Connecting RV220W to an IPv6 Tunnel broker

A tunnel broker is essentially a service that provides a network tunnel, the most common being an IPv6 tunnel broker. An IPv6 tunnel broker allows you to reach the IPv6 internet by tunneling over existing IPv4 connections.

This guide shows you step by step how to configure the RV220W to an IPv6 tunnel broker. In this example we are going to use Hurricane Electric as our tunnel broker. Hurricane Electric is a free tunnel broker service that just requires you to sign up.

To sign up for the tunnel broker service with Hurricane Electric go to:
http://tunnelbroker.net/

Go to the bottom of the page and click on “Sign up Now”
After signing up, login into your tunnel broker account and you will be presented with the Main page.

Please follow the steps below for creating the tunnel from the broker’s end point:

1) Click on the “Create regular tunnel” link located on the upper left hand corner of the page.
Note: Prior to proceeding with the next step below, please make sure the RV220W firewall setting is configured to allow ICMP.(Firewall-> Attack Prevention, and enable respond to ping on WAN and disable block anonymous ICMP msg). This step is important because the tunneling server(broker) will send an ICMP message to RV220W to test the validity of the tunnel end point prior to creating the tunnel.

2) Enter the IPv4 address of the tunnel end point (i.e. the WAN address of the RV220W) and the system will preselect the closest tunneling server. If the system does not auto select a tunneling server, manually select the closest tunneling server from the available list.
3) Next, click the “Create Tunnel” and the bottom of the page

4) System will then provide you the tunneling details. Use these details to establish the other end of the tunnel(i.e RV220W end point).
### Tunnel Details

- **IPv6 Tunnel**
  - Tunnel ID: 124557
  - Creation Date: Jul 6, 2011
- **Description:** RV220test

#### IPv6 Tunnel Endpoints
- Server IPv4 Address: 216.218.224.42
- Server IPv6 Address: 2001:470:1f0e::14:1/64
- Client IPv4 Address: 173.37.194.128
- Client IPv6 Address: 2001:470:1f0e::14:2/64

#### Available DNS Resolvers
- Anycasted IPv6 Caching Nameserver: 2001:470:20::2
- Anycasted IPv4 Caching Nameserver: 74.82.42.42

#### Routed IPv6 Prefixes
- Routed /64: 2001:470:1f0f::1d4:/64
  - Routed /48

#### rDNS Delegations
- rDNS Delegated NS1:
- rDNS Delegated NS2:
- rDNS Delegated NS3:
- rDNS Delegated NS4:
- rDNS Delegated NS5:
On RV220W:

1) Go to Networking -> IPv6 -> Routing Mode and enable dual stack (IPv4 / IPv6 mode)

2) Go to Networking -> IPv6 -> Router Advertisement. Enable Router Advertisement (RADVD) and ensure that Advertisement mode is set for Unsolicited Multicast. Also remember to set the RA managed flag and confirm IPv6 devices acquire 6to4 prefixes (2002:WAN IP in HEX ::) for stateless auto-configuration.
3) Go to Networking -> IPv6 -> Advertisement Prefixes. Choose 6to4 as the IPv6 prefix type and set the SLA ID to a **non zero** value (E.g 1). Also set the prefix lifetime.
4) Go to Networking->IPv6->Tunneling and enable automatic tunneling.

5) Next, create a static route to the broker. Go to Networking->IPv6->Routing->Add. Enter the IPv6 destination, prefix length and select 6to4 for the interface. For the IPv6 gateway, enter the WAN IPv4 address of the tunneling server in the following format: ::WAN IPv4 of broker’s tunneling server.
6) Next, configure the RV220W with the block of global IPv6 addresses that the broker has assigned to you. Go to Networking->IPv6->Advertisement Prefixes->Add

7) Once your setup is complete you can try testing the setup by pinging ipv6.google.com