RouterApp

PLMN Whitelist

Used symbols

Important

Important — Indicates a risk to personal safety or potential damage to the router. Follow these instructions precisely to prevent injury or equipment damage.

Warning

Warning — Highlights conditions that may cause malfunction, loss of data, or unexpected behavior in specific situations. Read carefully before proceeding.

Info

Info — Provides helpful tips, context, or references that improve understanding but are not strictly required to complete the task.

Code Example

```
Code Example - Copy-pasteable configuration snippets or CLI commands.
```

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1. Basic Information

1.1 PLMN

> ⚠️ **Warning**
>
> **Important Notice Regarding Firmware Version 6.6.0 and above**
>
> - **Feature Integration:** As of router firmware version 6.6.0, the functionality of this Router App is now included as a standard feature. It can be accessed via *Configuration → Mobile WAN → Operator*.
> - **Recommendation:** On routers running version 6.6.0 or newer, it is strongly recommended to use the native firmware feature and uninstall this app to prevent potential conflicts.
> - **Migration Advisory:** When transitioning from this app to the integrated feature, you must carefully review the new settings. Default values and available options may differ, and failing to adjust them could lead to unexpected reboot behavior.

In telecommunication, a public land mobile network (PLMN) is a combination of wireless communication services offered by a specific operator in a specific country. A PLMN is identified by a globally unique PLMN code, which consists of a MCC (Mobile Country Code) and MNC (Mobile Network Code). Hence, it is a five- to six-digit number identifying a country, and a mobile network operator in that country, usually represented in the form 001-01 or 001–001.

In the Czech Republic has MCC 230 and MNCs for our operators are following:

MNC	Operator
01	T-Mobile
02	O2
03	Vodafone
04	Nordic Telecom

Table 1: MNC values for Czech GSM operators

In this router app the PLMN representation form drops the separating dash so for example T-Mobile PLMN would be **23001**

1.2 Blacklist vs. Whitelist

Blacklisting, or denylisting, is a security measure that keeps certain people, web sites or programs from a computer or network. In other words, it refers to the practice of blocking unauthorized access to a system resource. A blacklist is a list of hosts that are not allowed to access a certain service, and this list is often used by antivirus software as well as firewalls.

Whitelisting, or allowlisting, is a defensive measure, used to protect against malware and other malicious software. It works by allowing only trusted executables, applications and websites to run on an organization's systems. Whitelisting is a cybersecurity term that refers to the process of identifying and permitting safe content. It means blocking all other content from entering the network by default and then only permitting specific files that have been pre-approved.

2. Router App Description

2.1 Web Interface

After Router App installation, the module's GUI can be invoked by clicking the router app name on the Router Apps page of router's web interface.

Left part of this GUI contains menu with Customization menu section, Troubleshoot menu section and Administration menu section. Administration menu section contains only the Return item, which switches back from the module's web page to the router's web configuration pages. The main menu of router app GUI is shown on Figure below.

Figure 1: Menu

2.2 PLMN Whitelist

Customization menu section contains PLMN Whitelist item where all the setting of this router app takes place.

Figure 2: PLMN whitelist

Item	Description
Enable PLMN Whitelist	Enables PLMN Whitelist functionality.
PLMN	List of added PLMN items are displeyed here.

Table 2: PLMN whitelist config items

For adding another just type the PLMN into textbox and click add and then apply. There can be multiple PLMNs whitelisted. In the image below the T-Mobile, O2 is added and Vodafone is just being added.

Figure 3: PLMN whitelist

2.3   System log

System log section contains log messages.

```
                              System Log
                            System Messages

2022-07-26 12:50:28 plmnWhitelist: Try PLMN: 23003
2022-07-26 12:50:29 mwan1d[20032]: started
2022-07-26 12:50:29 mwan1d[20032]: powering down
2022-07-26 12:50:35 mwan1d[20032]: powering up
2022-07-26 12:50:45 mwan1d[20032]: preparing
2022-07-26 12:50:57 mwan1d[20032]: selected SIM: 1st
2022-07-26 12:50:58 mwan1d[20032]: selected APN: gprsa.agnep
2022-07-26 12:50:59 mwan1d[20032]: waiting for registration
2022-07-26 12:51:00 mwan1d[20032]: starting usbd
2022-07-26 12:51:00 usb1d[20292]: started
2022-07-26 12:51:00 usb1d[20292]: establishing connection
2022-07-26 12:51:04 usb1d[20292]: connection established
2022-07-26 12:51:04 usb1d[20292]: local IPv4 address 10.80.0.6
2022-07-26 12:51:04 usb1d[20292]: primary   DNSv4 address 10.0.0.1
2022-07-26 12:51:04 usb1d[20292]: script /etc/scripts/ip-pre-up-mwan started
2022-07-26 12:51:04 bard[1365]: usb0 connection is available on mwan
2022-07-26 12:51:04 usb1d[20292]: script /etc/scripts/ip-pre-up-mwan finished
2022-07-26 12:51:04 usb1d[20292]: script /etc/scripts/ip-up-mwan started
2022-07-26 12:51:04 usb1d[20292]: script /etc/scripts/ip-up-mwan finished
2022-07-26 12:51:04 bard[1365]: backup route selected: "Mobile WAN"
2022-07-26 12:51:05 bard[1365]: script /etc/scripts/ip-up usb0 started
2022-07-26 12:51:05 dnsmasq[1859]: reading /etc/resolv.conf
2022-07-26 12:51:05 dnsmasq[1859]: using nameserver 10.0.0.1#53
2022-07-26 12:51:05 bard[1365]: script /etc/scripts/ip-up usb0 finished, status = 0x0
2022-07-26 12:52:29 plmnWhitelist: Correct operator

 Save Log   Save Report
```
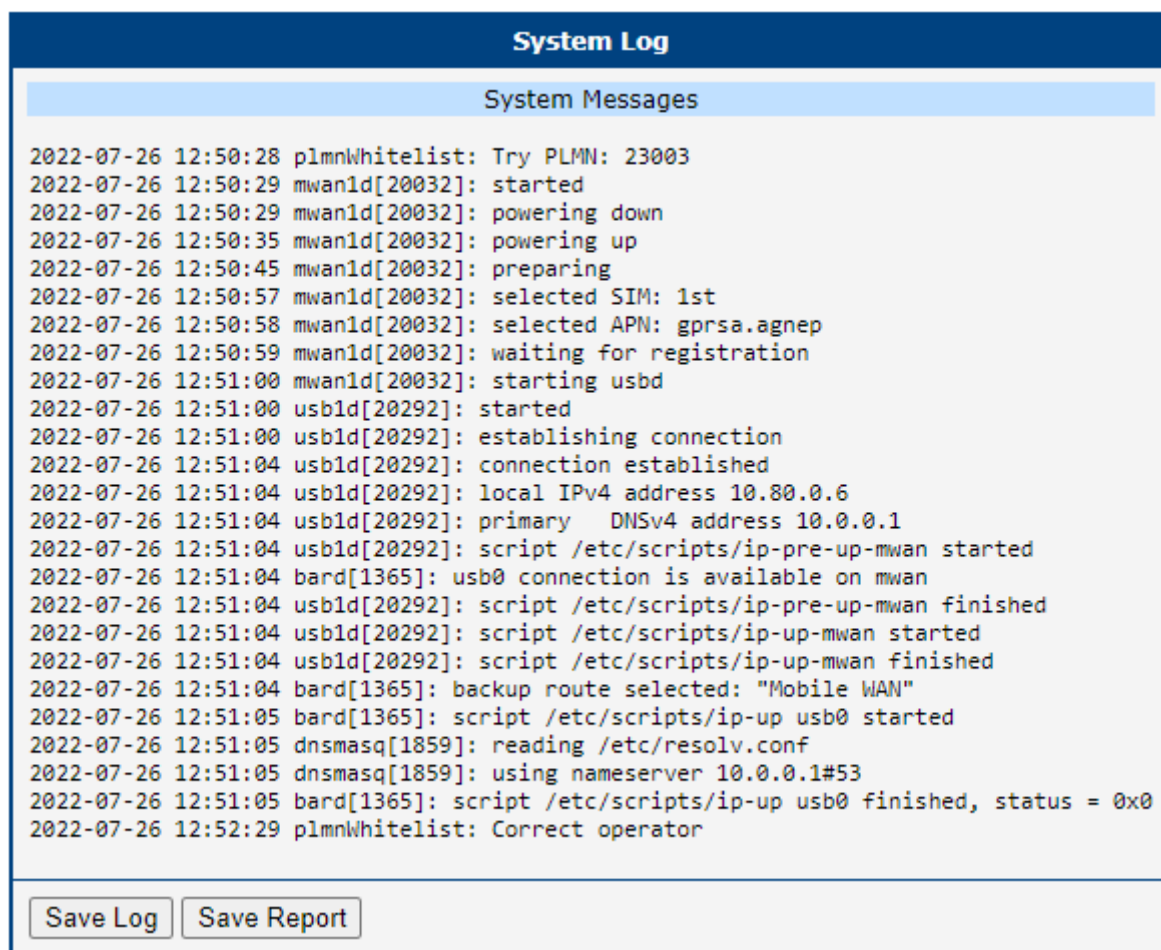
Figure 4: System log

3. Related Documents

You can obtain product-related documents on *Engineering Portal* at *icr.advantech.com* address.

To get your router's *Quick Start Guide*, *User Manual*, *Configuration Manual*, or *Firmware* go to the *Router Models* page, find the required model, and switch to the *Manuals* or *Firmware* tab, respectively.

The *Router Apps* installation packages and manuals are available on the *Router Apps* page.

For the *Development Documents*, go to the *Development* page.