

Configure Layer 2 Tunneling Protocol (L2TP) on RV110W

Objective

Layer 2 Tunneling Protocol (L2TP) is a tunneling protocol used by an Internet Service Provider (ISP) to support Virtual Private Networks (VPNs). It relies on an encryption protocol that it passes within the tunnel to provide privacy.

The objective of this document is to show you how to configure L2TP settings on the RV110W.

Applicable Devices

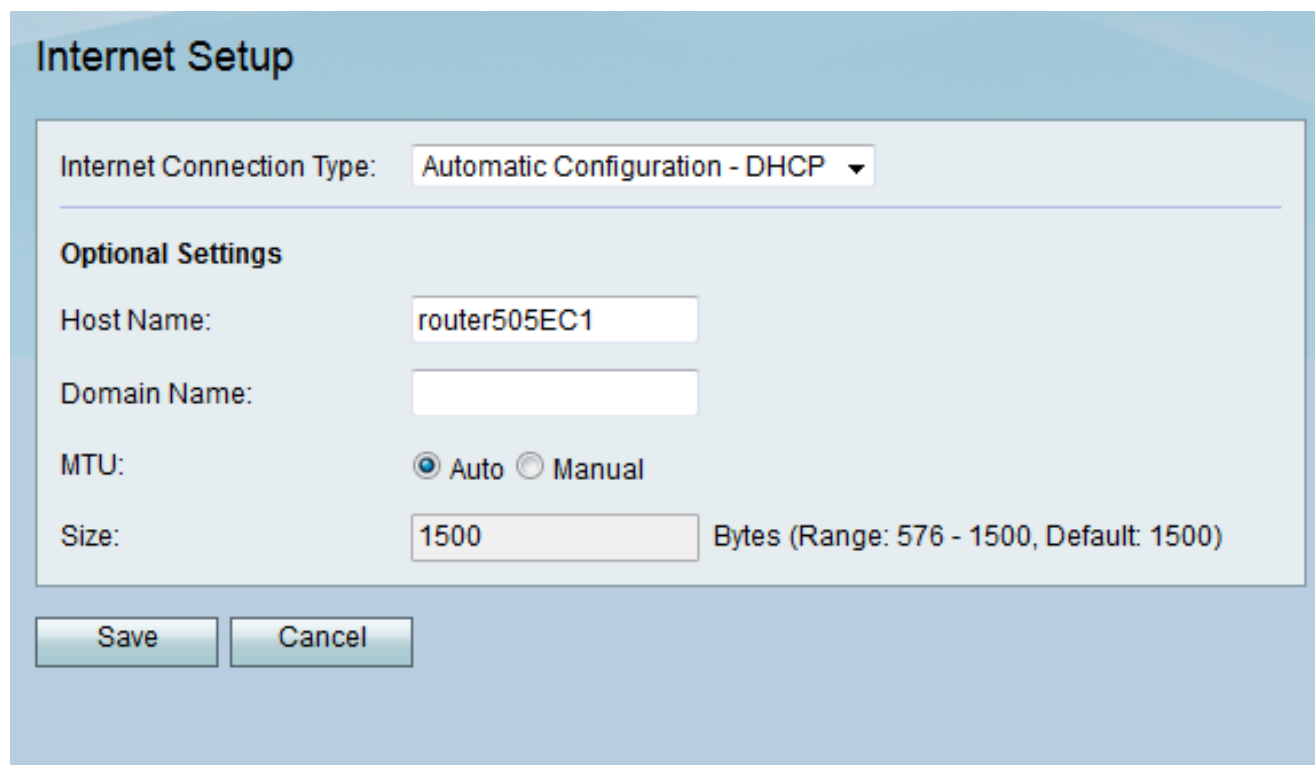
- RV110W

Software Version

- v1.2.1.4

Configuration Procedure

Step 1. Use the web configuration utility to choose **Network > WAN**. The *Internet Setup* page opens:



Internet Setup

Internet Connection Type: Automatic Configuration - DHCP

Optional Settings

Host Name: router505EC1

Domain Name:

MTU: Auto Manual

Size: 1500 Bytes (Range: 576 - 1500, Default: 1500)

Step 2. From the *Internet Connection Type* drop-down list, choose **L2TP**.

Internet Setup

Internet Connection Type: Automatic Configuration - DHCP
Optional Settings
Host Name:
Domain Name:
MTU: Auto Manual
Size: Bytes (Range: 576 - 1500, Default: 1500)

Step 3. In the *IP Address* field, enter the IP address of the WAN port.

L2TP Settings

IP Address: 123 . 110 . 139 . 92

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Step 4. In the *Subnet Mask* field, enter the subnet mask of the subnetwork.

L2TP Settings

IP Address:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="92"/>
Subnet Mask:	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="254"/>
L2TP Server:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Version:	<input type="text" value="2"/> ▾
Cookie Length:	<input type="text" value="0"/> ▾
Vendor ID:	<input checked="" type="radio"/> Standard <input type="radio"/> Cisco
Virtual Circuit ID:	<input type="text" value="0"/> (Range: 0 - 4294967295)
Authentication:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Username:	<input type="text"/>
Password:	<input type="text"/>
<input type="radio"/> Connect on Demand: Max Idle Time	<input type="text" value="5"/> minutes (Range: 1 - 9999, Default: 5)
<input checked="" type="radio"/> Keep Alive: Redial period	<input type="text" value="30"/> seconds (Range: 20 - 180, Default: 30)
Authentication Type:	<input type="text" value="Auto Negotiation"/> ▾
Service Name:	<input type="text"/>
MPPE Encryption:	<input type="checkbox"/> Enable

Step 5. In the *L2TP Server* field, enter the IP address of the L2TP server.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Step 6. Choose an L2TP server version from the *Version* drop-down list.

L2TP Settings

IP Address:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="92"/>
Subnet Mask:	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="254"/>
L2TP Server:	<input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Version:	<input type="text" value="2"/> ▼
Cookie Length:	<input type="text" value="2"/> <input type="text" value="3"/>
Vendor ID:	<input checked="" type="radio"/> Standard <input type="radio"/> Cisco
Virtual Circuit ID:	<input type="text" value="0"/> (Range: 0 - 4294967295)
Authentication:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Username:	<input type="text"/>
Password:	<input type="text"/>
<input type="radio"/> Connect on Demand: Max Idle Time	<input type="text" value="5"/> minutes (Range: 1 - 9999, Default: 5)
<input checked="" type="radio"/> Keep Alive: Redial period	<input type="text" value="30"/> seconds (Range: 20 - 180, Default: 30)
Authentication Type:	<input type="text" value="Auto Negotiation"/> ▼
Service Name:	<input type="text"/>
MPPE Encryption:	<input type="checkbox"/> Enable

Note: If you choose version 2, skip to [Step 13](#).

Step 7. From the *Cookie Length* drop-down list, choose the length of time that a cookie lasts.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Step 8. In the *Vendor ID* field, click the **Standard** radio button to use the standard vendor ID, or click the **Cisco** radio button to enter a virtual circuit ID.

L2TP Settings

IP Address:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="92"/>
Subnet Mask:	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="254"/>
L2TP Server:	<input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Version:	<input type="text" value="3"/> ▼
Cookie Length:	<input type="text" value="0"/> ▼
Vendor ID:	<input checked="" type="radio"/> Standard <input type="radio"/> Cisco
Virtual Circuit ID:	<input type="text" value="0"/> (Range: 0 - 4294967295)
Authentication:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Username:	<input type="text"/>
Password:	<input type="text"/>
<input type="radio"/> Connect on Demand: Max Idle Time	<input type="text" value="5"/> minutes (Range: 1 - 9999, Default: 5)
<input checked="" type="radio"/> Keep Alive: Redial period	<input type="text" value="30"/> seconds (Range: 20 - 180, Default: 30)
Authentication Type:	<input type="text" value="Auto Negotiation"/> ▼
Service Name:	<input type="text"/>
MPPE Encryption:	<input type="checkbox"/> Enable

Note: If you choose **Standard**, skip to [Step 10](#).

Step 9. In the *Virtual Circuit ID* field, enter the virtual circuit ID that you want to use.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

[Step 10](#). In the *Authentication* field, click the **Enable** radio button to require a username and password, or click the **Disable** radio button to turn off authentication.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Note: If you choose **Disable**, skip to [Step 16](#).

Step 11. In the *Username* field, enter the username for the L2TP server.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Step 12. In the *Password* field, enter the password for the L2TP server.

L2TP Settings

IP Address:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="92"/>
Subnet Mask:	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="254"/>
L2TP Server:	<input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Version:	<input type="text" value="3"/> ▼
Cookie Length:	<input type="text" value="0"/> ▼
Vendor ID:	<input checked="" type="radio"/> Standard <input type="radio"/> Cisco
Virtual Circuit ID:	<input type="text" value="0"/> (Range: 0 - 4294967295)
Authentication:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Username:	<input type="text" value="test"/>
Password:	<input type="password" value="••••••••"/>
<input type="radio"/> Connect on Demand: Max Idle Time	<input type="text" value="5"/> minutes (Range: 1 - 9999, Default: 5)
<input checked="" type="radio"/> Keep Alive: Redial period	<input type="text" value="30"/> seconds (Range: 20 - 180, Default: 30)
Authentication Type:	<input type="text" value="Auto Negotiation"/> ▼
Service Name:	<input type="text"/>
MPPE Encryption:	<input type="checkbox"/> Enable

[Step 13](#). Click the **Connect on Demand** radio button to enter the maximum allowable idle time (in minutes) in the *Max Idle Time* field, or click the **Keep Alive** radio button to enter how often (in seconds) the connection reconnects in the *Redial period* field.

L2TP Settings

IP Address: . . .

Subnet Mask: . . .

Gateway: . . .

L2TP Server: . . .

Version: ▼

Cookie Length: ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: (Range: 0 - 4294967295)

Authentication: Enable Disable

Username:

Password:

Connect on Demand: Max Idle Time minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period seconds (Range: 20 - 180, Default: 30)

Authentication Type: ▼

Service Name:

MPPE Encryption: Enable

Step 14. From the *Authentication Type* drop-down list, choose an authentication type. The available options are defined as follows:

L2TP Settings

IP Address: 123 . 110 . 139 . 92

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 123 . 110 . 139 . 254

L2TP Server: 1 . 1 . 1 . 1

Version: 2 ▼

Cookie Length: 0 ▼

Vendor ID: Standard Cisco

Virtual Circuit ID: 0 (Range: 0 - 4294967295)

Authentication: Enable Disable

Username: test

Password: ●●●●●●●●

Connect on Demand: Max Idle Time 5 minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period 30 seconds (Range: 20 - 180, Default: 30)

Authentication Type: Auto Negotiation ▼
Auto Negotiation
PAP
CHAP
MS-CHAP
MS-CHAP2

Service Name:

MPPE Encryption:

- Auto Negotiation — The L2TP server sends a request that asks for security information to the RV110W. The RV110W sends the security information to the L2TP Server.
- PAP — This option uses Password Authentication Protocol (PAP) to connect to the Internet Service Provider (ISP).
- CHAP Negotiation — This option uses Challenge Handshake Authentication Protocol (CHAP) to connect to the ISP.
- MS-CHAP Negotiation — This option uses Microsoft Challenge Handshake Authentication (MS-CHAP) to connect to the ISP.
- MS-CHAPv2 Negotiation — This option uses Microsoft Challenge Handshake Authentication version 2 (MS-CHAPv2) to connect to the ISP.

Step 15. In the *Service Name* field, enter the service name.

L2TP Settings

IP Address:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="92"/>
Subnet Mask:	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Gateway:	<input type="text" value="123"/> . <input type="text" value="110"/> . <input type="text" value="139"/> . <input type="text" value="254"/>
L2TP Server:	<input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Version:	<input type="text" value="2"/> ▼
Cookie Length:	<input type="text" value="0"/> ▼
Vendor ID:	<input checked="" type="radio"/> Standard <input type="radio"/> Cisco
Virtual Circuit ID:	<input type="text" value="0"/> (Range: 0 - 4294967295)
Authentication:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Username:	<input type="text" value="test"/>
Password:	<input type="password" value="••••••••••"/>
<input type="radio"/> Connect on Demand: Max Idle Time	<input type="text" value="5"/> minutes (Range: 1 - 9999, Default: 5)
<input checked="" type="radio"/> Keep Alive: Redial period	<input type="text" value="30"/> seconds (Range: 20 - 180, Default: 30)
Authentication Type:	<input type="text" value="Auto Negotiation"/> ▼
Service Name:	<input type="text" value="TestServiceName"/>
MPPE Encryption:	<input type="checkbox"/> Enable

[Step 16](#). In the *MPPE Encryption* field, check the **Enable** check box to enable Microsoft Point-to-Point Encryption (MPPE) which encrypts data over Point-to-Point Protocol (PPP) and a Virtual Private Network (VPN).

L2TP Settings

IP Address: 123 . 110 . 139 . 92

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 123 . 110 . 139 . 254

L2TP Server: 1 . 1 . 1 . 1

Version: 2 ▾

Cookie Length: 0 ▾

Vendor ID: Standard Cisco

Virtual Circuit ID: 0 (Range: 0 - 4294967295)

Authentication: Enable Disable

Username: test

Password: ●●●●●●●●

Connect on Demand: Max Idle Time 5 minutes (Range: 1 - 9999, Default: 5)

Keep Alive: Redial period 30 seconds (Range: 20 - 180, Default: 30)

Authentication Type: Auto Negotiation ▾

Service Name: TestServiceName

MPPE Encryption: Enable

Step 17. Click **Save** to save changes or **Cancel** to discard them.

Optional Settings

This procedure explains how to adjust optional settings to further configure the RV110W.

Step 1. In the *Host Name* field, enter a host name for the RV110W.

Optional Settings

Host Name:

Domain Name:

MTU: Auto Manual

Size: Bytes (Range: 576 - 1460, Default: 1460)

Step 2. In the *Domain Name* field, enter a domain name for your network.

Optional Settings

Host Name:

Domain Name:

MTU: Auto Manual

Size: Bytes (Range: 576 - 1460, Default: 1460)

Step 3. in the *MTU* field, click the **Auto** radio button to set the Maximum Transmit Unit (MTU) to the default 1500 bytes, or click the **Manual** radio button to manually enter the MTU size.

Optional Settings

Host Name:

Domain Name:

MTU: Auto Manual

Size: Bytes (Range: 576 - 1460, Default: 1460)

Step 4. If you chose **Manual** in the previous step, enter the MTU size (in bytes) In the *Size* field.

Optional Settings

Host Name:

Domain Name:

MTU: Auto Manual

Size: Bytes (Range: 576 - 1460, Default: 1460)

Step 5. Click **Save** to save changes or **Cancel** to discard them.