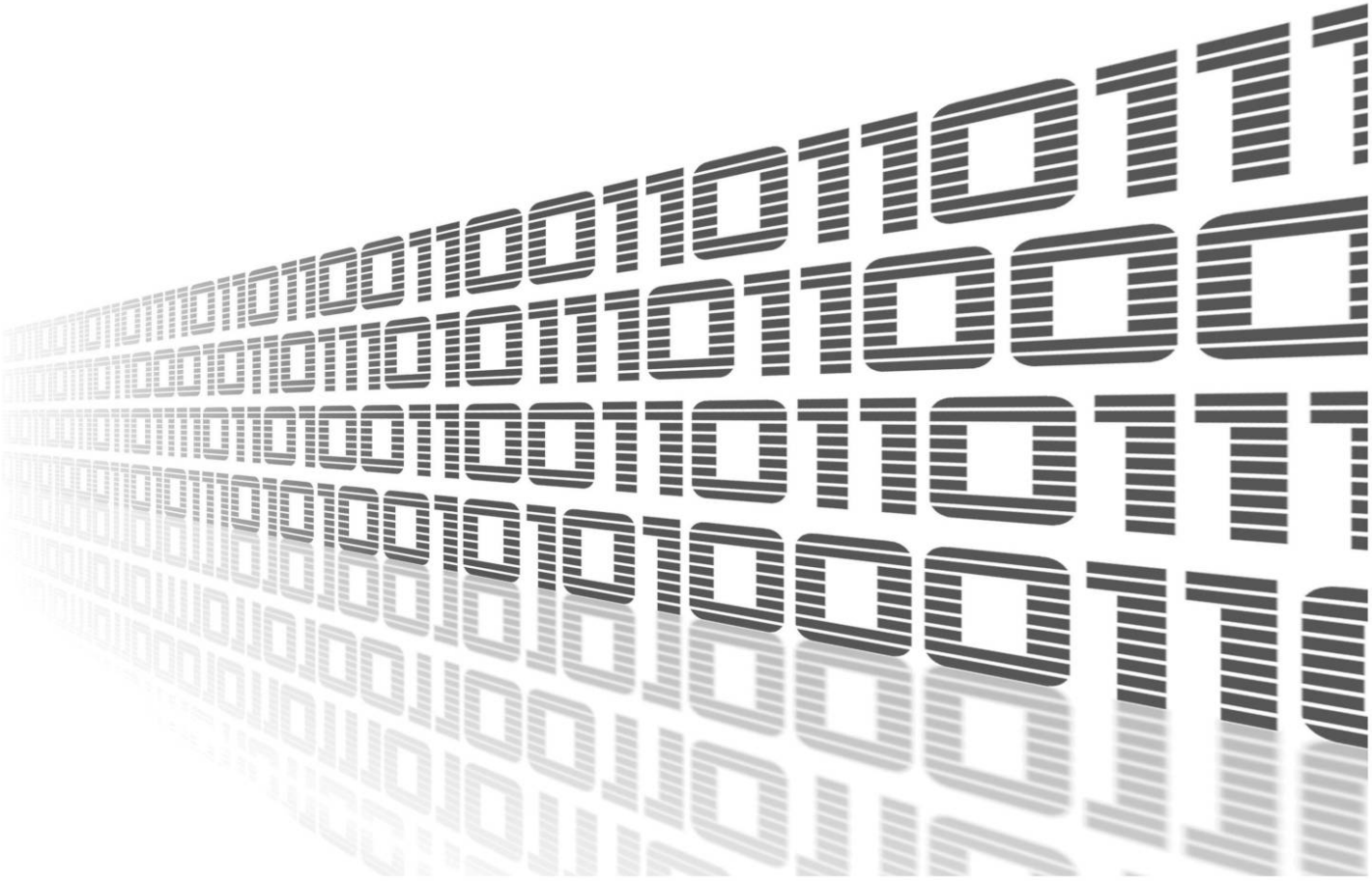
ADVANTECH

RouterApp

DHCP Based on MAC OUI



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Used symbols

Danger – Information regarding user safety or potential damage to the router.

Attention – Problems that can arise in specific situations.

Information – Useful tips or information of special interest.

Example – Example of function, command or script.

Contents

1. Changelog **1**

1.1 DHCP Based on MAC OUI Changelog 1

2. Description of the Router App **2**

2.1 What is MAC OUI? 2

3. Web Interface **3**

3.1 Configuration 4

3.1.1 Global 4

4. Related Documents **5**

List of Figures

1 Menu 3

2 Configuration 4

List of Tables

1 DHCP Based on MAC UOI Configuration items description 4

1. Changelog

This Router App has been tested on a router with firmware version 6.3.10. After updating the router's firmware to a higher version, make sure that a newer version of the Router App has not also been released, as it is necessary to update it as well for compatibility reasons.

1.1 DHCP Based on MAC OUI Changelog

v1.0.0 (2019-10-11)

- First release.

v1.1.0 (2020-10-01)

- Updated CSS and HTML code to match firmware 6.2.0+.

2. Description of the Router App

This router app is not contained in the standard router firmware. Uploading of this router app is described in the Configuration manual (see Chapter Related Documents).

DHCP Based on MAC OUIrouter app handles IP address assignation for devices according to its MAC OUI.

For *DHCP based on MAC OUI* router app to work, you have to disable routers own DHCP protocol.

2.1 What is MAC OUI?

The MAC OUI (Organizationally Unique Identifier) is the first 24 bits (first 3 octets) of a MAC address that identifies the manufacturer of the network device. The IEEE assigns these unique OUI identifiers to companies that need to include them in their networking products.

By looking up the OUI portion of a MAC address, you can determine the manufacturer of the device. This information can be useful for network configuration, troubleshooting, and security profiling. For example, you could use the OUI to identify the vendor of devices on your network and apply appropriate security policies.

The remaining 24 bits (last 3 octets) of the 48-bit MAC address are assigned by the manufacturer to uniquely identify each individual network interface card (NIC). So the full MAC address provides both the manufacturer information (OUI) and a unique identifier for that specific device.

3. Web Interface

Once the installation of the module is complete, the module's GUI can be invoked by clicking the module name on the Router apps page of router's web interface.

Left part of this GUI contains menu with Status menu section and Customization menu section. Customization 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 module's GUI is shown on Figure 2.

Figure 1: Menu

3.1 Configuration

3.1.1 Global

All DHCP base on MAC OUI router app settings can be configured by clicking on the *Global* item in the main menu of module web interface. An overview of configurable items is given below.

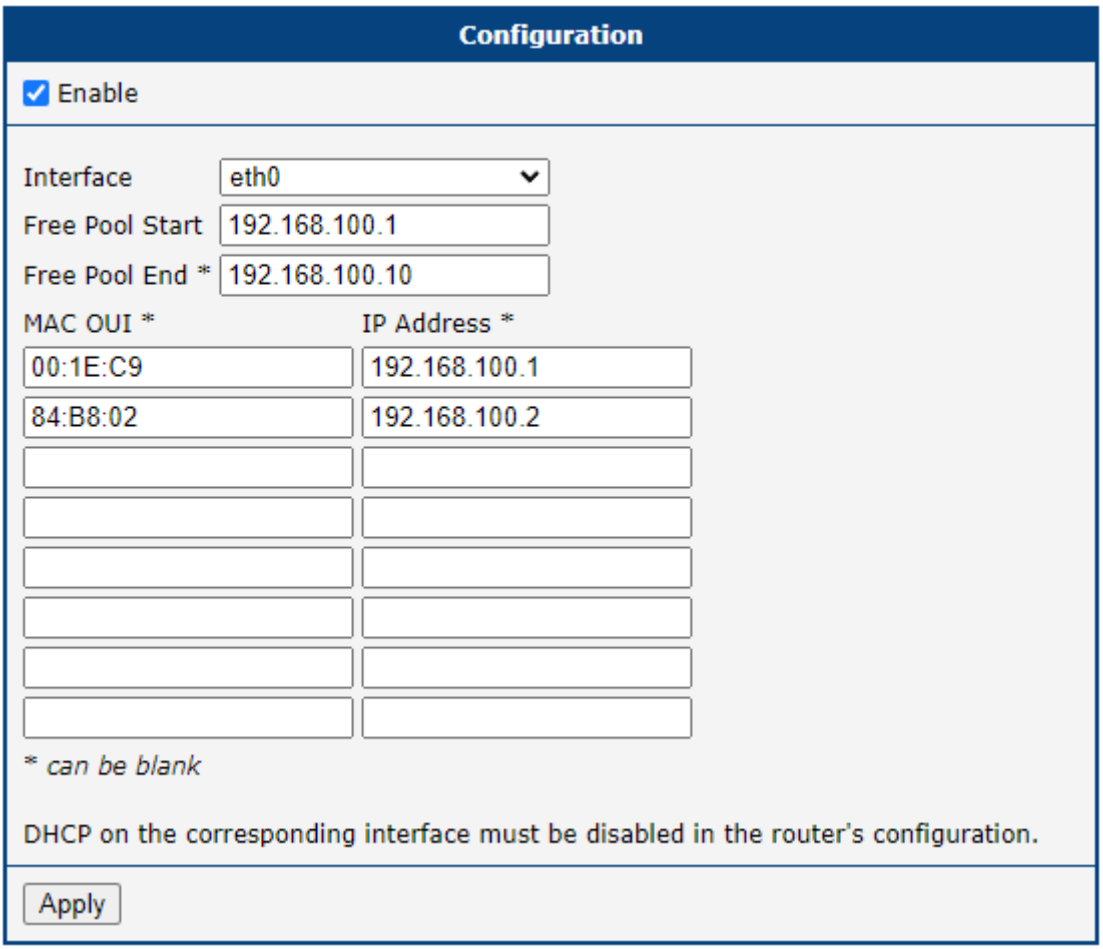

Figure 2: Configuration

Item	Description
Enable	Enables usage of DHCP based on MAC OUI functionality. In this case please disable DHCP client in Router configuration.
Free Pool Start	Enter first IP address from range
Free Pool End	Enter last IP address from range
MAC OUI & IP Address pair	Enter up to 8 rules for IP address assignation according to MAC OUI, MAC OUI format is expected to be set octets separated by colons (*FF:FF:FF*)

Table 1: DHCP Based on MAC UOI Configuration items description

4. 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 *DevZone* page.