

IPv6 Configuration and Setup Guide for R-Series and Mikrotik Router

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Introduction

This document provides details on configuring R-Series and Mikrotik routers. For more information, please refer the User Guide and Knowledge Base documents of R-series and Mikrotik, or contact Cambium Support.

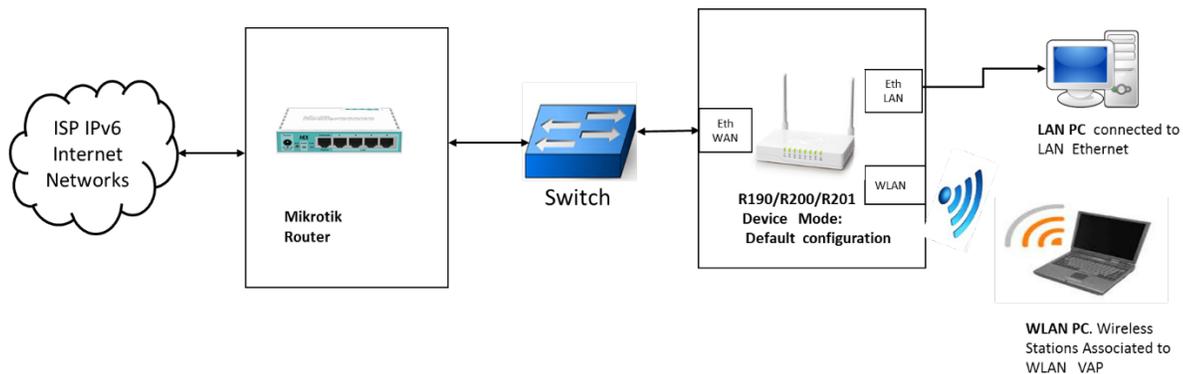
R-Series Knowledge Base documents

Cambium Community URL: http://community.cambiumnetworks.com/t5/cnPilot-R-Series-Home-Small/bd-p/Getting_Started

R-Series User Guide

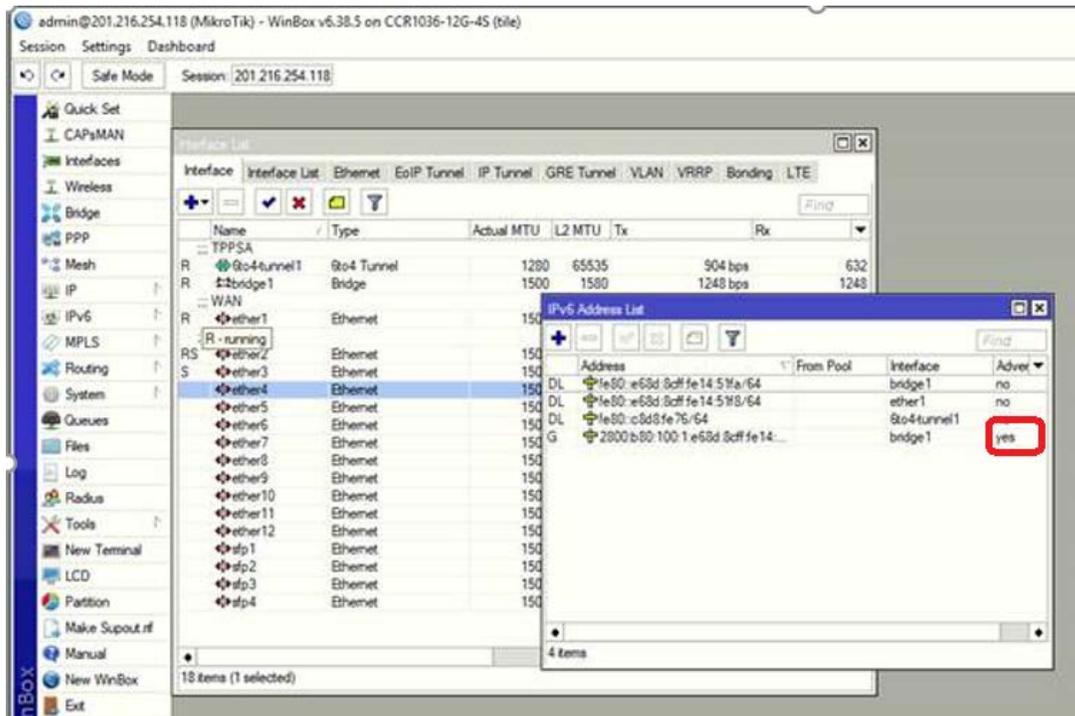
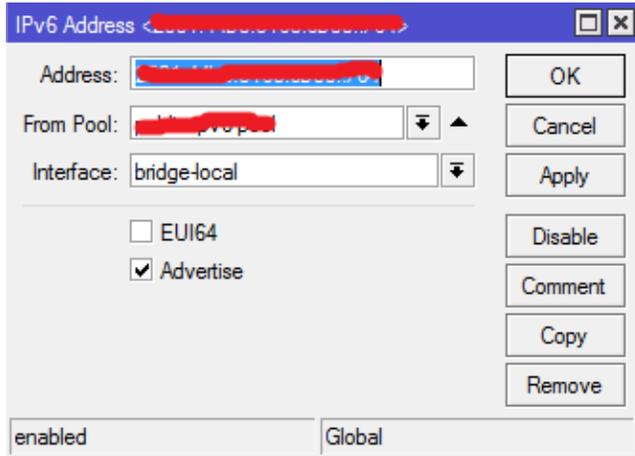
Mikrotik IPv6 Wiki page URL: <https://wiki.mikrotik.com/wiki/Manual:IPv6>.

Setup Diagram

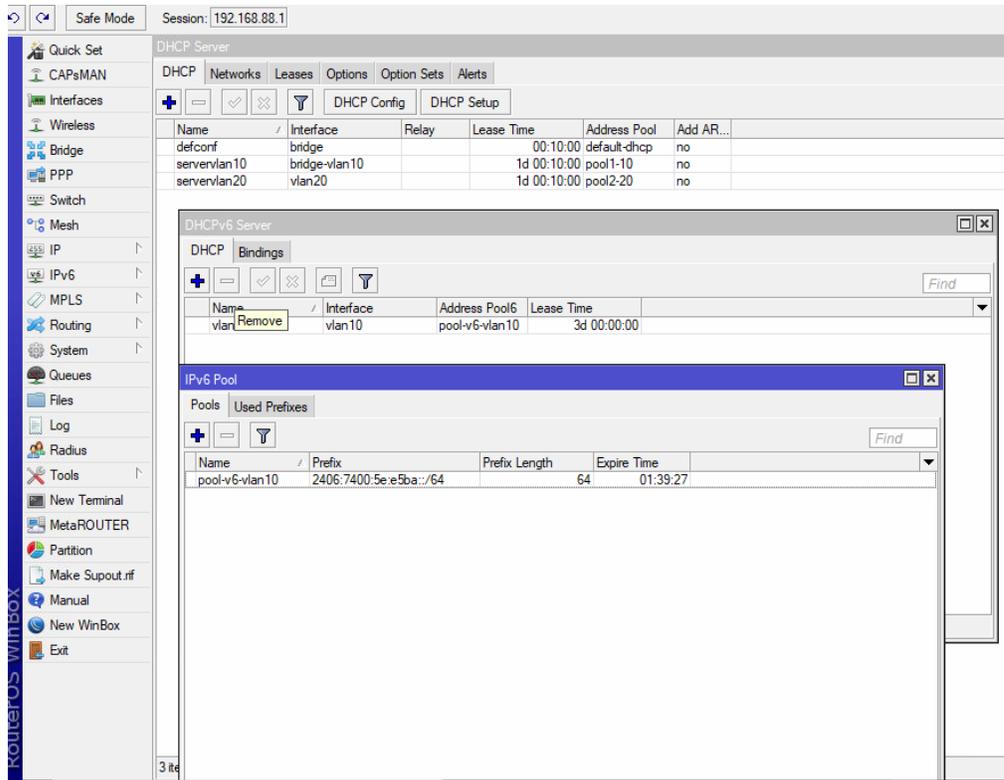


Configuring MikroTik and R-series Routers

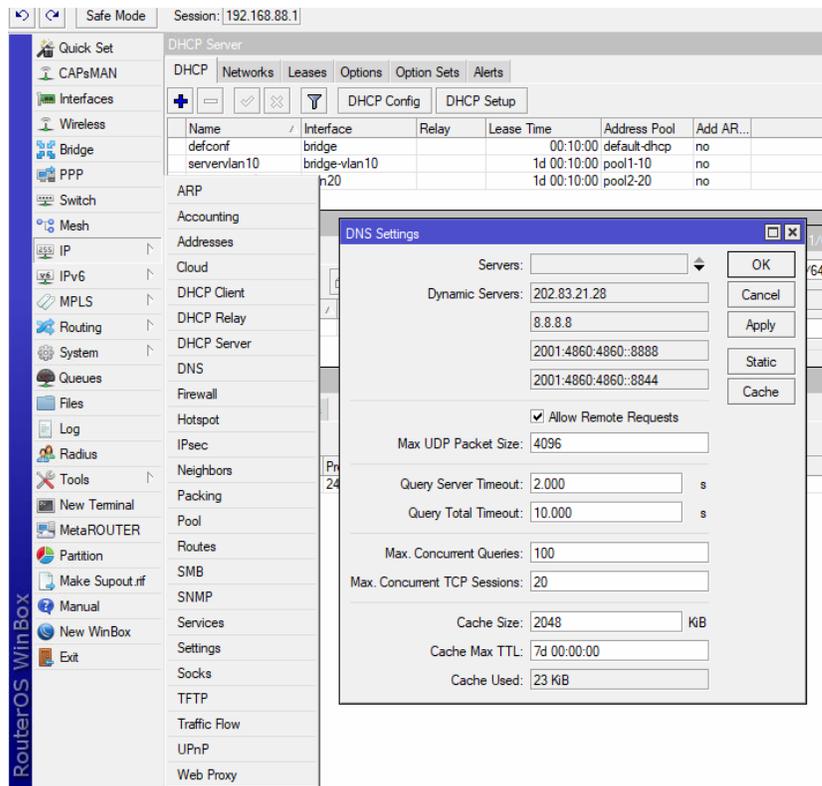
1. Configure and run Router Advertised (RA) in MikroTik router. (To send the RA message to downlink network, after receiving the RA message, R-series adds WAN IP (SLAAC) and default route with the link-local address.)



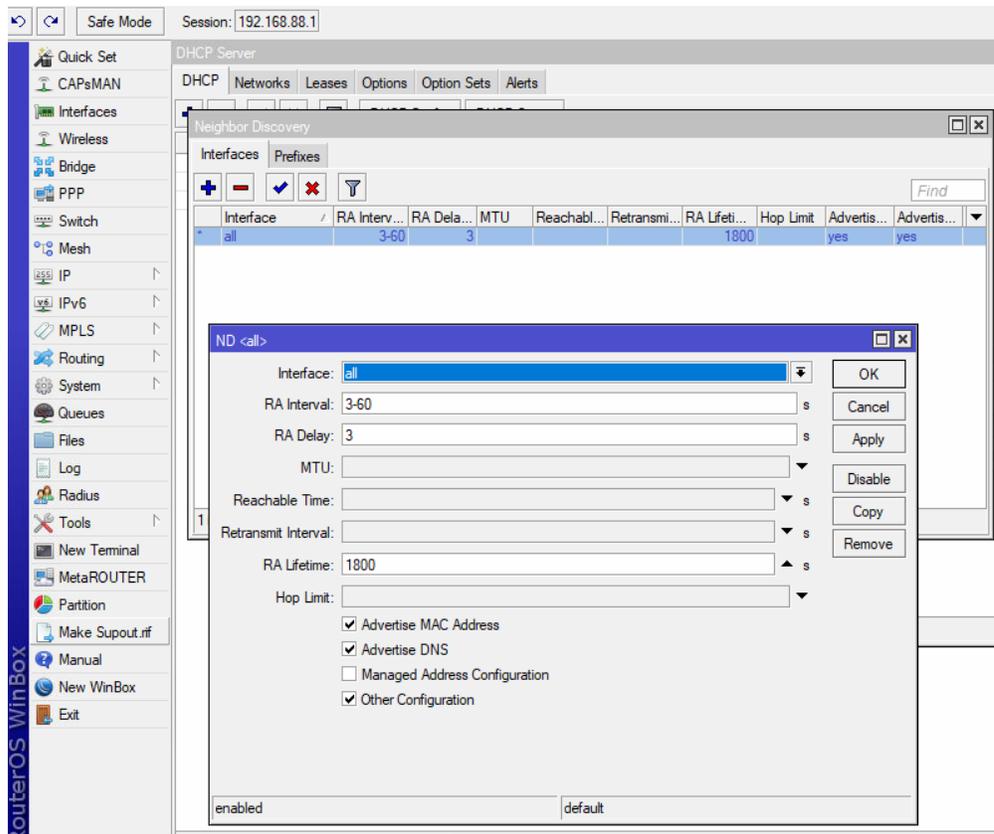
2. In the MikroTik router, configure and run the DHCPv6 server to delegate the IPv6 prefix pool that receives from uplink /ISP.



3. In the MikroTik router, configure DNS address.



4. In the MikroTik router, configure the ND feature to send the RA message with correct and proper parameters.



5. Configure R-series router in default mode.
6. In R-series router, enable IPv6 mode, and then configure in DHCP Stateless or DHCP Stateful mode as per configuration of Mikrotik router/uplink router and enable prefix delegation mode to delegate IPv6 address to LAN side. In the case of the Mikrotik router, enable DHCP stateless mode.



[Status](#) | **[Network](#)** | [Wireless 2.4GHz](#) | [Wireless 5GHz](#) | [SIP](#) | [FXS1](#) | [FXS2](#) | [Security](#) | [Application](#)

[WAN](#) | [LAN](#) | [IPv6 Advanced](#) | [IPv6 LAN](#) | [VPN](#) | [Port Forward](#) | [DMZ](#) | [DDNS](#) | [QoS](#) | [Port Setting](#) | [Route](#)

INTERNET

WAN

Connect Name: Delete Connect
 Service:
 IP Protocol Version:
 WAN IP Mode:
 MAC Address Clone:
 NAT Enable:
 Overwrite NAT IP:
 VLAN Mode:
 VLAN ID: (1-4094)
 DNS Mode:
 Primary DNS:
 Secondary DNS:
 DHCP Renew:
 DHCP Vendor (Option 60):
 DHCPv6 Address Settings:
 Prefix Delegation:
 Port Bind: Port_1 Port_2 Port_3 Port_4
 Wireless(SSID) Wireless(SSID1) Wireless(SSID2) Wireless(SSID3)

Note: A port can be mapped to only a single WAN profile. If a port is selected in multiple WAN profiles then, only the most recent selection is retained.

7. Save in R-series, then reboot the device.
8. Download the configuration from R-series and then add or append below configuration to the downloaded file then upload the configuration file.

Configuration: `" misc_cmd=sleep 30; ip -6 route del default dev eth2.1 metric 1024 mtu 1500 advmss 1440 hoplimit 0"`.



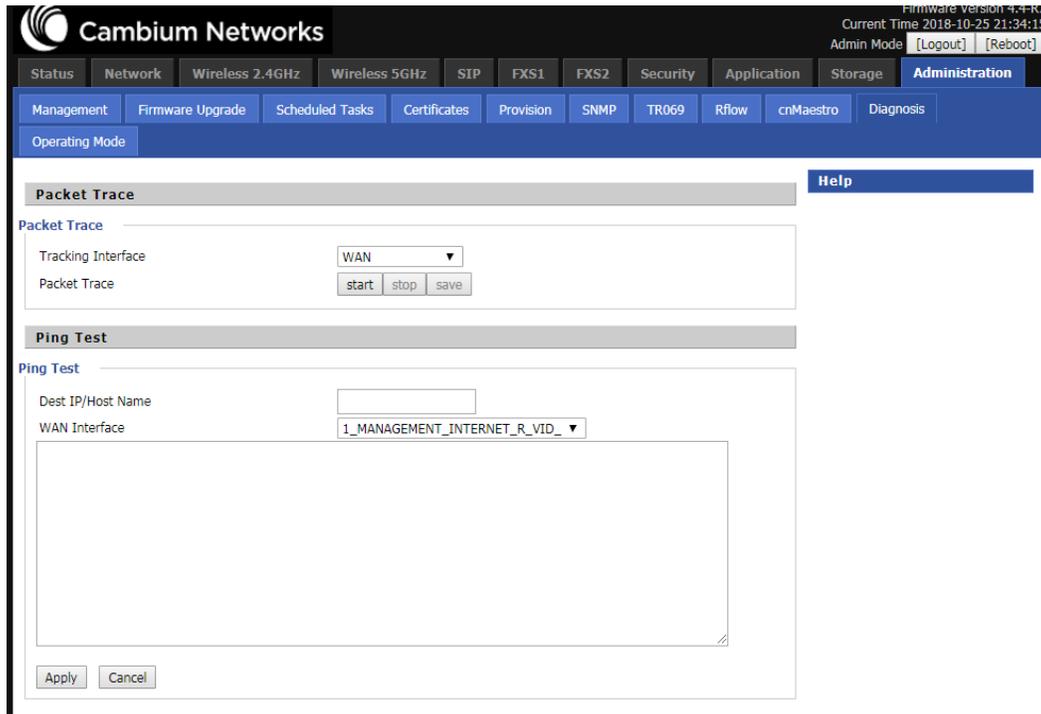
Note

Please check the internet connectivity in the LAN/WLAN client. The device should delegate prefix using RA (prefix is received by R-series from MikroTik router) and R-series should send DNS information using DHCP stateless.

Troubleshooting

This section provides procedure to troubleshoot when the user is not able to connect to the Internet by checking the configuration and connectivity of R-series and Mikotik.

1. Check the ping connectivity to the linternet IP from the device (Example: ping connectivity to Google.com)



The screenshot displays the Cambium Networks web management interface. At the top, the navigation menu includes Status, Network, Wireless 2.4GHz, Wireless 5GHz, SIP, FXS1, FXS2, Security, Application, Storage, and Administration. The Administration menu is expanded to show Management, Firmware Upgrade, Scheduled Tasks, Certificates, Provision, SNMP, TR069, Rflow, cnMaestro, and Diagnosis. The main content area is divided into two sections: Packet Trace and Ping Test. The Packet Trace section has a dropdown menu for 'Tracking Interface' set to 'WAN' and buttons for 'start', 'stop', and 'save'. The Ping Test section has a text input for 'Dest IP/Host Name', a dropdown for 'WAN Interface' set to '1_MANAGEMENT_INTERNET_R_VID_', and a large empty text area for results. At the bottom of the Ping Test section are 'Apply' and 'Cancel' buttons.

2. Check IP address of the WAN interface. R-series device should generate IP using RA Message (RA message will be sent by MikroTik).
3. Check IP address of DNS in status page of R-Series, If DNS IP is not available then check DNS server configuration of MikroTik.
4. Check the prefix delegation IP address in status page of R-series, if IP is not available then check DHCP server configuration of MikroTik.
5. Check the IP range/subnet of LAN PC client. IP range should be as per prefix/subnet which is received from MikroTik (R-Series will get prefix/subnet from MikroTik router). if LAN IP of the subnet does not match with prefix/subnet, execute the IP and IP renew process in LAN PC to get new IP.
6. Check the default gateway of LAN client. Default gateway IP should be the link-local address of the LAN interface of the device (br0). To check link-local address br0 interface, login into the device.
7. Using SSH execute the "ifconfig" command.



Note

Check DNS IP of LAN client, If DNS IP is not available then DNS IP status R-Series, MikroTik should send DNS information using DHCP stateless. Please check the DNS configuration and ND feature option.

Contacting Cambium Networks

Support website: <http://www.cambiumnetworks.com/support>

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