

How to do Port Forwarding?

Using JioBusiness Gateway Device
(ONT Modem)

Contents

1. Introduction	3
2. Pre-requisites.....	3
3. Use Case 1: Jio ONT connected to Server.....	4
4. Use Case 2: Jio ONT connected to Server through Firewall	9

1. Introduction

In this user manual you will learn about the generic steps to configure Port Forwarding using Jio ONT. However, there may arise a need for the device to be configured with specific parameters to cater to a specific purpose. Under such conditions, JioBusiness care team can be approached to configure the device parameters.

2. Pre-requisites

Before initiating **Port Forwarding**, please check for the following things:

- JioBusiness link is installed correctly and ONT modem is displaying **Green Light**
- Internet browsing is happening on JioBusiness link
- Static IP is reflecting on WAN port of ONT modem (115.x.x.x). This can also be checked in Self-Care under **High Speed Internet > Manage Device**
- By default, ping is blocked.** Enable ping for **Static Public IP from ONT** by following below steps:

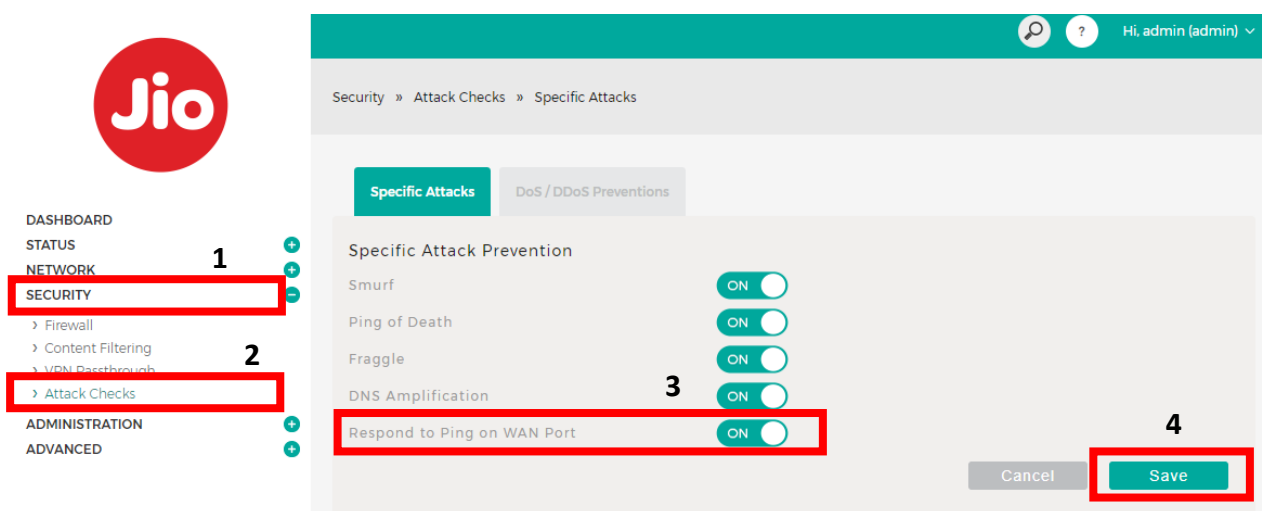
Login into ONT :

Step 1. SECURITY

Step 2. Attack Checks

Step 3. Respond to Ping on WAN Port (Toggle to ON state)

Step 4. Click on Save



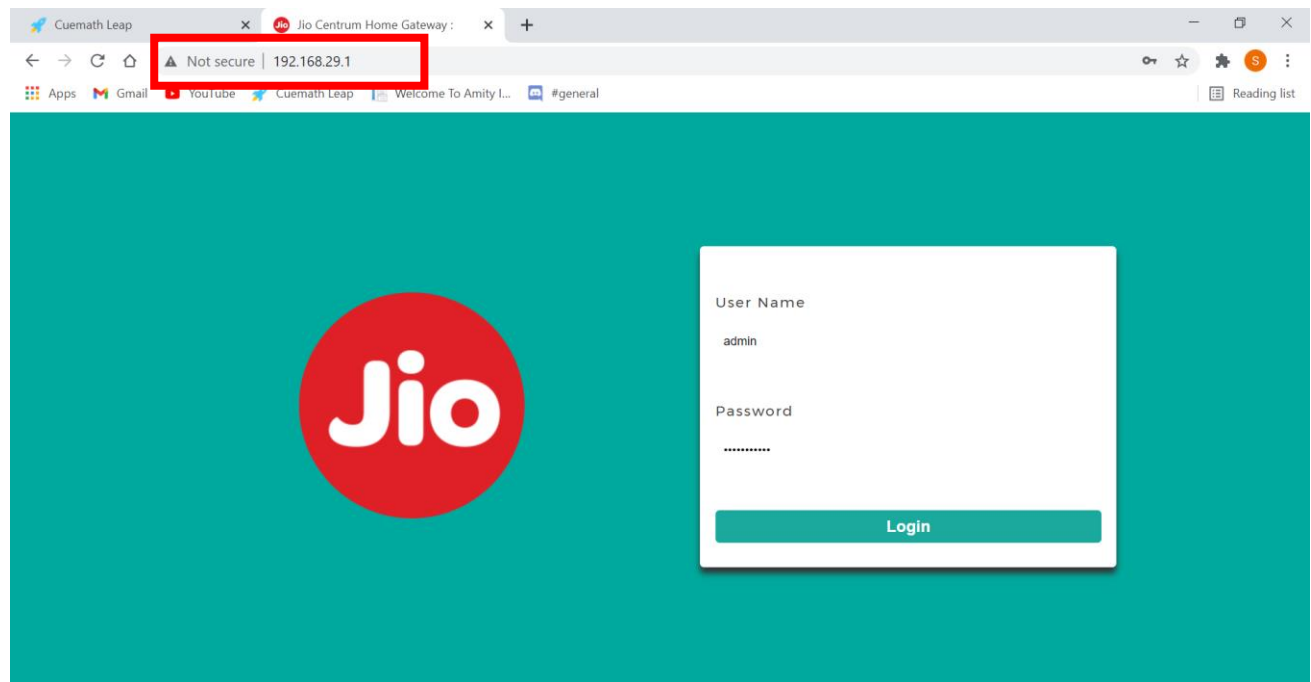
3. Use Case 1: Jio ONT connected to Server

When your Server is directly connected to Jio ONT and you want to access application (for example website) on this server from Internet. **In this solution, inbound traffic for specified ports will be port forwarded to your server.**

Enabling Port Forward

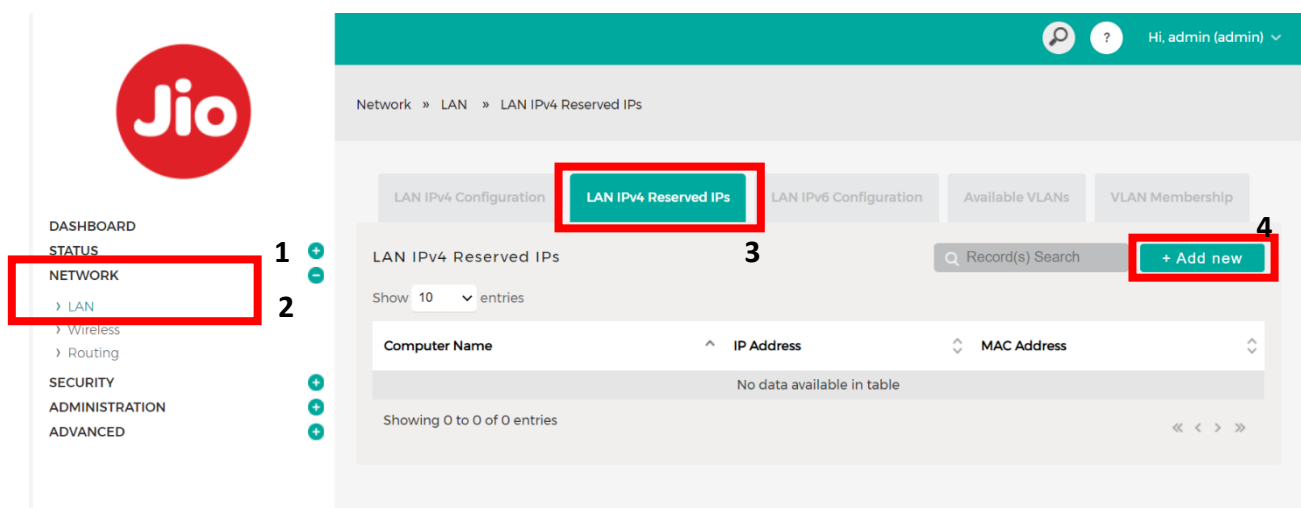
Step 1: Log in to ONT by typing **192.168.29.1** in the browser (Google Chrome is preferred).

Enter valid **Username and Password**



Step 2: On the left side panel of the screen

1. Click on **Network**
2. Select **LAN**
3. Go to **LAN IPv4 Reserved IPs** (Following LAN IPv4 Reserved IPs screen displays)



4. Click on **ADD New**

LAN IPv4 Reserved IP Configuration window will appear. In this window:

- Enter the host name of the device** for which port forward is to be enabled. Please ensure there is no space in the name, e.g. FTP_Server1
- Enter the Reserved IP** from Jio ONT IP Pool to be assigned to host in the IP Address field
*Tip: IP Address can be taken by using command **ipconfig/ all** (in the command prompt window)*
- Enter the MAC address of host** for which IP is to be reserved in the MAC Address field.
Ensure to put " : " between numbers, e.g. 60:14:B3:BB:2A:89
*Tip: MAC Address can be taken by using command **ipconfig/ all** (in the command prompt window)*
- Click Save** to apply changes

Following screen is displayed after **Save** button is clicked

Step 3: On the left side panel of the screen

1. Click on **Security** tab
2. Go to **Firewall**
3. Select **Custom Services** (The Custom Services screen displays)
4. Click on **Add New**

The screenshot shows the Jio Business dashboard. On the left sidebar, the 'SECURITY' tab is highlighted with a red box and labeled '1'. Under 'SECURITY', the 'Firewall' option is selected with a red box and labeled '2'. In the main content area, the 'Custom Services' tab is selected with a red box and labeled '3'. In the top right corner of the main content area, the '+ Add new' button is highlighted with a red box and labeled '4'.

5. The **Custom Services Configuration** window appears. In the *Custom Services Configuration* window:

- a. **Enter the name** in the Name field, e.g. FTP_Server1
- b. **Click the drop-down** of the Type field and **select either TCP/ UDP / ICMP**, e.g. TCP
- c. **Click the drop-down** of the Port Type field and **select either Port Range or Multiple Ports**
- d. **If Port Type is selected** as Port Range then **enter the start and the end port details** based on the specified range
- e. **In case of single port, Start Port and End Port will be the same** (i.e. 21 / 21; confirm the port number on which your application is working, like port 21 for FTP)
- f. **Click Save** to apply the changes

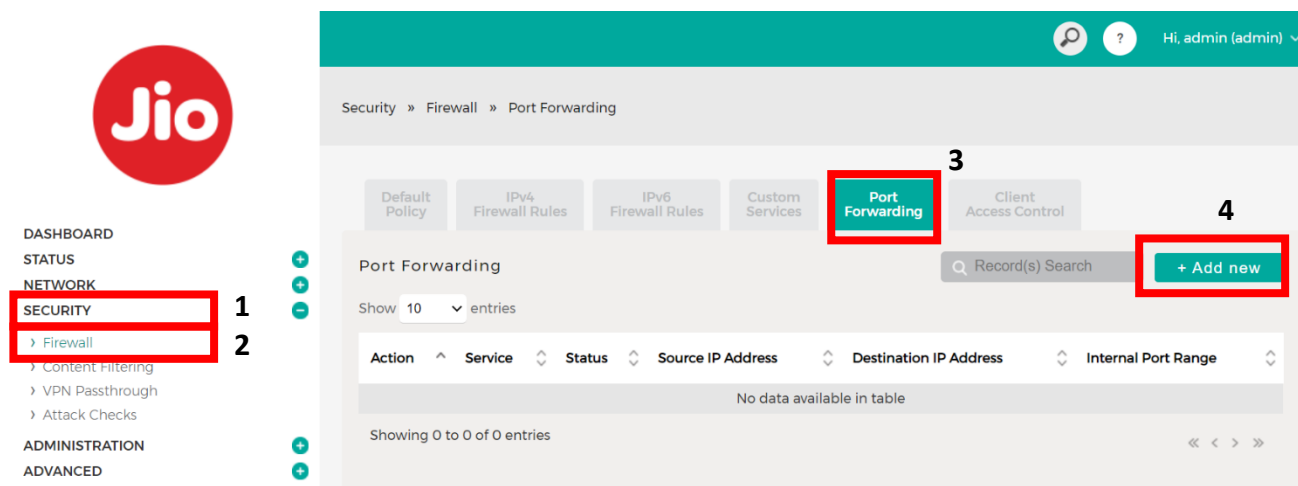
The screenshot shows the 'Custom Services Configuration' window. It has a teal header with the title and a close button. The form contains the following fields:

- Name:** A text input field containing 'FTP_Server1'.
- Type:** A dropdown menu with 'TCP' selected.
- Port Type:** A dropdown menu with 'Port Range' selected.
- Start Port:** A text input field containing '21'. To its right is a red text label '[Range: 1 - 65535]'.
- End Port:** A text input field containing '21'. To its right is a red text label '[Range: 1 - 65535]'.

At the bottom right of the form is a teal 'Save' button.

Step 4: On the left side panel of the screen

1. Click on **Security** tab
2. Go to **Firewall**
3. Select **Port Forwarding** (The Port Forwarding screen displays)
4. Click on **Add New**



5. The **New Port Forwarding Configuration** window appears. In the *Port Forwarding Configuration* window:

- a. Click the **drop-down** arrow of the Action field and **select Allow Always**
- b. Click the **drop-down** arrow of the Services field and **select FTP, HTTP or any other service** based on the need, e.g. FTP_Server1 service created in previous steps for port 21 can be selected from the list
- c. Click the **drop-down** arrow of the Source IP Address field and **select Any to allow request from any Remote IP to Port 21**
- d. Click **Destination IP Address** field and **type the Internal IP** on which remote request needs to be forwarded (i.e. FTP_Server IP: 192.168.29.246)
- e. Click the **drop-down arrow** of the Internal Port Type field and **select Single** as requests need to be sent to single internal port
- f. **Enter the port number** at which forwarding needs to be applied in the Internal Port field (i.e. Port 21 for browser)
- g. Click **Save** to apply the changes

Port Forwarding Configuration
X

Action	Allow Always
Services	FTP_Server1
Source IP Address	Any
Destination IP Address	192.168.29.246
Internal Port Type	Single
Internal Port	21 [Range: 1 - 65535]

Save

Check that there is no port blocking by system firewall and the application is allowed in the system firewall for inbound access. The application server is up and running in the LAN and the application is accessible in the Local network.

By following above steps,

1. FTP_Server will be now accessible remotely using Jio provided Public Static IP (ftp://115.x.x.x) in browser, content of shared folder should open if Internet port used is 21; else
2. FTP_Server will be now accessible remotely using Jio provided Public Static IP (ftp://115.x.x.x: port number) in browser, content of shared folder should be visible open if Internet port used is other than 21 for FTP

Note: If using Google Chrome to access FTP, follow these steps to enable FTP on Chrome (by default FTP access is disabled in Chrome)

1. Open Chrome and type '**chrome://flags**' in the address bar
2. Once in the flags area, type '**enable-ftp**' in the search bar stating '**search flags**'
3. When you see the '**Enable support for FTP URLs**' option tap where it says '**Default**'
4. Tap '**Enable**' option
5. Hit '**Relaunch Now**' option at the bottom of the page
6. Chrome will relaunch and the Chrome will start supporting FTP

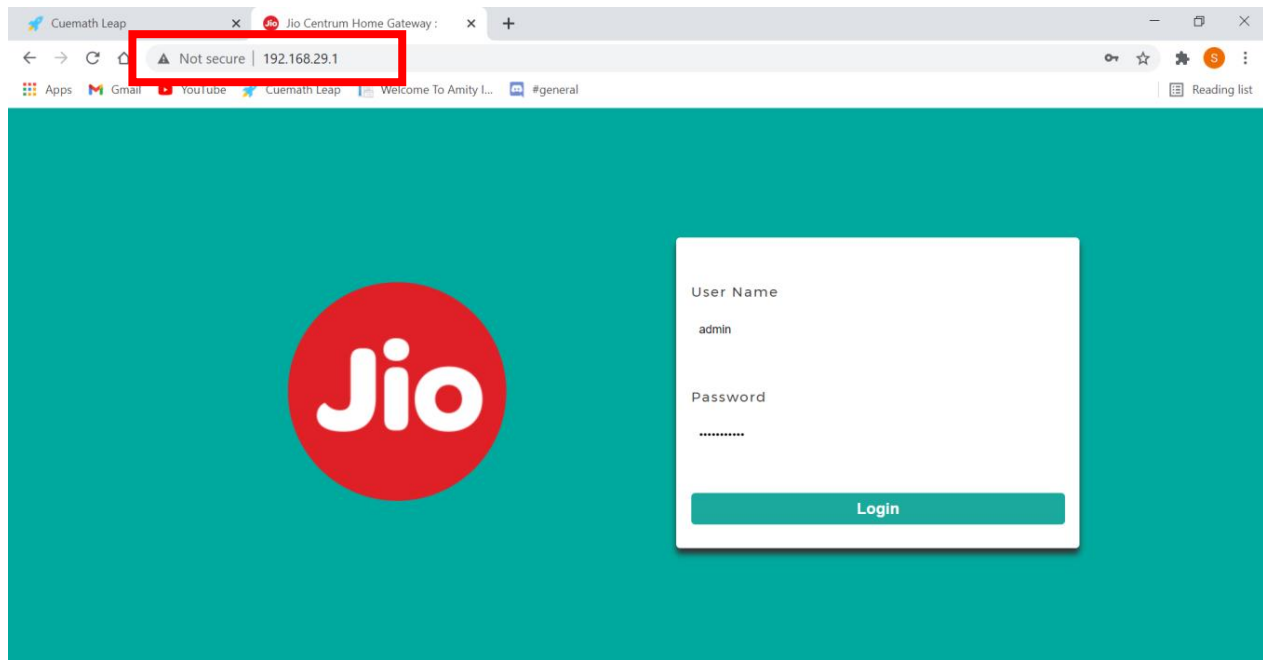
4. Use Case 2: Jio ONT connected to Server through Firewall

When Jio ONT is connected to your server through firewall and you want to access application (e.g. FTP/ website) on this server from Internet. In this solution, inbound traffic for specified ports will be forwarded to defined WAN interface of the firewall.

Enabling Port Forward

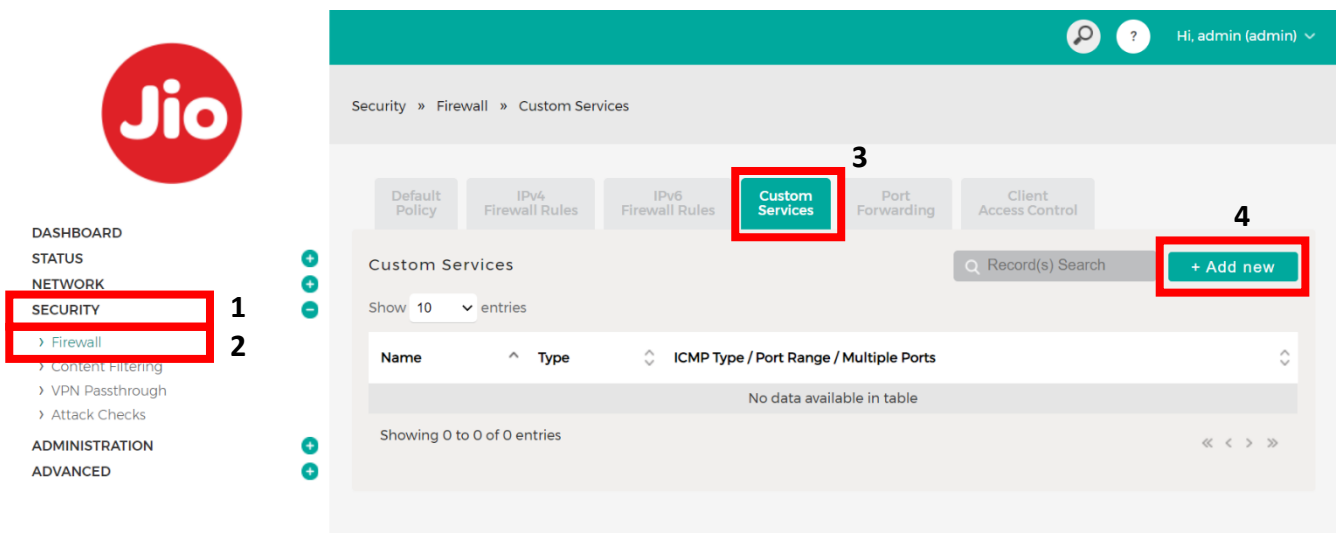
Step 1: Log in to ONT by typing **192.168.29.1** in the browser (Google Chrome is preferred)

Enter valid **Username and Password**



Step 2: On the left side panel of the screen

1. Click on **Security** tab
2. Go to **Firewall**
3. Select **Custom Services** (Custom Services screen displays)
4. Click on **Add New**



5. The **Custom Services Configuration** window appears. In the *Custom Services Configuration* window:
 - a. **Enter the name** in the Name field, e.g. FTP_Server1
 - b. **Click the drop-down** arrow of the Type field and **select either TCP / UDP / ICMP**, e.g. TCP
 - c. **Click the drop-down** arrow of the Port Type field and **select either Port Range or Multiple Ports**
 - d. If Port Type is selected as Port Range then you have to **enter the Start and the End Port details** based on the specified range
 - e. In case of **single port**, **Start Port and End Port will be the same** (i.e. 21/ 21; confirm the port number on which your application is working, like port 21 for FTP)
 - f. **Click Save** to apply the changes

Custom Services Configuration
X

Name	FTP_Server1	
Type	TCP	
Port Type	Port Range	
Start Port	21	[Range: 1 - 65535]
End Port	21	[Range: 1 - 65535]

Save

Step 3: On the left side panel of the screen

1. Click on **Security** tab
2. Go to **Firewall**
3. Select **Port Forwarding** (The Port Forwarding screen displays)
4. Click on **Add New**

DASHBOARD

STATUS

NETWORK

SECURITY

Firewall

Content Filtering

VPN Passthrough

Attack Checks

ADMINISTRATION

ADVANCED

Security » Firewall » Port Forwarding
Hi, admin (admin) ▾

Default Policy

IPv4 Firewall Rules

IPv6 Firewall Rules

Custom Services

Port Forwarding

Client Access Control

Port Forwarding

+ Add new

Record(s) Search

Show 10 ▾ entries

Action	Service	Status	Source IP Address	Destination IP Address	Internal Port Range
No data available in table					

Showing 0 to 0 of 0 entries

<<

<

>

>>

Port Forwarding

Page 10 | 11

5. The **New Port Forwarding Configuration** window appears. In the Port Forwarding Configuration window:
 - a. **Click the drop-down** arrow of the Action field and **select Allow Always**
 - b. **Click the drop-down** arrow of the Services field and **select FTP, HTTP or any other service** based on the need, e.g. FTP_Server1 service created in previous steps for port 21 can be selected from the list
 - c. **Click the drop-down** arrow of the Source IP Address field and **select Any to allow request from any Remote IP to Port 21**
 - d. **Click Destination IP Address field** and **type the Internal IP** of the Firewall on which remote request needs to be forwarded (i.e. 192.168.29.100). Please ensure that the same private IP is put on the WAN interface of the firewall where inbound traffic is to be port forwarded
 - e. **Click the drop-down arrow** of the **Internal Port Type** field and **select Single** as requests need to be sent to single internal port
 - f. **Enter the port number** at which forwarding needs to be applied in the **Internal Port** field (i.e. Port 21 for browser)
 - g. **Click Save** to apply the changes

Port Forwarding Configuration
X

Action	Allow Always ▼
Services	FTP_Server1 ▼
Source IP Address	Any ▼
Destination IP Address	192.168.29.100
Internal Port Type	Single ▼
Internal Port	21 [Range: 1 - 65535]

Save

Check that port forward between Firewall and the application server is also up and running in the LAN and the application is accessible in the Local network. Also check that port is not blocked at the firewall.

By following above steps,

1. FTP_Server will be now accessible remotely using Jio provided Public Static IP (ftp://115.x.x.x) in browser, content of shared folder should open if Internet port used is 21; else
2. FTP_Server will be now accessible remotely using Jio provided Public Static IP (ftp://115.x.x.x: port number) in browser, content of shared folder should be visible open if Internet port used is other than 21 for FTP