. In the Radio Interface field, select a Radio interface. Port 1 in this case.
4. In PIPE Type select dot1q.
5. Click **Next**.



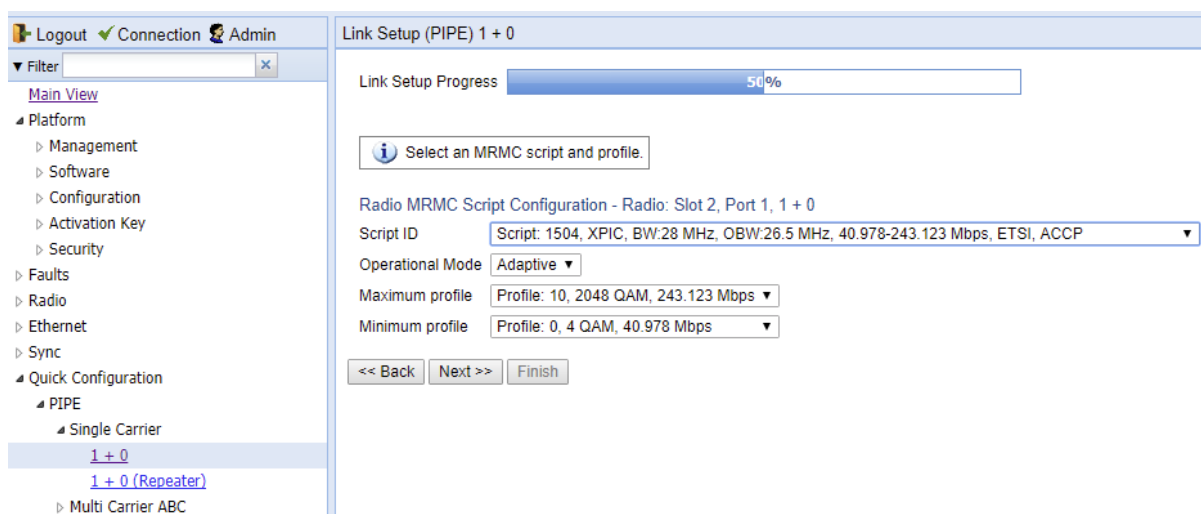
Logout ✓ Connection Admin

Filter

Main View

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 - 1 + 0 (Repeater)
 - Multi Carrier ABC

- In the **TX Frequency (MHz)** field, set the transmission radio frequency in MHz. *Assign this frequency as the RX Frequency on the remote radio.*
- In the **RX Frequency (MHz)** field, set the received radio frequency in MHz. *Assign this frequency as the TX Frequency on the remote radio.*
- In the **TX Level (dBm)** field, enter the desired TX signal level (TSL). The range of values depends on the frequency and Product type.
- To mute the TX output of the RFU, select **On** in the **TX mute** field. To unmute the TX output of the RFU, select **Off**.
- Click **Next**.



Link Setup (PIPE) 1 + 0

Link Setup Progress 50%

Select an MRMC script and profile.

Radio MRMC Script Configuration - Radio: Slot 2, Port 1, 1 + 0

Script ID Script: 1504, XPIC, BW:28 MHz, OBW:26.5 MHz, 40.978-243.123 Mbps, ETSI, ACCP ▼

Operational Mode Adaptive ▼

Maximum profile Profile: 10, 2048 QAM, 243.123 Mbps ▼

Minimum profile Profile: 0, 4 QAM, 40.978 Mbps ▼

<< Back Next >> Finish

- In the **Script ID** field, select the MRMC script you want to assign to the radio.

Please note the choice of script specifies the Channel bandwidth and so it will affect the capacity achieved. For maximum capacity choose the script with maximum channel size. If you operate the unit in a network for which you have specific frequency license, then you will have to follow the requirements of your frequency license.

- In the **Operational Mode** field, select the ACM mode: **Adaptive**.

Note:

In most cases using Adaptive ACM mode provides maximum capacity and maximum stability of the link.

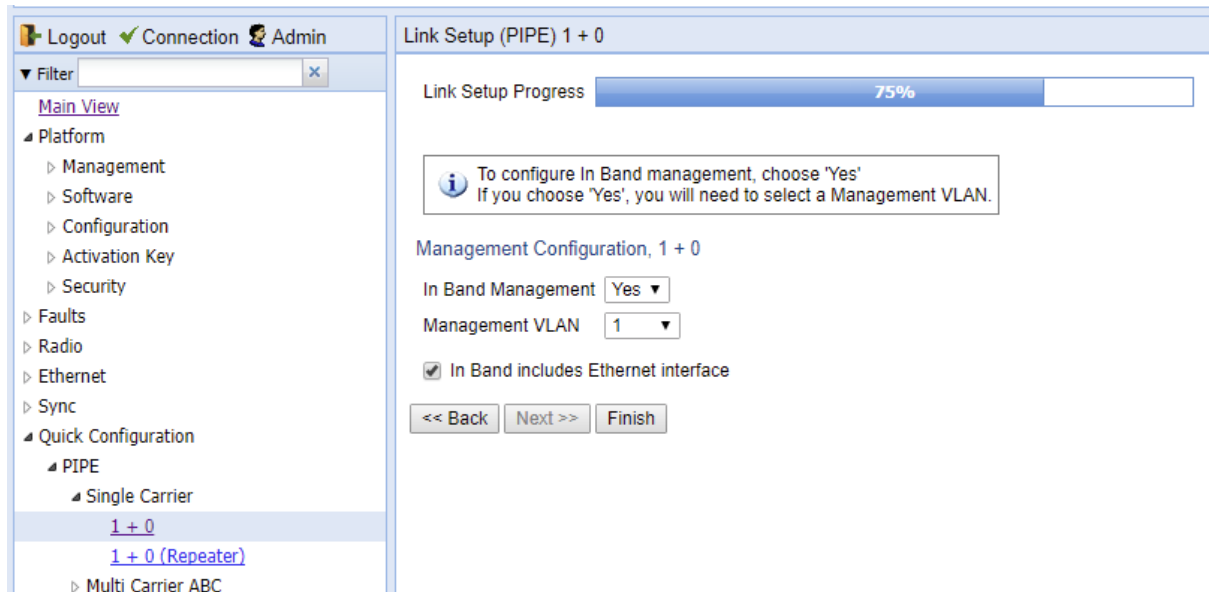
In special cases specified by a link design you may limit the radio to fixed mode to make sure the link works only if it can provide the required capacity and will disconnect if the environmental radio conditions are not suitable for the specified capacity. In most case you will not chose this mode.

- Select the **Maximum and Minimum profile**.

Note:

In order to achieve maximum flexibility of the link for environmental radio conditions choose the highest modulation as Maximum and use the lowest modulation as minimum.

- Click **Finish**.



Logout ✓ Connection Admin

Filter

Main View

- Platform
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Link Setup (PIPE) 1 + 0

Link Setup Progress 75%

To configure In Band management, choose 'Yes'
If you choose 'Yes', you will need to select a Management VLAN.

Management Configuration, 1 + 0

In Band Management Yes ▼

Management VLAN 1 ▼

In Band includes Ethernet interface

<< Back Next >> Finish

- In the **In Band Management** field, select **Yes** to configure in-band management. If you select **Yes**, the **Management VLAN** field appears.

Note:

Selecting **Yes** is required if you want to manage the unit using the Eth1 and Eth2 ports or from a remote site in a network and along with the actual link traffic.

Select **No** only if you want to limit the management of unit to the physical connect only to the Management port of the unit.

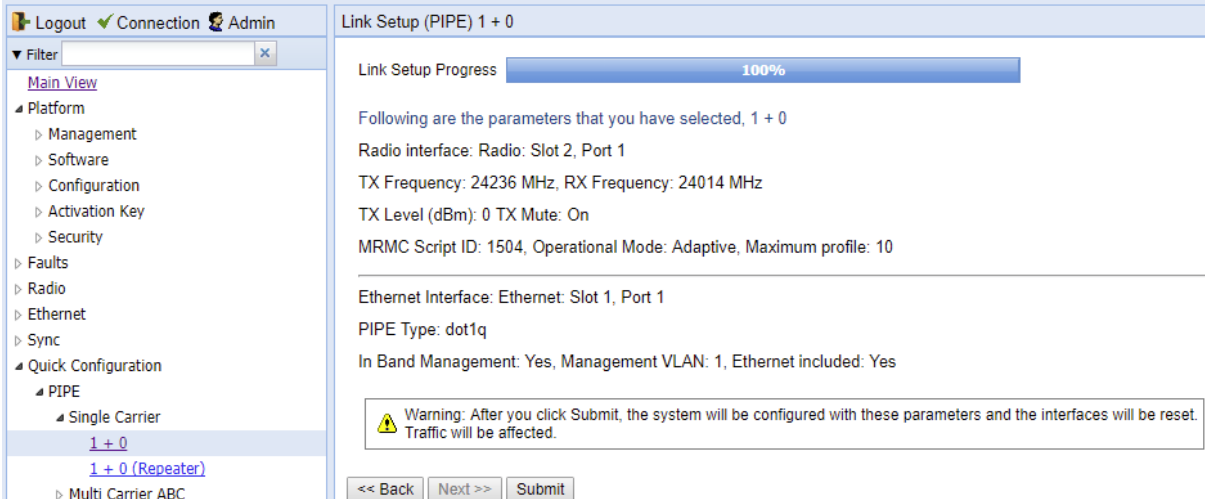
- If you selected **Yes** in the **In Band Management** field, select the management VLAN in the **Management VLAN** field.

Note:

After selecting the In Band management and selecting the VLAN, the unit can be managed only if it is connected to a VLAN aware switch with the VLAN defined on the port to which the radio is connected.

This will not affect possibility of managing the unit via Management port. The unit will still be manageable via Management port.

- If you want to use the Ethernet interface as well as the radio interface for in-band management, select **In Band includes Ethernet interface**.
- Click **Finish**.



The screenshot shows the Netronics NS Primo web interface. The top navigation bar includes "Logout", "Connection", and "Admin". The left sidebar contains a menu with categories like "Platform", "Faults", "Radio", "Ethernet", "Sync", and "Quick Configuration". Under "Quick Configuration", the "PIPE" section is expanded, showing "Single Carrier" with sub-items "1 + 0" and "1 + 0 (Repeater)".

The main content area is titled "Link Setup (PIPE) 1 + 0". It features a progress bar labeled "Link Setup Progress" at 100%. Below the progress bar, the following parameters are listed:

- Following are the parameters that you have selected, 1 + 0
- Radio interface: Radio: Slot 2, Port 1
- TX Frequency: 24236 MHz, RX Frequency: 24014 MHz
- TX Level (dBm): 0 TX Mute: On
- MRCM Script ID: 1504, Operational Mode: Adaptive, Maximum profile: 10
- Ethernet Interface: Ethernet: Slot 1, Port 1
- PIPE Type: dot1q
- In Band Management: Yes, Management VLAN: 1, Ethernet included: Yes

A warning box with a yellow triangle icon contains the text: "Warning: After you click Submit, the system will be configured with these parameters and the interfaces will be reset. Traffic will be affected." Below the warning box are three buttons: "<< Back", "Next >>", and "Submit".

This page displays the parameters you have selected for the link.

19. Review the parameter and click **Submit**.

Unmuting the Radios:

At this point the link setup is done but link is not established. This is because we have muted the radios.

Radio Parameters								
▼ Radio Parameters Table								
Radio location ▲	Type	TX Frequency	RX Frequency	Operational TX Level (dBm)	RX Level (dBm)	Modem MSE	Defective Blocks	TX Mute Status
Radio: Slot 2, Port 1	RFU-N-DC	24236.000	24014.000	0	-93	-99.00	0	On
Radio: Slot 2, Port 2	RFU-N-DC	24236.000	24014.000	0	-93	-99.00	10777	On

[Edit](#)

To unmute the radios so that the radio are able to transmit, follow the steps below.

1. Click on the Radio Slot2, Port 1. Once highlighted, click on Edit.
2. A window will open up. Select the **Tx Mute** to **Off**.

Radio Parameters - Google Chrome
— □ ×

192.168.1.2/responder.fcgi1?winid=174&deviceid=0&winsystemname=rf-status-...

Status Parameters

Radio location:

Type:

XPIC support:

Radio Interface operational status:

Operational TX Level (dBm):

RX Level (dBm):

Modem MSE (dB):

Modem XPI (dB):

Defective Blocks:

TX Mute Status:

Adaptive TX power operational status:

Frequency control (Local)

TX Frequency (MHz): (24170.000..24250.000)

RX Frequency (MHz): (24000.000..24080.000)

TX to RX frequency separation (MHz):

Set also remote unit

Configuration Parameters

TX Level (dBm): (-20..0)

TX mute: ▼

RSL Connector Source: ▼

Link Id: (1..65535)

Adaptive TX power admin: ▼

Page Refresh Interval (Seconds): ▼ Last Loaded: 08:45:31

- Click on apply and the Radio Mute status will be update to Off. In this mode the radio will start transmitting. Do this for both side radios of the link.

Radio location ▲	Type	TX Frequency	RX Frequency	Operational TX Level (dBm)	RX Level (dBm)	Modem MSE	Defective Blocks	TX Mute Status
Radio: Slot 2, Port 1	RFU-N-DC	24236.000	24014.000	0	-36	-43.18	0	Off
Radio: Slot 2, Port 2	RFU-N-DC	24236.000	24014.000	0	-85	-99.00	10777	On

You can see the received signal strength level. And the link is established.

To check the current modulation and bit rate, go to MRMC tab as shown below.

Radio location ▲	Configured MRMC Script	TX profile	TX QAM	TX bit-rate	RX profile	RX QAM	RX bit-rate
Radio: Slot 2, Port 1	mdN_A2828X_157_1504 (1504)	10	2048	243.123	10	2048	243.123
Radio: Slot 2, Port 2	mdN_A2828X_157_1504 (1504)	0	4	0	0	4	0

Repeat this process on the second unit by choosing same exact parameters and SWAPPING the TX and RX frequencies.

If you finished the steps on the second radio, at this stage you should be able to see Rx Level of -50 dbm or more on each radio and the link should get established on both radio chains.

After configuring the second unit position the units vertically using a part of the foam coming in the units package as shown in the picture below.



At this stage you should be able to see the received signal of each unit on the other unit.

Please note this setup is ideal for bench testing the units while the radiator fins are vertical and the ports are available on the top side for testing. The unit can be operated at proper temperature for long time.

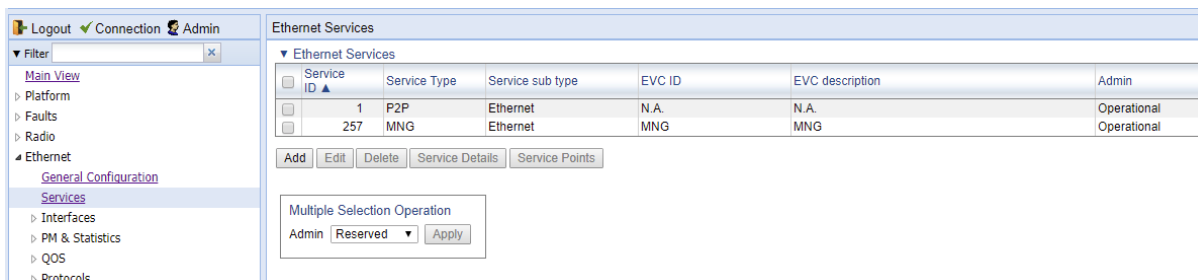
Please note this setup is not ideal for testing link capacity as the radio conditions are not what they should be in an actual link installed in the field on the antenna.

For more detailed information on installation of the link please refer to **NetStream Primo Installation Guide** available on Netronics knowledge base section of the website.

If you need further assistance, please contact us on support@netronics-networks.com

Enabling Management via Ethernet Port:

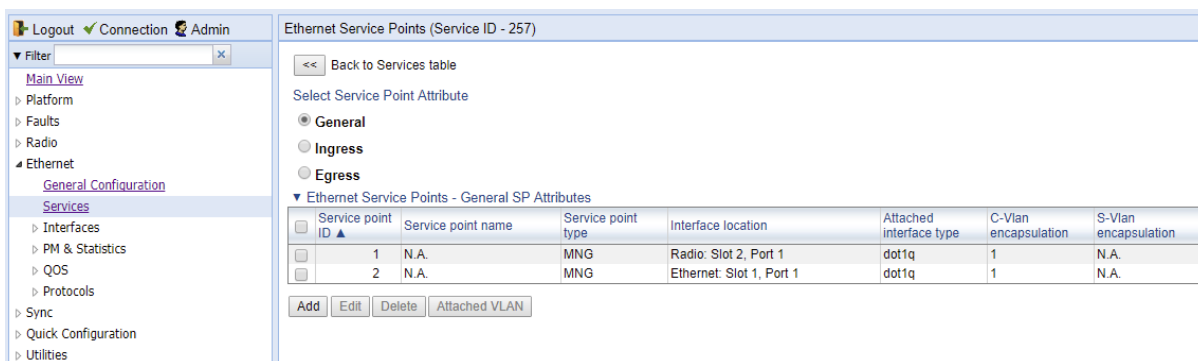
At this point your link is established. Now if you connect your LAN cable to the Ethernet port from laptop, you might not be able to ping the radio. This is because Management VLAN 1 is set on the radio.



The screenshot shows the 'Ethernet Services' configuration page. The left sidebar contains navigation options like Platform, Faults, Radio, Ethernet, and Services. The main content area displays a table of Ethernet Services:

Service ID	Service Type	Service sub type	EVC ID	EVC description	Admin
1	P2P	Ethernet	N.A.	N.A.	Operational
257	MNG	Ethernet	MNG	MNG	Operational

Below the table are buttons for 'Add', 'Edit', 'Delete', 'Service Details', and 'Service Points'. A 'Multiple Selection Operation' section shows 'Admin' set to 'Reserved' with an 'Apply' button.



The screenshot shows the 'Ethernet Service Points (Service ID - 257)' configuration page. The left sidebar is similar to the previous screenshot. The main content area shows a 'Back to Services table' link and radio buttons for 'General', 'Ingress', and 'Egress'. The 'General' option is selected. Below is a table of Ethernet Service Points - General SP Attributes:

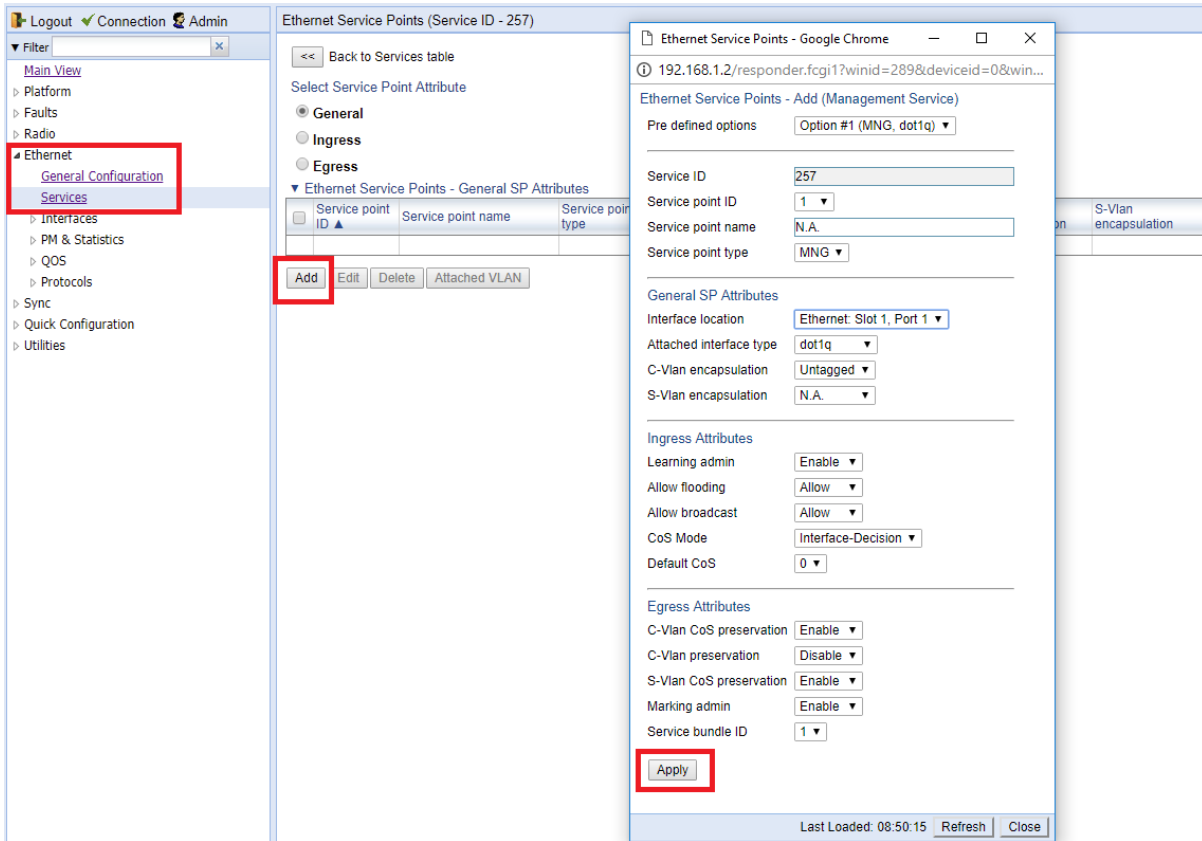
Service point ID	Service point name	Service point type	Interface location	Attached interface type	C-Vlan encapsulation	S-Vlan encapsulation
1	N.A.	MNG	Radio: Slot 2, Port 1	dot1q	1	N.A.
2	N.A.	MNG	Ethernet: Slot 1, Port 1	dot1q	1	N.A.

Buttons for 'Add', 'Edit', 'Delete', and 'Attached VLAN' are located below the table.

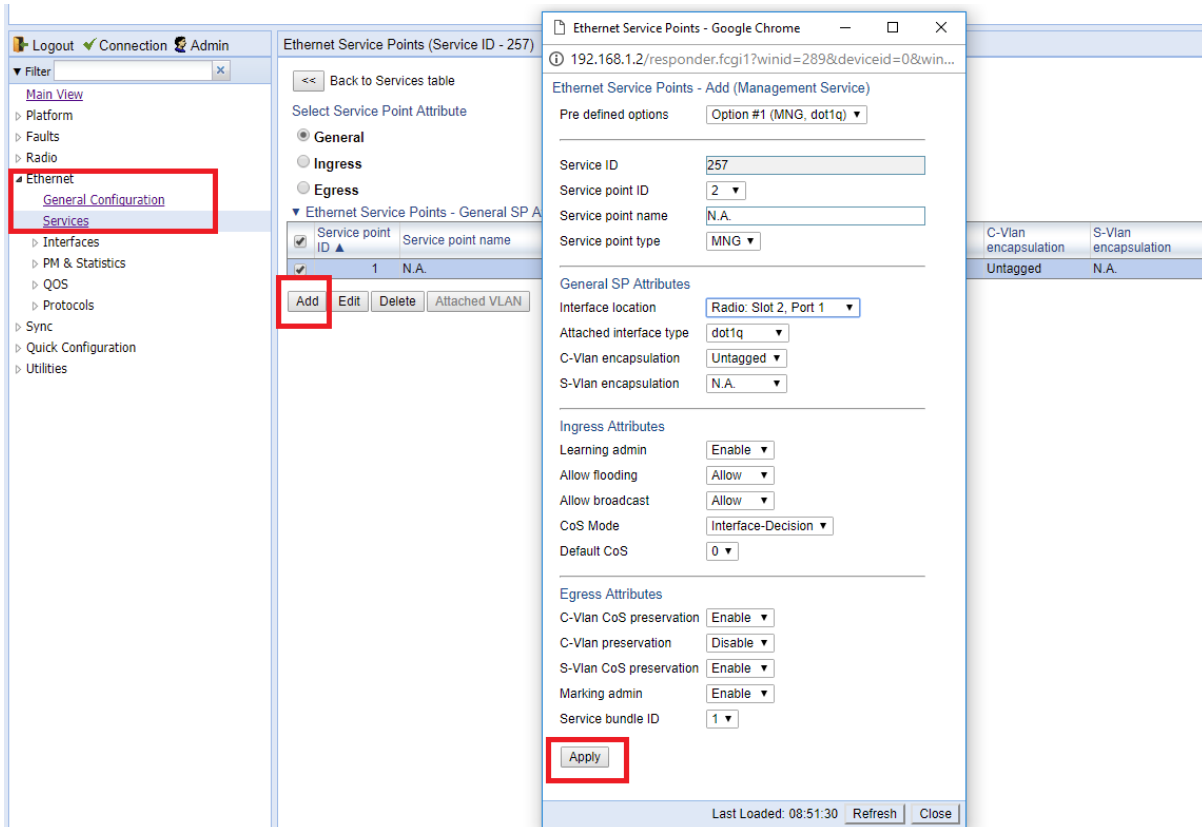
If you wish to continue like this, then set the PC/laptop NIC to VLAN 1 or use a VLAN aware switch with VLAN 1 activated on the port connected to the unit. You will be able to ping the radio. Or come from a switch port which is set to VLAN 1.

If you do not wish to set the management VLAN, then you will need to remove the Management service and set a new management service which Untagged C-VLAN.

1. Set a service point for Management for Ethernet interface.



2. Set a service point for Management for Radio interface.



3. The service points status will be as below.

Ethernet Service Points (Service ID - 257)

Back to Services table

Select Service Point Attribute

- General
- Ingress
- Egress

Ethernet Service Points - General SP Attributes

Service point ID	Service point name	Service point type	Interface location	Attached interface type	C-Vlan encapsulation	S-Vlan encapsulation
1	N.A.	MNG	Ethernet: Slot 1, Port 1	dot1q	Untagged	N.A.
2	N.A.	MNG	Radio: Slot 2, Port 1	dot1q	Untagged	N.A.

Buttons: Add, Edit, Delete, Attached VLAN

4. Make sure the Ethernet ports are operational. You check and configure them in Interface Manager.

Interface Manager

Interface location	MAC address	Admin status	Operational Status
Ethernet: Slot 1, Port 1	80:86:98:97:10:63	Up	Down
Ethernet: Slot 1, Port 2	80:86:98:97:10:64	Up	Down
Ethernet: Slot 1, Port 3	80:86:98:97:10:65	Up	Down
Radio: Slot 2, Port 1	80:86:98:97:10:66	Up	Up
Radio: Slot 2, Port 2	80:86:98:97:10:67	Up	Down

Buttons: Edit

Multiple Selection Operation
Admin status: Up (dropdown) Apply

Now if you connect the radio to your laptop via Ethernet/PoE port, you will be able to ping the radio and the remote radio.