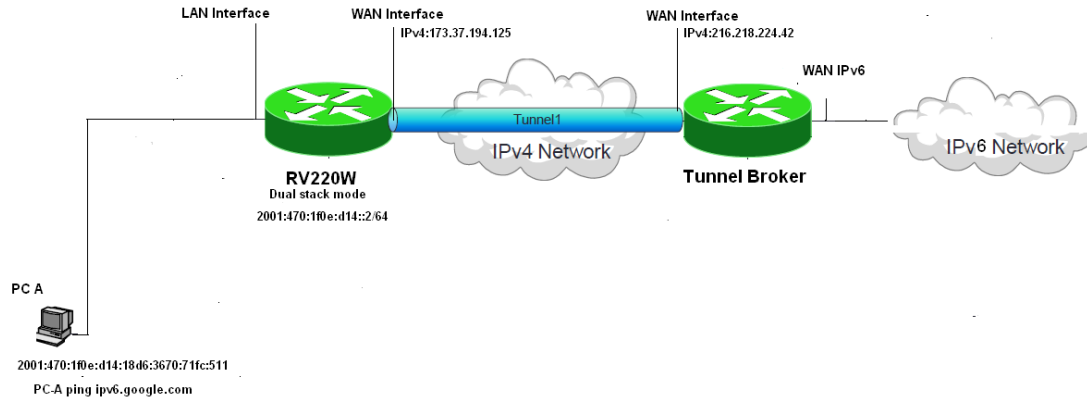


## Connecting RV220W to an IPv6 Tunnel broker

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”

### Tunnelbroker Login

Username:

Password:

[Login](#) [Register](#)

## Hurricane Electric Free IPv6 Tunnel Broker

# IPv6 Tunnel Broker

Check out our new [usage stats!](#)

And then hit up our new [Forums!](#)

Welcome to the Hurricane Electric IPv6 Tunnel Broker! Our free tunnel broker service enables you to reach the IPv6 Internet by tunneling over existing IPv4 connections from your IPv6 enabled host or router to one of our IPv6 routers. To use this service you need to have an IPv6 capable host (IPv6 support is available for most platforms) or router which also has IPv4 (existing Internet) connectivity. Our tunnel service is oriented towards developers and experimenters that want a stable tunnel platform.

Advantages of using our tunnel service over others include:

- Run by a Business ISP with 24 x 7 staff at multiple locations and an International backbone ([find out more about IPv6 transit at Hurricane Electric.](#))
- Ability to get your own /48 prefix once your tunnel is up
- Ability to get a full view of the IPv6 BGP4+ routing table
- Ability to use your tunnel now after a simple registration process. (It takes less than a minute.)
- Ability to create your tunnel on geographically diverse tunnel-servers (Fremont, CA; New York, NY; Dallas, TX; Chicago, IL; London, UK; Frankfurt, Germany; Paris, France; Amsterdam, NL; Miami, FL; Ashburn, VA; Seattle, WA; Los Angeles, CA; Hong Kong; Toronto, ON)

If you are a new user please register by clicking on Register below. After registering your password will be mailed to you and you can return here to activate your tunnel.

If you operate a network, run BGP, have your own ASN, and wish to announce IPv6 address space allocated directly to you by an RIR (ARIN, RIPE, APNIC, etc.) please select the "Create BGP Tunnel" option after you register.

Upon tunnel activation configuration commands for a variety of platforms will be automatically generated. Once you configure your side you will be able to reach the IPv6 Internet. If you like our service be sure to tell a friend and [recommend us to others!](#)

[Sign up now!](#)

### Quick Links

[Certification](#)  
[Tunnelbroker](#)  
[Free DNS](#)  
[BGP Toolkit](#)  
[Forums](#)  
[FAQ](#)  
[Video Presentations](#)  
[IPv6 Blog Posts](#)  
[Usage Statistics](#)  
[Tunnel Server Status](#)  
[Network Map](#)  
[Looking Glass \(v4/v6\)](#)  
[Route Server \(telnet\)](#)  
[Global IPv6 Report](#)  
[IPv6 BGP View](#)

### Top 10 Certs

<a href="#">bmork</a>	[1500]
<a href="#">kneissel</a>	[1500]
<a href="#">cktsoi</a>	[1500]
<a href="#">solarken...</a>	[1500]
<a href="#">docbower</a>	[1500]
<a href="#">beisheim</a>	[1500]
<a href="#">julien43</a>	[1500]
<a href="#">Belgarion</a>	[1500]
<a href="#">ralphmaas</a>	[1500]
<a href="#">jimb</a>	[1500]

### Latest 10 Certs

<a href="#">texasfred</a>	[Exp]
<a href="#">benjabean1</a>	[Exp]
<a href="#">u8sf</a>	[Guru]
<a href="#">akellar</a>	[Enth]
<a href="#">Kramer09</a>	[Enth]
<a href="#">njmac</a>	[Newb]
<a href="#">wood911</a>	[Newb]
<a href="#">dlgroups</a>	[Sage]
<a href="#">badooley</a>	[Exp]
<a href="#">ajethridge</a>	[Exp]

### Services

[Transit](#)  
[Colocation](#)  
[Dedicated Servers](#)

### v4 Exhaustion

#### IPv4 & IPv6 Statistics

**RIR v4 /24s Left**

AfriNIC	234,611
APNIC	75,567
ARIN	513,601
LACNIC	258,551
RIPE	213,317

**v6 ASNs**  
11% (4,359/38,441)

**v6 Ready TLDs**  
84% (261/310)

**v6 Glues**  
6,134

**v6 Domains**

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.



Hurricane Electric Free IPv6 Tunnel Broker	
<b>Account Menu</b> Main Page <b>Account Info</b> Logout	Name: Carl Fernandes User ID: tb4e14cc9fb5a712.91557604 <b>Tunnel Broker News:</b> ☒ <b>Hurricane Electric Customer Appreciation Event</b> [May 27, 2011] ☒ <b>DynDns support for dns.he.net</b> [March 23, 2011] ☒ <b>Last 2 /8s, before the reserved 5 are assigned, now allocated.</b> [January 31, 2011] ☒ <b>Re: PPTP Tunnel Beta</b> [October 29, 2010] ☒ <b>UPDATE - August 14th, 2010</b> [August 14, 2010]
<b>User Functions</b> Combine Tunnels <b>Create Regular Tunnel</b> Create BGP Tunnel IPv6 Portscan	HE.NET IPv6 Certified <b>No Cert Yet</b> carferna

**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.

**Account Menu**

Main Page  
Account Info  
Logout

**User Functions**

Combine Tunnels  
Create Regular Tunnel  
Create BGP Tunnel  
IPv6 Portscan

**Create New Tunnel**

You currently have 0 of 5 tunnels configured.

- If you are trying to reclaim a tunnel simply use your last IPv4 address here. If you have any issues please email [ipv6@he.net](mailto:ipv6@he.net).
- If you have a public ASN and wish to setup a full BGP feed, please use [this form](#) instead.

IPv4 Endpoint (Your side):

IP is a potential tunnel endpoint.

You are viewing from: 173.37.194.125

We recommend you use: Checking...

Available Tunnel Servers:

**Asia**

- Hong Kong, HK
- Singapore, SG 216.218.221.6
- Tokyo, JP 74.82.46.6

**Europe**

- Amsterdam, NL
- Frankfurt, DE 216.66.84.46
- Not Available (Full)
- London, UK 216.66.80.26
- Paris, FR 216.66.84.42
- Stockholm, SE
- Zurich, CH 216.66.80.90
- 216.66.80.98

**North America**

- Ashburn, VA, US
- Chicago, IL, US 216.66.22.2
- Dallas, TX, US 209.51.181.2
- Fremont, CA, US 216.218.224.42
- Los Angeles, CA, US 72.52.104.74
- Miami, FL, US 66.220.18.42
- New York, NY, US 209.51.161.58
- Seattle, WA, US 209.51.161.14
- Toronto, ON, CA 216.218.226.238
- 216.66.38.58

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).

**Account Menu**

[Main Page](#)  
[Account Info](#)  
[Logout](#)

**User Functions**

[Combine Tunnels](#)  
[Create Regular Tunnel](#)  
[Create BGP Tunnel](#)  
[IPv6 Portscan](#)

**Tunnel Details**

---

**IPv6 Tunnel**    **Example Configurations**

---

Tunnel ID: 124957 [Delete Tunnel](#)  
 Creation Date: Jul 6, 2011  
 Description:

---

**IPv6 Tunnel Endpoints**

Server IPv4 Address: 216.218.224.42  
 Server IPv6 Address: 2001:470:1f0e:d14::1/64  
 Client IPv4 Address: 173.37.194.125  
 Client IPv6 Address: 2001:470:1f0e:d14::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:d14::/64  
 Routed /48: [Assign /48](#)

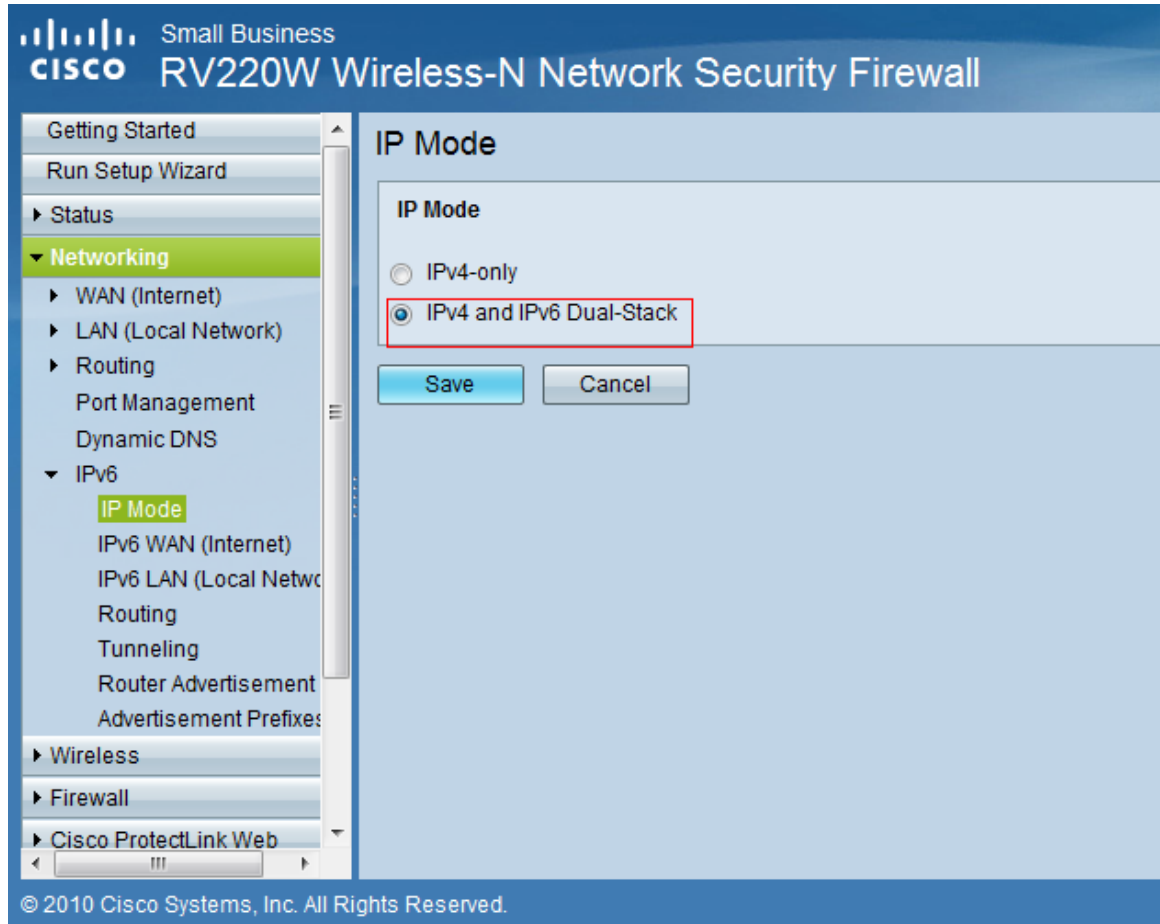
---

**rDNS Delegations** [Edit](#)

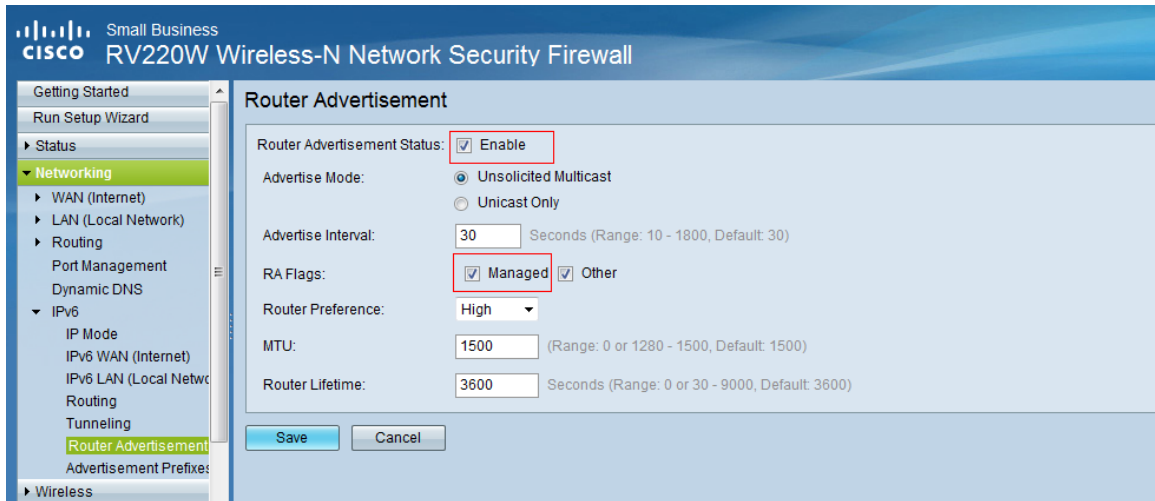
rDNS Delegated NS1:  
 rDNS Delegated NS2:  
 rDNS Delegated NS3:  
 rDNS Delegated NS4:  
 rDNS Delegated NS5:

**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.



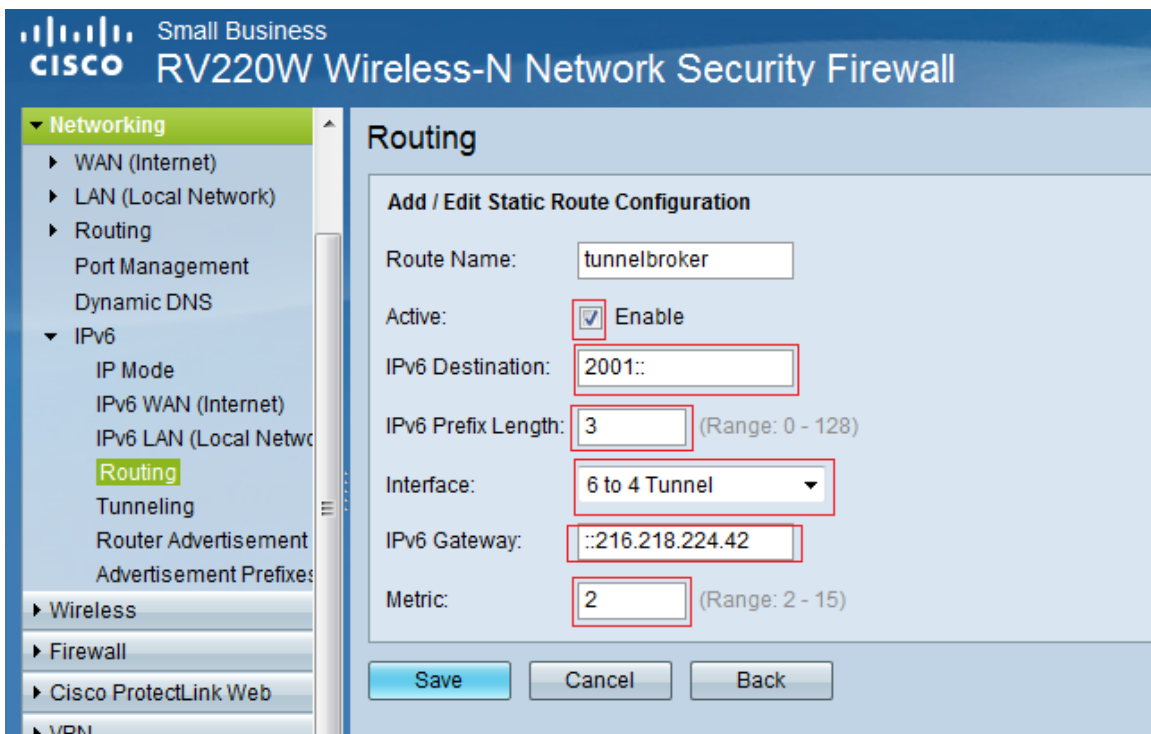
- 3) Go to Networking ->IPv6->Advertisement Prefixes. Choose 6to4 as the IPv6 prefix type and set the SLA ID to a **non zero** value (E.g 1). Also set the prefix lifetime.



- 4) Go to Networking->IPv6->Tunneling and enable automatic tunneling.

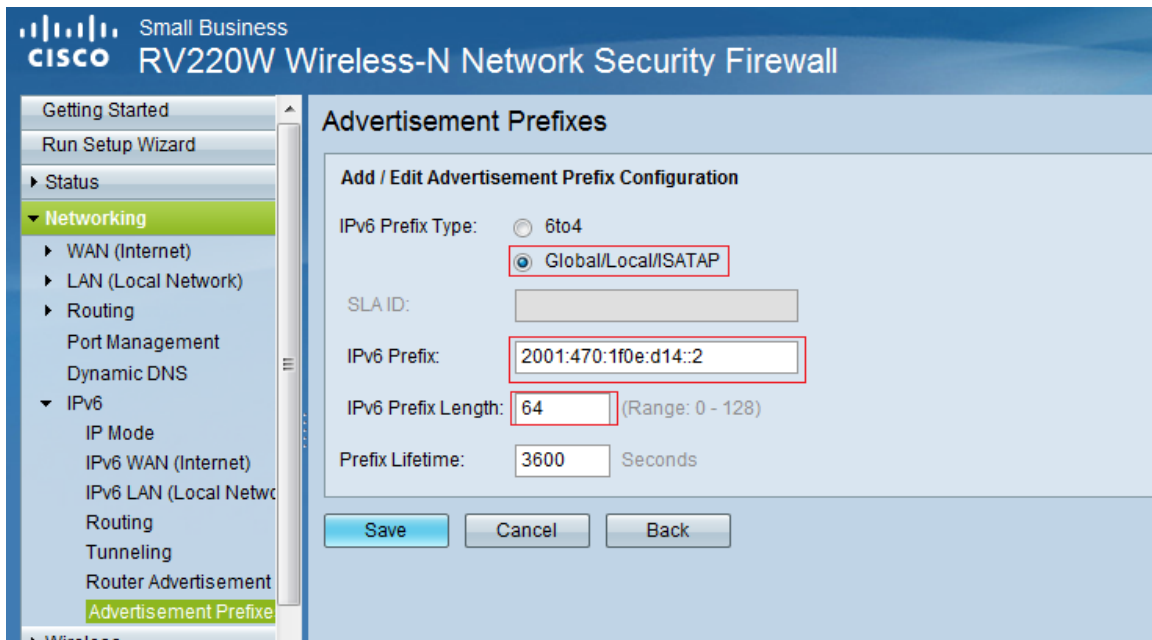


- 5) Next, create a static route to the broker. Go to Networking->IPv6->Routing->Add. Enter the IPv6 destination, prefix length and select 6to4 for the interface. For the IPv6 gateway, enter the WAN IPv4 address of the tunneling server in the following format: ::WAN IPv4 of broker's tunneling server.





- 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

