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IPv6 Settings Configuration on the WAP131 and WAP351 Access Points

Objective

IPv6 is the most recent implementation of the IP protocol used to route traffic across the internet. IPv6 deals with the issue of limited IP address space and is designed to replace IPv4.

The objective of this article is to show you how to configure the WAP131 and WAP351 devices to use IPv6 addresses and IPv6 tunnel.

Applicable Devices

- WAP131
- WAP351

Software Version

- V1.0.0.39

Configuring IPv6 Address Settings

Step 1. Log in to the web configuration utility and navigate to **LAN > IPv6 Setting**. The *IPv6 Setting* page appears:

Step 2. In the *IPv6 Connection Type* field, choose how the WAP will obtain an IPv6 address by selecting the corresponding radio button.

The available options are defined as follows:

- DHCPv6 — Address is assigned by a DHCPv6 server.
- Static IPv6 — Manually enter the IPv6 address.

Step 3. (Optional) Check the *IPv6 Administrative Mode* check box if you would like to enable IPv6 management access to the WAP.

Step 4. (Optional) Check the *IPv6 Auto Configuration Administrative Mode* check box if you would like to enable the WAP to learn its IPv6 addresses and gateway through router advertisements received on the LAN port.

Step 5. If you selected **Static IPv6** in Step 2, enter the static IP in the *Static IPv6 Address* field. If **DHCPv6** was selected in Step 2 you may skip this step.

Step 6. If you selected **Static IPv6** in Step 2, enter the prefix length of the static IPv6 address in in the *Static IPv6 Address Prefix Length* field. This prefix determines the network portion of the IP address and is similar to a subnet mask from IPv4. The range is 0 to 128. If **DHCPv6** was selected in Step 2 you may skip this step.

The *Static IPv6 Address Status* field gives the status of the static IPv6 address. The following statuses may be displayed:

- Operational — The static address has been verified to be unique on the LAN and is useable.
- Tentative — The static address is in the process of being verified for uniqueness on the network. While in this state, the address is not useable
- Blank (no value) — No static IP address is assigned or the assigned address is not operational.

The *IPv6 Autoconfigured Global Addresses* field will list all IPv6 addresses that have been assigned automatically to the WAP device.

The *IPv6 Link Local Address* field displays the IPv6 address used by the local link. It is not configurable and is assigned using the IPv6 Neighbor Discovery process.

Step 7. If you selected **Static IPv6** in Step 2, enter an IPv6 address in the *Default IPv6 Gateway* field to use as the default gateway address, otherwise skip to Step 8.

Step 8. If you selected **DHCPv6** in Step 2, choose the radio button from the *IPv6 Domain Name Servers* field for how you would like DNS servers to be allocated.

The available options are defined as follows:

- Dynamic — DNS name servers are learned dynamically through DHCPv6.
- Manual — Manually specify up to two IPv6 DNS name servers in the fields provided.

Step 9. If you have selected **Manual** in Step 8 or **Static IPv6** in Step 1, then enter in two IPv6 DNS name servers in the fields provided. Otherwise, you may skip this step.

Configuring an IPv6 Tunnel using ISATAP

The WAP 351 and WAP 131 devices support Intra-Site Automatic Tunnel Addressing Protocol (ISATAP). ISATAP enables the WAP to transmit IPv6 packets that are encapsulated within IPv4 packets over the LAN. With this protocol, the WAP can communicate with remote IPv6 hosts even if the LAN connecting them does not support IPv6.

The WAP acts as an ISATAP client. An ISATAP-enabled host or router must be connected on the LAN to establish a tunnel. For more information on ISATAP on the RV180 and RV180W, refer to the article *Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) Tunnel Configuration on the RV180 and RV180W Routers*.

Step 1. In the *ISATAP Status* field, check the enable checkbox if you want to enable the administrative mode of ISATAP on the WAP device. This will allow IPv6 traffic from the WAP to be transmitted over an IPv4 network.

Step 2. Enter the IP address or DNS name of the ISATAP router in the *ISATAP Capable Host* field. The default value is "isatap".

Step 3. To specify how often the WAP should send DNS queries to attempt to resolve an ISATAP host name into an IP address, enter a time in seconds into the *ISATAP Query Interval* field. The valid range is 120 to 3600.

Step 4. In the *ISATAP Solicitation Interval* field, specify how often (in seconds) the WAP device should send router solicitation messages to ISATAP routers that the WAP discovers through the DNS query messages. The WAP device sends the router solicitation messages only when there is no active ISATAP router. The default value is 120 seconds.

Note: When the tunnel is established the *ISATAP IPv6 Link Local Address* and *ISATAP IPv6 Global Address* will be displayed on the page.

The *ISATAP IPv6 Link Local Address* is your local IPv6 address that is not routable. This address is used for local area network connections.

The *ISATAP IPv6 Global Address* is your global IPv6 address that is world-routable and used for internet traffic.

Step 5. Click **Save** to save the changes.

Step 6. A *Confirm* window will appear to warn you that you may be disconnected and that your wireless settings are about to be updated. Click **OK** to continue.