Port Forwarding on RV215W

Objective

Port Forwarding is a feature that is used to redirect packets sent across the internet. Different applications use different port numbers often assigned by the programmer of the application. Port forwarding is needed when using NAT in order to allow devices outside the network to connect to applications hosted inside the network. Port forwarding should only be used only when necessary, as opening a port to a public network is a security risk. The RV215W supports single port forwarding, port range forwarding, and port range triggering.

This article explains how to forward and configure trigger ports on the RV215W.

Applicable Devices

• RV215W

Software Version

• 1.1.0.5

Port Forwarding Configuration

Single Port Forwarding

Single port forwarding is a feature that is used to forward a single port.

Step 1. Log in to the web configuration utility and choose **Firewall > Single Port Forwarding**. The *Single Port Forwarding* page opens:

Single Port Forwarding

Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
HTTP	80	80	TCP	Both (Ethernet & 3G)		☐
FTP	21	21	TCP	Both (Ethernet & 3G)		☐
Telnet	23	23	TCP	Both (Ethernet & 3G)		☐
SMTP	25	25	TCP	Both (Ethernet & 3G)		☐
TFTP	69	69	UDP	Both (Ethernet & 3G)		☐
finger	79	79	TCP	Both (Ethernet & 3G)		☐
NTP	123	123	UDP	Both (Ethernet & 3G)		☐
POP3	110	110	TCP	Both (Ethernet & 3G)		☐
NNTP	119	119	TCP	Both (Ethernet & 3G)		☐
SNMP	161	161	UDP	Both (Ethernet & 3G)		☐
CVS	2401	2401	TCP	Both (Ethernet & 3G)		☐
SMS	2701	2701	TCP	Both (Ethernet & 3G)		☐
SMS-rmctl	2702	2702	TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐
			TCP	Both (Ethernet & 3G)		☐

Save   Cancel

Step 2. Enter a name for the application that you want to configure port forwarding for in the

Application field. This value has no impact on the operation of the router.

Single Port Forwarding						
Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port			TCP	Both (Ethernet & 3G)		☐

Step 3. Enter a port number in the *External Port* field. This is the port that you want devices outside your network to connect to.

Single Port Forwarding						
Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242		TCP	Both (Ethernet & 3G)		☐

Step 4. Enter a port number in the *Internal Port* field. This is the port that the device inside your network is listening on. This can be different from the value entered in the *External Port* field, and the RV215W will forward the packet from the External Port to the Internal Port.

Single Port Forwarding						
Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242	4242	TCP	Both (Ethernet & 3G)		☐

Step 5. From the *Protocol* drop-down list choose the transport protocol that is designated for the application and is to be used by the rule.

Single Port Forwarding						
Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242	4242	TCP	Both (Ethernet & 3G)		☐

The available options are described as follows:

• TCP — The application will use Transmission Control Protocol (TCP). TCP is a transport protocol that offers reliability over speed.

• UDP — The application will use User Datagram Protocol (UDP). UDP is a transport protocol that offers speed over complete reliability.

• TCP & UDP — The application will use both TCP and UDP.

Step 6. From the *Interface* drop-down list choose the interface to which the rule applies to.

Single Port Forwarding						
Port Range Forwarding Rules Table						
Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242	4242	TCP	Both (Ethernet & 3G)		☐

The available options are described as follows:

• Both (Ethernet & 3G) — The rule applies when the RV215W is supplied internet through an Ethernet connection in the WAN port or through a 3G modem in the USB port.

• Ethernet — The rule applies only when the RV215W is supplied internet through an Ethernet connection in the WAN port.

• 3G — The rule applies only when the RV215W is supplied internet through a 3G modem in the USB port.

Step 7. Enter the IP address of the host on the LAN to which the IP traffic will be forwarded to in the *IP Address* field.

Single Port Forwarding

Port Range Forwarding Rules Table

Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242	4242	TCP	Both (Ethernet & 3G)	192.168.1.2	☐

Step 8. Check **Enable** to enable the configured rule.

Single Port Forwarding

Port Range Forwarding Rules Table

Application	External Port	Internal Port	Protocol	Interface	IP Address	Enable
test_port	4242	4242	TCP	Both (Ethernet & 3G)	192.168.1.2	☑

Step 9. Click **Save**.

Port Range Forwarding

Port range forwarding is a feature that is used to open a range of ports. Port range forwarding is also considered to be static port forwarding. Static port forwarding increases security risk due to configured ports always being open.

Step 1. Log in to the web configuration utility and choose **Firewall > Port Range Forwarding**. The *Port Range Forwarding* page opens:

Port Range Forwarding

Port Range Forwarding Rules Table

Application	Start	End	Protocol	Interface	IP Address	Enable
test1	6112	6119	TCP & UDP	Both (Ethernet & 3G)	192.168.1.1	☑
			TCP	Both (Ethernet & 3G)		☐

Step 2. Enter a name for the application that you want to configure ports for in the

Application field.

Step 3. Enter the port that begins the range of ports to be forwarded in the Start field.

Step 4. Enter the port that ends the range of ports to be forwarded in the End field.

Step 5. From the protocol drop-down list choose the transport protocol that is designated for the application and is to be used by the rule.

• TCP — The application will use Transmission Control Protocol (TCP). TCP is a transport protocol that offers reliability over speed.

• UDP — The application will use User Datagram Protocol (UDP). UDP is a transport protocol that offers speed over complete reliability.

• TCP & UDP — The application will use both TCP and UDP.

Step 6. From the Interface drop-down list choose the interface to which the rule applies to.

• Both (Ethernet & 3G) — The rule applies when the RV215W is supplied internet through an Ethernet connection in the WAN port or through a 3G modem in the USB port.

• Ethernet — The rule applies only when the RV215W is supplied internet through an Ethernet connection in the WAN port.

• 3G — The rule applies only when the RV215W is supplied internet through a 3G modem in the USB port.

Step 7. Enter the IP address of the host on the LAN to which the IP traffic will be forwarded to in the IP Address field.

Step 8. Check **Enable** to enable the configured rule.

Step 9. Click **Save**.

Port Range Triggering

Port range triggering is considered to be dynamic port forwarding. When a host that is connected to the RV215W opens a trigger port that is configured in a port range triggering rule, the RV215W forwards the configured ports to the host. Once the host closes the triggered port, the RV215W closes the forwarded ports. Port triggering is more secure than single port forwarding and port range forwarding because ports are only opened when they are triggered. A triggering rule does not require an IP address because any computer connected to the RV215W can utilize the rule, however only one computer can use the rule at a time.

Step 1. Log in to the web configuration utility and choose **Firewall > Port Range Triggering**. The *Port Range Triggering* page opens:

Step 2. Enter a name for the application that you want to configure ports for in the Application field.

Step 3. Enter the range of ports that will trigger the rule in the Triggered Range fields.

Step 4. Enter the range of ports that will be forwarded when the rule is triggered in the Forwarded Range fields.

Step 5. From the Interface drop-down list choose the interface to which the rule applies to.

• Both (Ethernet & 3G) — The rule applies when the RV215W is supplied internet through an Ethernet connection in the WAN port or through a 3G modem in the USB port.

• Ethernet — The rule applies only when the RV215W is supplied internet through an Ethernet connection in the WAN port.

• 3G — The rule applies only when the RV215W is supplied internet through a 3G modem in the USB port.

Step 6. Check **Enable** to enable the configured rule.

Step 7. Click **Save**.