Template:Networking rut2xx manual mobile

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Contents

Summary

The **Mobile** page is used for setting parameters related to the mobile data connection. This page is an overview of the Mobile section for {{{name}}} routers.

The information in this page is updated in accordance with the **[[Media:{{{fw_version}}}_WEBUI.bin|{{{fw_version}}}]]** firmware version.

General

The **General** section is used to configure the SIM card parameters that define how the router establishes a cellular connection.

Mobile Configuration

The **Mobile Configuration** section is used to configure main SIM card parameters. Refer to the figure and table below for information on the fields contained in that section.

File:Networking rut2xx manual mobile general mobile configuration v2.png

Field	Value	Description

Connection type	QMI | PPP; default: **QMI**	How the router's modem will establish a connection to the carrier. • **PPP** - uses a dialling number to establish a data connection. • **QMI** - does not use a dialling number to connect and is usually faster than PPP.
Mode	NAT | Passthrough*Bridge **; default: **NAT**	Mobile connection operating mode. • **NAT** - the mobile connection uses NAT (network address translation). • **Bridge** - bridges the LTE data connection with LAN. In this mode the router relay the IP address received from the ISP to another LAN device (e.g., computer). Using Bridge mode will disable most of the router's capabilities. • **Passthrough** - works in a similar fashion to Bridge mode, except in Passthrough mode the router will have an Internet connection and be reachable from LAN, because the router's DHCP Server is not disabled.
Auto APN	checkbox; default: **enabled**	Auto APN scans an internal Android APN database and selects an APN based on the SIM card's operator and country. If the first automatically selected APN doesn't work, it attempts to use the next existing APN from the database.
APN	custom | APN provided by carrier; default: **APN provided by carrier**	APN (Access Point Name) is configurable network identifier used by a mobile device when connecting to a carrier.
Custom APN	string; default: **none**	An Access Point Name (APN) is a gateway between a GSM, GPRS, 3G or 4G mobile network and another computer network. Depending on the contract, some operators may require you to enter the APN just to complete the registration to a network. In other cases an APN is used to get special parameters from the operator (e.g., a public IP address) depending on the contract. **Important note**: an APN Network Identifier cannot start with any of the following strings: "rac", "lac", "sgsn" or "rnc"; it cannot end in ".gprs" and it cannot take the value "*".
PIN number	string; default: **none**	A 4-12 digit long numeric password used to authenticate the modem to the SIM card.
Dialing number	string; default: **none**	A dial code used to establish a mobile PPP connection.
MTU	integer [0..1500]; default: **1500**	Sets the maximum transmission unit (MTU) size. It is the largest size of a protocol data unit (PDU) that can be transmitted in a single network layer transaction.
Authentication method	CHAP | PAP | None; default: **None**	Authentication method that your GSM carrier uses to authenticate new connections on its network. If you select PAP or CHAP, you will also be required to enter a username and password.

Service mode	2G only | 3G only > 4G (LTE) only | Automatic; default: **Automatic**	Your service mode preference. If your local mobile network supports 2G, 3G and 4G (LTE), you can specify to which type of network you wish to connect to. For example, if you choose 2G only, the router will connect to a 2G network, so long as it is available, otherwise it will connect to a network that provides better connectivity. If you select Automatic, then the router will connect to the network that provides the best connectivity.
Deny data roaming	yes | no; default: **no**	When enabled, this option prevents the device from establishing a mobile data connection while not in your home network (roaming conditions).

* more on Passthrough mode in section 2.3 of this page.

Mobile data on demand

The **mobile data on demand** function keeps the mobile data connection *on* only when it is in use. When the router detects that there is no traffic, it shuts down the mobile data connection and turns it back *on* only when there is a "Demand" (a user trying to reach a website, for example). Refer to the figure and table below for more information.

[[File:{{{file_general_demand}}}]]

Field	Value	Description
Enable	yes | no; default: **no**	Turns mobile data on demand on or off **Important**: this function is only available with PPP Connection type.
No data timeout (sec)	integer [10..3600]; default: **10**	Mobile data connection will be terminated if no data is transferred during the timeout period specified in this field.

Passthrough mode

In **Passthrough** mode the router assigns its mobile WAN IP address to another device. It is similar to *Bridge* mode, except in Passthrough mode other devices can still connect to the router and get LAN IP addresses and both other clients and the router retain Internet access, while Bridge mode also disables the router's DHCP Server.

To begin configuring Passthrough mode, make sure that WAN failover is turned off and mobile is set as main WAN in the *Network → [[{{{name}}} WAN|WAN]]* page. Then in the *Network → Mobile* page select *Mode: Passthrough* in the mobile configuration section. You will then see additional configuration fields appear at the bottom of the section.

Important: using Passthrough mode will disable most of the router’s other capabilities.

[[File:{{{file_passthrough}}}]]

Field	Value	Description
DHCP mode	Static | Dynamic | No DHCP; default: **Static**	Specifies DHCP mode used with Passthrough. • **Static** - manually binds the WAN IP address to the device with the specified MAC address. This device will get an IP address from your GSM operator. Other devices that are connected to the router will get IP addresses from the router's DHCP server, but they will not have internet access. • **Dynamic** - the GSM operator will connect to the router first and give out an IP address to one of your connected devices. The device will be selected at random. Therefore, you should usually use Dynamic mode when you have only one device (e.g., computer) connected to the router. When using Passthrough in Dynamic mode, the router's LAN DHCP server will be disabled, but it will enabled again automatically when you switch to a different mode. • **No DHCP** - IP address, subnet mask, default gateway and DNS information from the GSM operator will have to be entered on your computer manually. When using Passthrough in No DHCP mode, the router's LAN DHCP server will be disabled, but it will become enabled automatically when you switch to a different mode.
MAC address	mac; default: **none**	MAC address of a LAN device (e.g., computer).
Lease time	integer; default: **2 min**	A DHCP lease will expire after the amount of time specified in this field and the device that was using the lease will have to request a new one. However, if the device stays connected, its lease will be renewed after half of the specified amount of time passes (e.g., if lease time is 12 hours, then every 6 hours the device will ask the DHCP server to renew its lease). The minimum amount of time that can be specified is 2 minutes.

Network Operators

The **Network Operators** tab provides you with the possibility to scan for and manually manage mobile network opertors to which the router's SIM card can connect to. Operator selection is only available for the primary SIM card. In order to specify an operator for the other SIM card it must first be selected as the primary SIM in the SIM Management section.

Scan For Network Operators

Scan For Network Operators is a function that initiates a scan for mobile network operators available in your area. To initiate a scan, press the 'Scan for operators' button. After you do, you will be prompted with a pop-up asking if you wish to proceed. This is because while the scan is in progress you will lose your data connection for approximately 2 minutes.

[[File:{{{file_network_operators_scan}}}]]

After the scan is complete you will be presented with a list of operators available in your area. The list provides such information as operator's name, code and network access type. You can also choose to which operator you would like to connect provided that the operator's status is not

Forbidden.

Below the list you can select how to the router should connect to network operators:

[[File:{{{file_network_operators_settings}}}]]

The 'Reconnect interval' box specifies how often the device will attempt to reconnect to a network operator, while the 'Connection mode' specifies the logic of how the router will connect operators:

- **Auto** - the router automatically connects to the network operator that provides the best connectivity.
- **Manual** - prompts you to enter an operator's code*. The router will then only attempt to connect to the operator whose code was specified (even if previous attempts have been unsuccessful).
- **Manual-Auto** - prompts you to enter an operator's code* but if the router can't complete the connection, it will automatically connect to the next available operator.

* Most network operators' codes can be found online or you can initiate a scan for operators - if the operator you're looking for can be reached from your current area, the list of available network operators will contain the desired operator's code.

Operators List

The **Operators List** section is used for creating a blacklist or whitelist for undesired or desired operators.

Settings
[[File:{{{file_operator_list_settings}}}]]

Field	Value	Description
Enable	yes | no; default: **no**	Turns operator list on or off.
Mode	Blacklist | Whitelist; default: **Whitelist**	Defines how operators will be filtered. • **Blacklist** - operators contained in the blacklist are considered forbidden and your router will not attempt to connect to them even if they are available. • **Whitelist** - operators contained in the whitelist will be the only operators that the router will be trying to connect to. Other operators that are not in the whitelist will be considered forbidden.

Operators List
[[File:{{{file_operator_list}}}]]

Field	Value	Description
Name	string; default: **none**	Operator's name. Used only for easier management purposes and not in the actual filtering process.

Operator code	integer; default: **none**	Operator's code used to identify a network operator. You can find network operator codes online or use the router's scan for operators function described here.

Important: be mindful when using the Operators List function as it very easy to block yourself from the right operators and lose your data connection.

Mobile Data Limit

The **Mobile Data Limit** page provides you with the possibility to set data usage limits for your SIM cards and data usage warnings via SMS message in order to protect yourself from unwanted data charges.

Data Connection Limit Configuration

The **Data Connection Limit Configuration** section is used to configure custom mobile data limits for your SIM card. When the mobile data limit set for the SIM card is reached, the router will no longer use the mobile connection to establish a data connection until the limit period is over or the limit is reset by the user.

[[File:{{{file_data_limit_configuration}}}]]

Field	Value	Description
Enable data connection limit	yes | no; default: **no**	Turns mobile data limitations on or off.
Data limit* (MB)	integer; default: **none**	The amount of data that is allowed to be downloaded over the specified period of time. When the limit is reached, the router will no longer be able to establish a data connection until the period is over or the data limit is reset.
Period	Month | Week | Day; default: **Month**	Data limit period after which the data counter is reset on the specified *Start day*.
Start day | Start hour	day [1..31] | day [Monday..Sunday] | hour [1..24]; default: **day 1**	Specifies when the period of counting data usage should begin. After the period is over, the limit is reset and the count begins over again.

*Your carrier's data usage accounting may differ. Teltonika is not liable should any accounting discrepancies occur.

SMS Warning Configuration

The **SMS Warning Configuration** section provides you with the possibility to configure a rule that sends you an SMS message after the router's SIM card uses a specified amount of mobile data.

[[File:{{{file_data_limit_warning}}}]]

Field	Value	Description

Enable SMS warning	yes | no; default: **no**	Toggles SMS warning On or OFF
Data limit* (MB)	integer; default: **none**	The received data limit before sending an SMS warning. After reaching using the the amount of data specified in this field, the router will send an SMS warning message to the specified phone number.
Period	Month | Week | Day; default: **Month**	Period to which the data limit applies to.
Start day | Start hour	day of the month [1..31] | day of the week [Monday..Sunday] | hour of the day [1..24]; default: **1**	Specifies when the period of counting data usage should begin. After the period is over, the limit is reset and the count begins over again.
Phone number	phone number; default: **none**	Recipient's phone numbers

Clear Data Limit

The **Clear Data Limit** section contains only one button - 'Clear data limit'. When clicked, the button resets the data limit counter for the related SIM card. Thus, the count is started over again regardless of the specified period.

[[File:{{{file_data_limit_clear}}}]]

Important: remember that the 'Clear data limit' button doesn't clear the actual data usage statistics for the SIM card, only the data counters as calculated by the router. [[Category:{{{name}}} Network section]]