# **RUT850 Routes**

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The information in this page is updated in accordance with firmware version .

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### Summary

The **Routes** page displays the ARP table and active IPv4/IPv6 routes.

This chapter of the user manual provides an overview of the Routes page for RUT850 devices.

## ARP

The **Address Resolution Protocol** (**ARP**) is a communication protocol used for mapping an Internet Protocol address (IP address) to a physical machine's link layer address (MAC address) belonging to the local network.

The ARP section displays the router's **ARP cache** (also known as ARP table) data. The ARP cache contains information on each known MAC address and its corresponding IP address. When the router receives a packet destined for a local host, the ARP program attempts to find a physical host or MAC address in the ARP cache that matches the IP address. If the ARP cache doesn't contain the needed IP address, ARP broadcasts a request packet to all LAN machines in order to find the device with the IP address in question.

The figure below is an example of the ARP cache section:

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Field nameValueDescriptionIP addressip; default: noneIP address of a local host.MAC addressmac; default: noneMAC address of a local host.Interfacestring; default: noneInterface through which the router is associated with the host.

You can also view the ARP cache via shell using the **arp** or **ip neigh** commands, depending on which output your prefer:

root@Teltonika-RUT850:~# arp

Flags IP address HW type HW address Mask Device 192.168.1.103 0x1 0x2 ac:e2:d3:00:00:00 \* brlan 192.168.1.151 18:d6:c7:00:00:00 0x1 0x2 \* brlan root@Teltonika-RUT850:~# ip neigh

192.168.1.103 dev br-lan lladdr ac:e2:d3:00:00:00 REACHABLE 192.168.1.151 dev br-lan lladdr 18:d6:c7:00:00:00 REACHABLE

#### **Active IP routes**

The **Active IP routes** section displays the router's **routing table**. A routing table contains a list of routes to network destinations associated with and known by the router.

The figure below is an example of the Active IP routes section:

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Field name	e Value	Description
Network	string; default: <b>none</b>	Associated network interface name.
Target	ip   ip/netmask; default: <b>none</b>	Destination network address.
IP gateway	ip; default: <b>none</b>	Indicates the IP address of the gateway through which the target network can be reached.
Metric	integer [04,294,967,295]; default: <b>none</b>	Metrics help the router choose the best route among multiple feasible routes to a destination. The route will go in the direction of the gateway with the lowest metric value.

You can also view the routing table via shell using the **route** or **ip route** commands, depending on which output your prefer:

root@Teltonika-RUT850:~# route

Kernel IP routing table							
Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
default	10.1.179.213	0.0.0.0	UG	0	0	0	wwan0
10.1.179.208	*	255.255.255.248	U	10	0	0	wwan0
10.1.179.213	*	255.255.255.255	UH	10	0	0	wwan0
192.168.1.0	*	255.255.255.0	U	0	0	0	br-
lan							

root@Teltonika-RUT850:~# ip route default via 10.1.179.213 dev wwan0 10.1.179.208/29 dev wwan0 proto static scope link metric 10 10.1.179.213 dev wwan0 proto static scope link src 10.1.179.212 metric 10 192.168.1.0/24 dev br-lan proto kernel scope link src 192.168.1.1

#### **Active IPv6 routes**

The Active IPv6 routes section displays the router's IPv6 routing table.

The figure below is an example of the Active IPv6 routes section:

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Field name	e Value	Description			
Network	string; default: <b>none</b>	Associated network interface name.			
Target	ip6   ip6/netmask; default: <b>none</b>	Destination network address.			
IP gateway	ip6; default: <b>none</b>	Indicates the IPv6 address of the gateway through which the target network can be reached.			
Metric	integer [04,294,967,295]; default: <b>none</b>	Metrics help the router choose the best route among multiple feasible routes to a destination. The route will go in the direction of the gateway with the lowest metric value.			

You can also view the routing table via shell using the **route -A inet6** or **ip -6 route show** commands, depending on which output your prefer:

root@Teltonika-RUT850:~# ip -6 route
fe80::/64 dev wwan0 proto kernel metric 256