Configuration on Gateway-to-Gateway VPN tunnel using DynDNS on one side of the tunnel on RV016, RV042, RV042G and RV082 VPN Routers

Objectives

A Dynamic Domain Name System (DDNS) allows Internet access to the server using a domain name rather than an IP address. DDNS also maintains IP address information even when the client receives a dynamic IP assignment subject to constant change by the ISP. With this configuration, the server is always available regardless of the IP address. This service is only usable after you establish an account with a DDNS service provider.

The objective of this document is to explain how to configure a Gateway to Gateway VPN using DynDNS on local group side, and Static IP with registered domain name on the Remote group side for RV016, RV042, RV042G and RV082 VPN Routers.

Applicable Devices

- RV016
- RV042
- RV042G
- RV082

Software Version

- 4.2.2.08

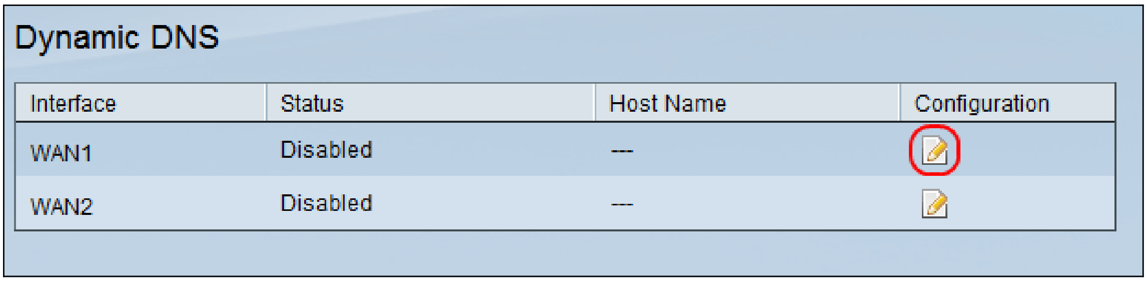
VPN Tunnel Configuration

Configure DDNS

Step 1. Visit www.dyndns.org and register a domain name.

Step 2. Log in to the Router Configuration Utility and choose **Setup > Dynamic DNS**. The *Dynamic DNS* page opens.

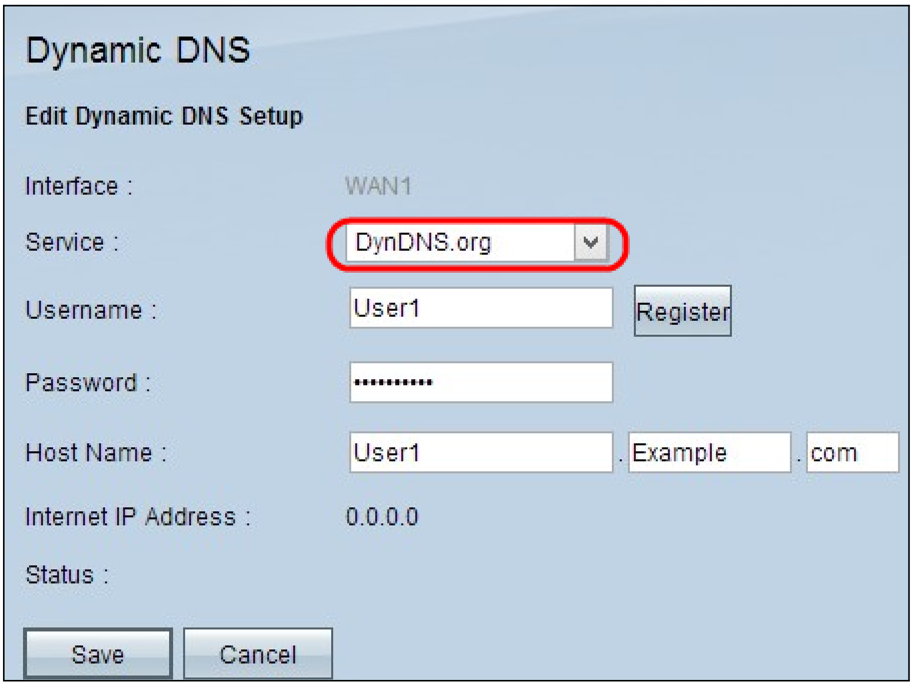
Step 3. Click the **Edit** icon for WAN1.



Dynamic DNS

Interface	Status	Host Name	Configuration
WAN1	Disabled	---	✎
WAN2	Disabled	---	✎

The *Edit Dynamic DNS Setup* page opens:



Dynamic DNS

Edit Dynamic DNS Setup

Interface : WAN1

Service : DynDNS.org

Username : User1

Password : ••••••••••

Host Name : User1 . Example . com

Internet IP Address : 0.0.0.0

Status :

Step 4. Choose **DynDNS.org** from the *Service* drop-down list.

Step 5. In the *Username* field, enter your DynDNS.org account Username information.

Step 6. In the *Password* field, enter the password corresponding to the Username registered at DynDNS.org

Step 7. Enter your host name in the *Host Name* field.

Note: The two remaining fields on the *Edit Dynamic DNS Setup* page display information and are non-configurable:

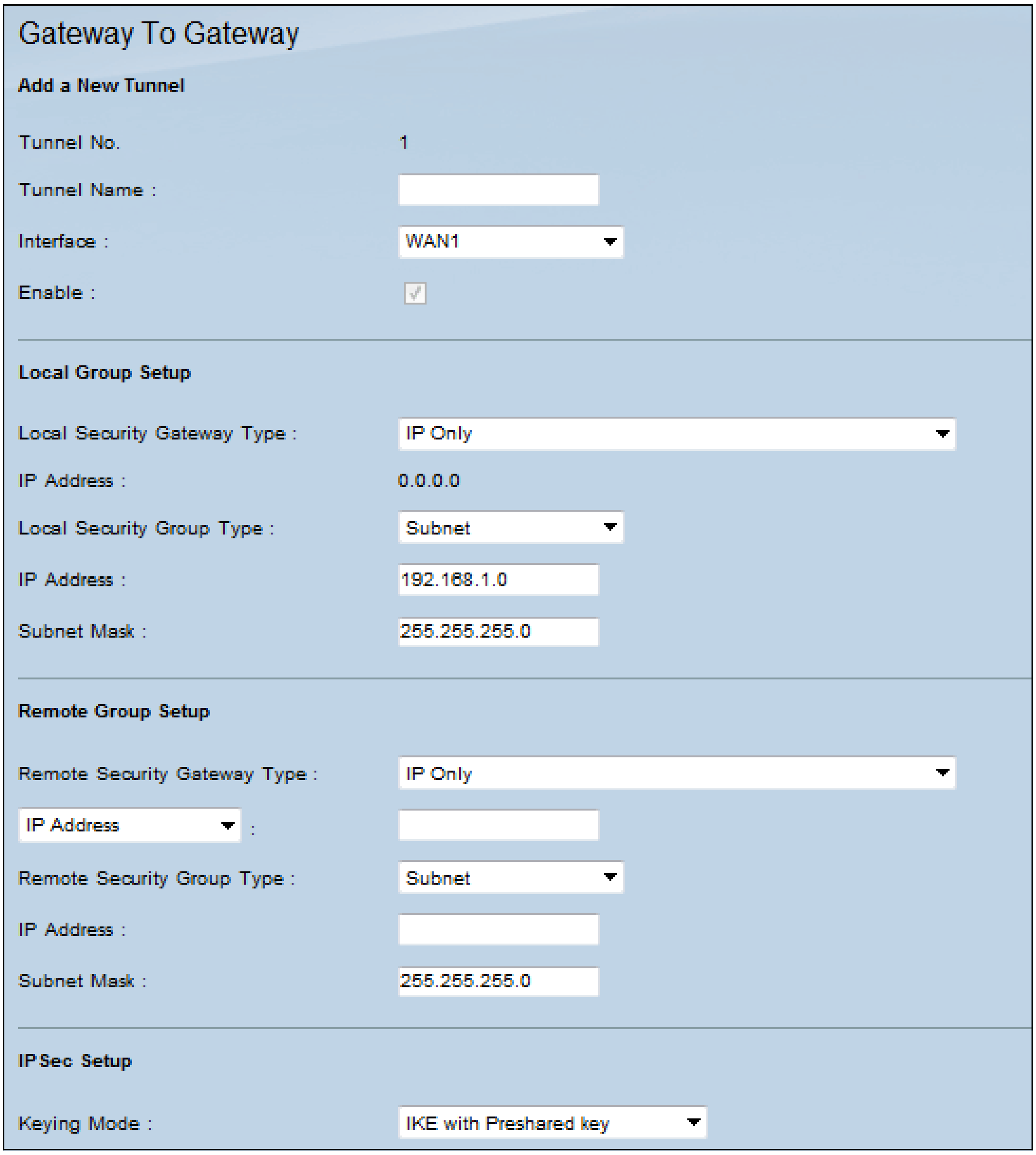
- Internet IP Address— Displays the router's IP address. This address will change because it is dynamic.

- Status— Displays the status of the DDNS. If there is an error, make sure you have entered the DDNS information correctly.

Step 8. Click **Save**.

Configure VPN Tunnel From Site 1 to Site 2

Step 9. Log in to the Router Configuration Utility and choose **VPN > Gateway to Gateway**. The *Gateway to Gateway* page opens*:*



Gateway To Gateway

Add a New Tunnel

Tunnel No.	1
Tunnel Name :	
Interface :	WAN1
Enable :	☑

Local Group Setup

Local Security Gateway Type :	IP Only
IP Address :	0.0.0.0
Local Security Group Type :	Subnet
IP Address :	192.168.1.0
Subnet Mask :	255.255.255.0

Remote Group Setup

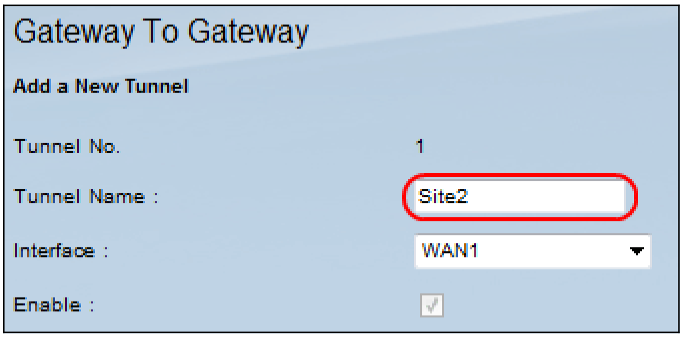
Remote Security Gateway Type :	IP Only
IP Address :	
Remote Security Group Type :	Subnet
IP Address :	
Subnet Mask :	255.255.255.0

IPSec Setup

Keying Mode :	IKE with Preshared key

Note: Before navigating away from this page, click **Save** to save the settings, or click **Cancel** to undo them.

Step 10. In the *Tunnel Name* field, enter a name for the VPN tunnel between site 1 and site 2.



Gateway To Gateway

Add a New Tunnel

Tunnel No.	1
Tunnel Name :	Site2
Interface :	WAN1
Enable :	☑

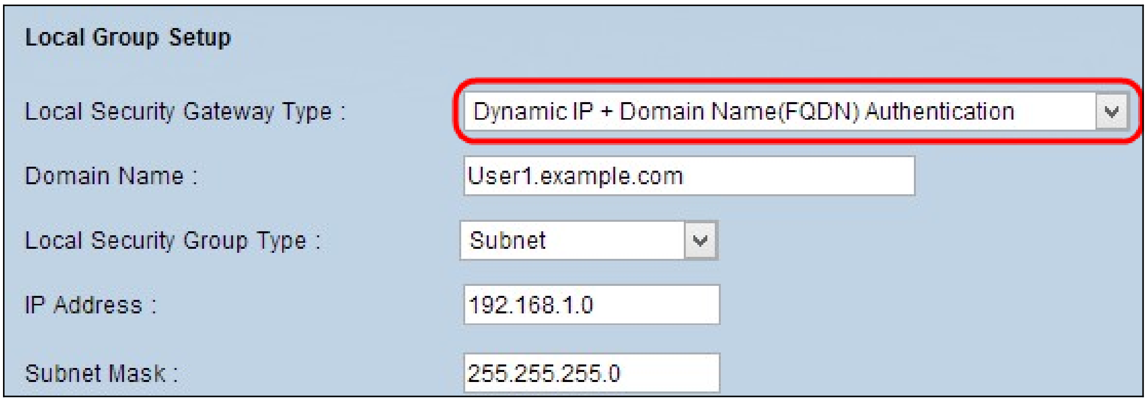
Note: The Tunnel Name is just for reference and does not have to match the name used at the other end of the VPN tunnel.

Step 11. Choose the WAN port to use for this tunnel from the *Interface* drop-down list.

Step 12. Check **Enable** to enable the VPN tunnel. The check box will be disabled once the

VPN tunnel is created.

Step 13. In the *Local Group Setup* area, choose **Dynamic IP + Domain Name (FQDN) Authentication** from the *Local Security Gateway Type* drop-down list.



Local Group Setup

Local Security Gateway Type : Dynamic IP + Domain Name(FQDN) Authentication

Domain Name : User1.example.com

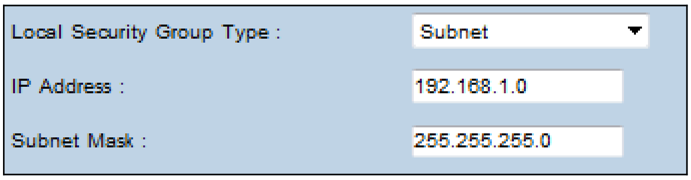
Local Security Group Type : Subnet

IP Address : 192.168.1.0

Subnet Mask : 255.255.255.0

Step 14. In the **Domain Name** field, enter the Registered DynDNS domain name.

Step 15. Choose **Subnet** from the *Local Security Group Type* drop-down list. The Local Security Group Type defines which LAN resources can use the VPN tunnel.



Local Security Group Type : Subnet

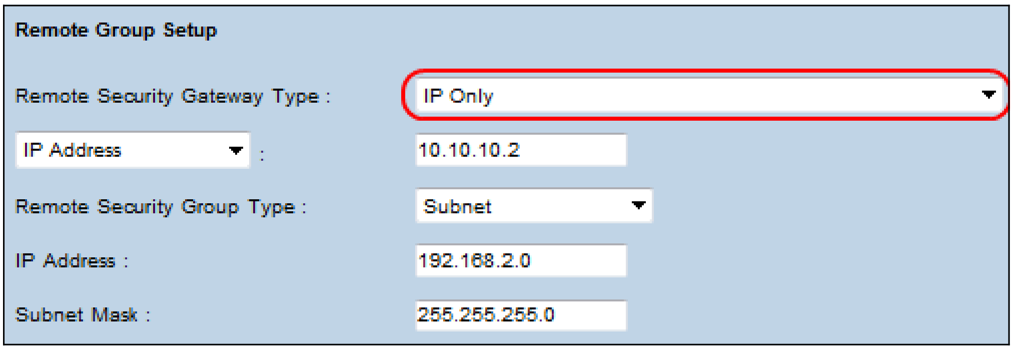
IP Address : 192.168.1.0

Subnet Mask : 255.255.255.0

Step 16. Enter the IP address in the *IP Address* field.

Step 17. Enter the subnet mask in the *Subnet Mask* field.

Step 18. In the *Remote Group Setup* area, choose **IP Only** from the *Remote Security Gateway Type* drop-down list.



Remote Group Setup

Remote Security Gateway Type : IP Only

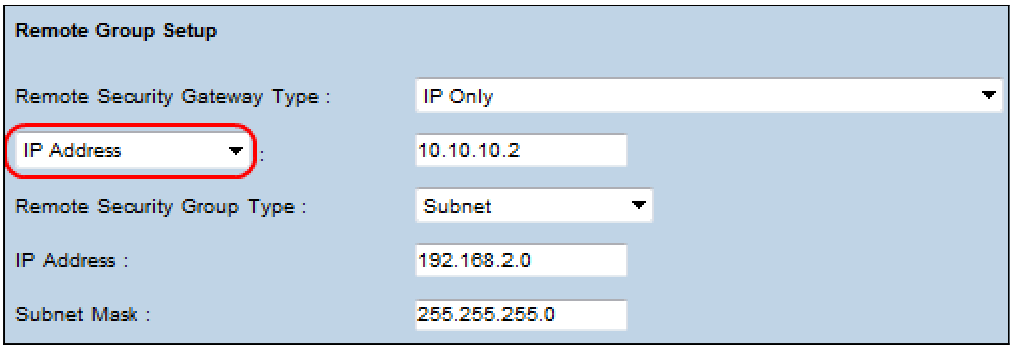
IP Address : 10.10.10.2

Remote Security Group Type : Subnet

IP Address : 192.168.2.0

Subnet Mask : 255.255.255.0

Step 19. Choose **IP by DNS Resolved** from the next drop-down list to specify one device.



Remote Group Setup

Remote Security Gateway Type : IP Only

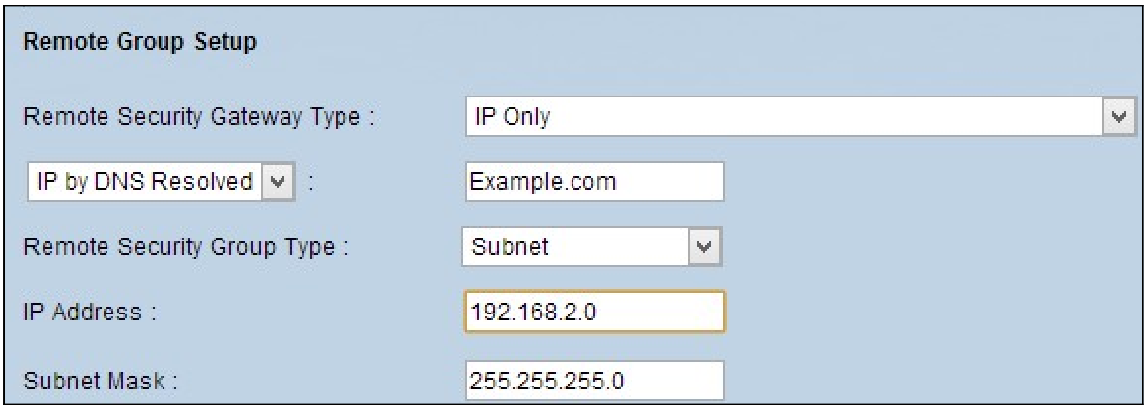
IP Address : 10.10.10.2

Remote Security Group Type : Subnet

IP Address : 192.168.2.0

Subnet Mask : 255.255.255.0

Step 20. After selecting **IP by DNS Resolved** from the drop-down list, enter the registered domain name of the router in the field beside it.



Remote Group Setup

Remote Security Gateway Type : IP Only

IP by DNS Resolved : Example.com

Remote Security Group Type : Subnet

IP Address : 192.168.2.0

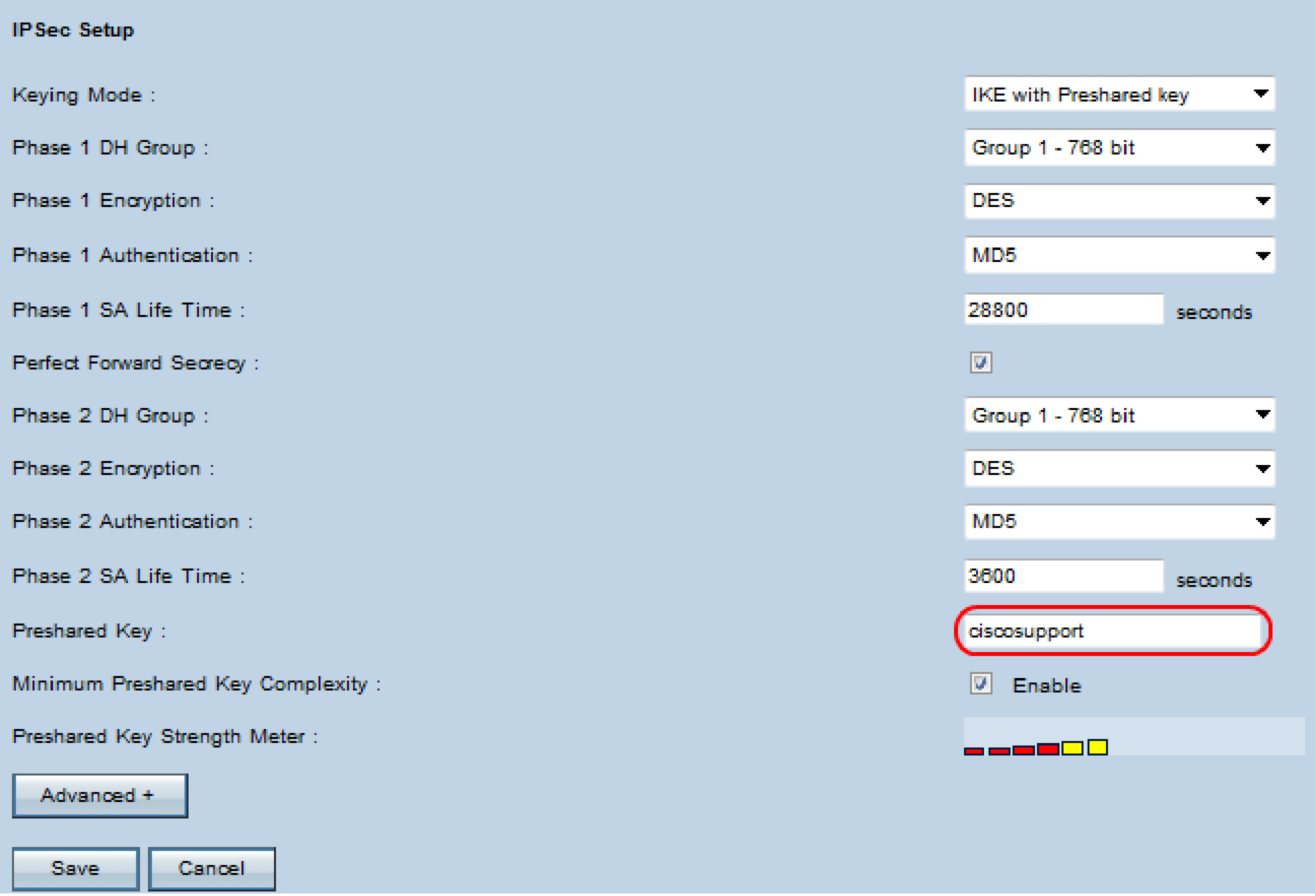
Subnet Mask : 255.255.255.0

Step 21. Choose **Subnet** from the *Remote Security Group Type* drop-down list. The Remote Security Group Type specifies which resources on the remote LAN can access the VPN tunnel.

Step 22. Enter the subnetwork IP address in the *IP Address* field.

Step 23. Enter the subnet mask in the *Subnet Mask* field.

Step 24. Under the *IP Sec Setup* area, find the *Preshared Key* field, and enter a preshared key to use to authenticate the remote IKE peer. Up to 30 keyboard characters and hexadecimal values can be entered. Both ends of the VPN tunnel must use the same preshared key. The rest of the fields in the **IPSec Setup** area may use default values.



IPSec Setup

Keying Mode :	IKE with Preshared key
Phase 1 DH Group :	Group 1 - 768 bit
Phase 1 Encryption :	DES
Phase 1 Authentication :	MD5
Phase 1 SA Life Time :	28800 seconds
Perfect Forward Secrecy :	☑
Phase 2 DH Group :	Group 1 - 768 bit
Phase 2 Encryption :	DES
Phase 2 Authentication :	MD5
Phase 2 SA Life Time :	3600 seconds
Preshared Key :	ciscosupport
Minimum Preshared Key Complexity :	☑ Enable
Preshared Key Strength Meter :	

Step 25. Click **Save** to save the changes.

Note: Configure the other router by following Steps 9 through 25 with the configuration for *Local Group Setup* and *Remote Group Setup* switched. The configuration done in the *Local Group Setup* area for the first router will be the configuration in the *Remote Group Setup* area on the second router.