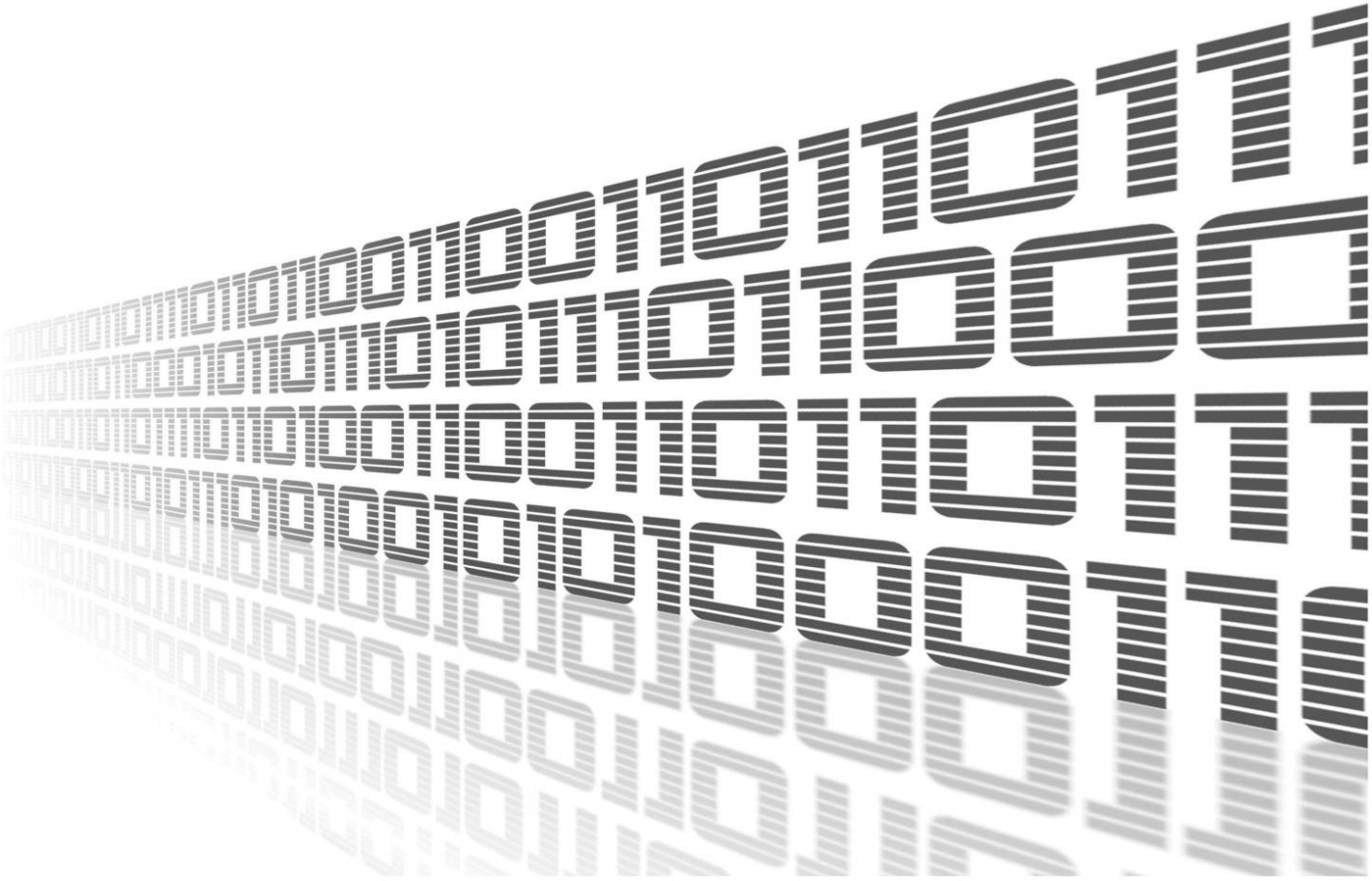
ADVANTECH

RouterApp

Transparent Mode



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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.

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 After updating the router's firmware to a higher version, make sure that a newer version of the Router App has not also been released, as it is necessary to update it as well for compatibility reasons.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

v1.0.0 (2014-06-24)

- First release.

v1.0.1 (2014-07-03)

- Fixed DNS issue.
- DHCP lease time increased to 60 seconds.

v1.0.2 (2014-07-07)

- Fixed DNS issue that occurs when the operator do not assign DNS.

v1.0.3 (2014-07-08)

- Added support of port forwarding.

v1.0.4 (2014-07-16)

- Added support of outbond traffic from router.

v1.0.5 (2014-08-21)

- Fixed NAT bugs with incoming traffic.

v1.1.0 (2017-03-21)

- Recompiled with new SDK.

v1.1.1 (2017-06-22)

- Added using of the largest possible netmask on internal network.

v1.1.2 (2020-06-19)

- Fixed handling with modules without arp.

v1.2.0 (2022-11-03)

- Reworked license information.

v1.2.1 (2024-02-16)

- Added description and summary files.

2. Description of router app

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).

This router app works for the ETH0 interface only.

After loading the router app into any Advantech router, this router becomes "invisible" for the remote devices. It is available only for a device that is located behind the router. The default IP address of the ETH0 interface is 192.168.1.1. All communication with the device, that is located behind this router, runs directly. This means that communication from the Internet toward the SIM IP will be redirected to the interface of the device behind this router.

The device connected to the Advantech router must have the DHCP client enabled.

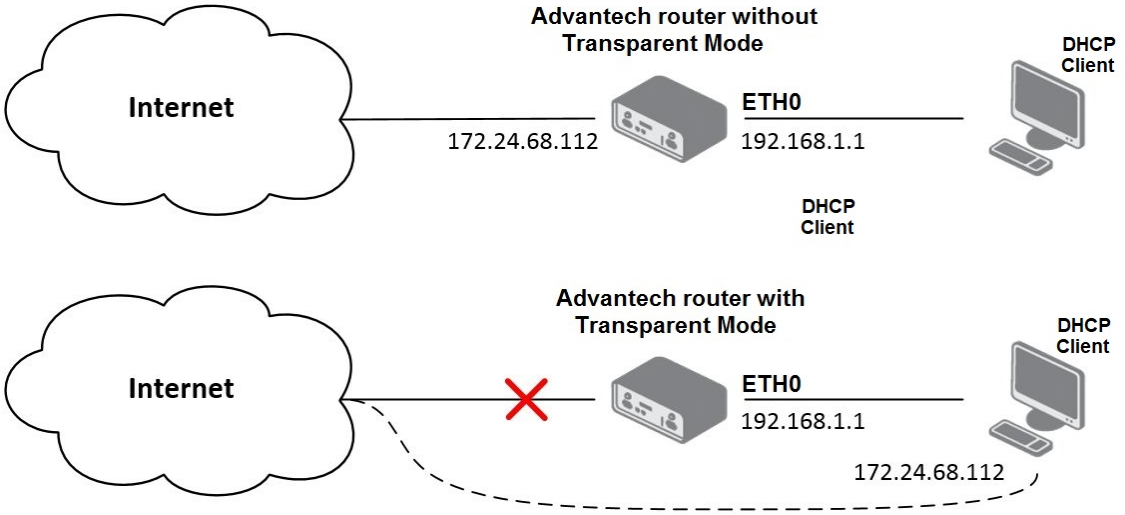

Figure 1: Functional scheme

The router app has no web interface and it is not necessary to activate it (it's active immediately after uploading).

3. Configuration

3.1 Automatic configuration during the module installation

During the installation of *Transparent Mode* module to the router, DHCP server (dynamic distributing of IP addresses) is disabled. IP address is allocated only when cellular connection is established. For cases when cellular connection is not established, it is necessary to set a static IP address for a device behind the router. The moment the router app is uninstalled, the router is reconfigured to its original state. If the DHCP server was enabled before installing *Transparent Mode* module, after uninstalling this module will be enabled again.

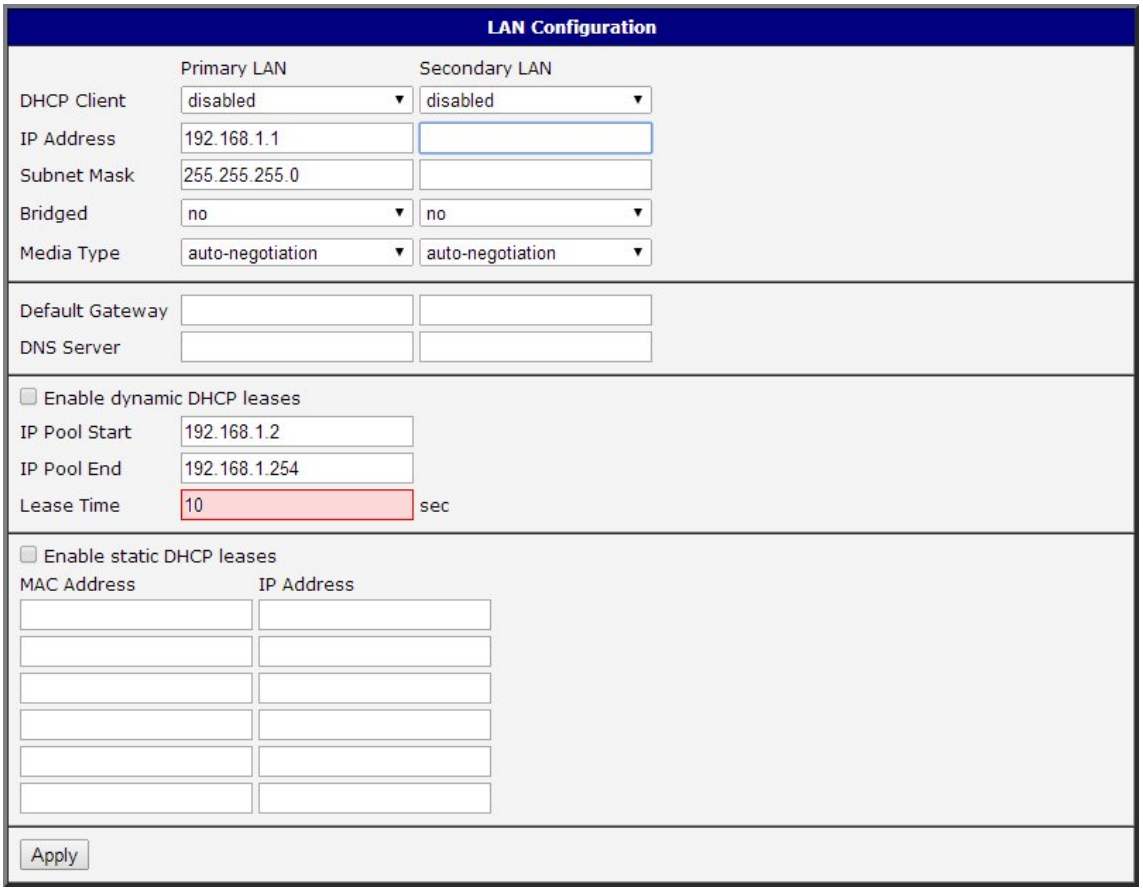

Figure 2: Reconfiguration of *Lease Time*

During the installation of this module, *Masquerade outgoing packets* item (on *NAT* page of router web interface) is disabled. **This item must never be enabled!**

3.2 Automatic forwarding from the router

For automatic forwarding from the router to the device behind this router is necessary to enable the protocol through which access to this device will be allowed. This is done using the form on the *NAT* page (see the figure below). By default, access through each of protocols is disabled.

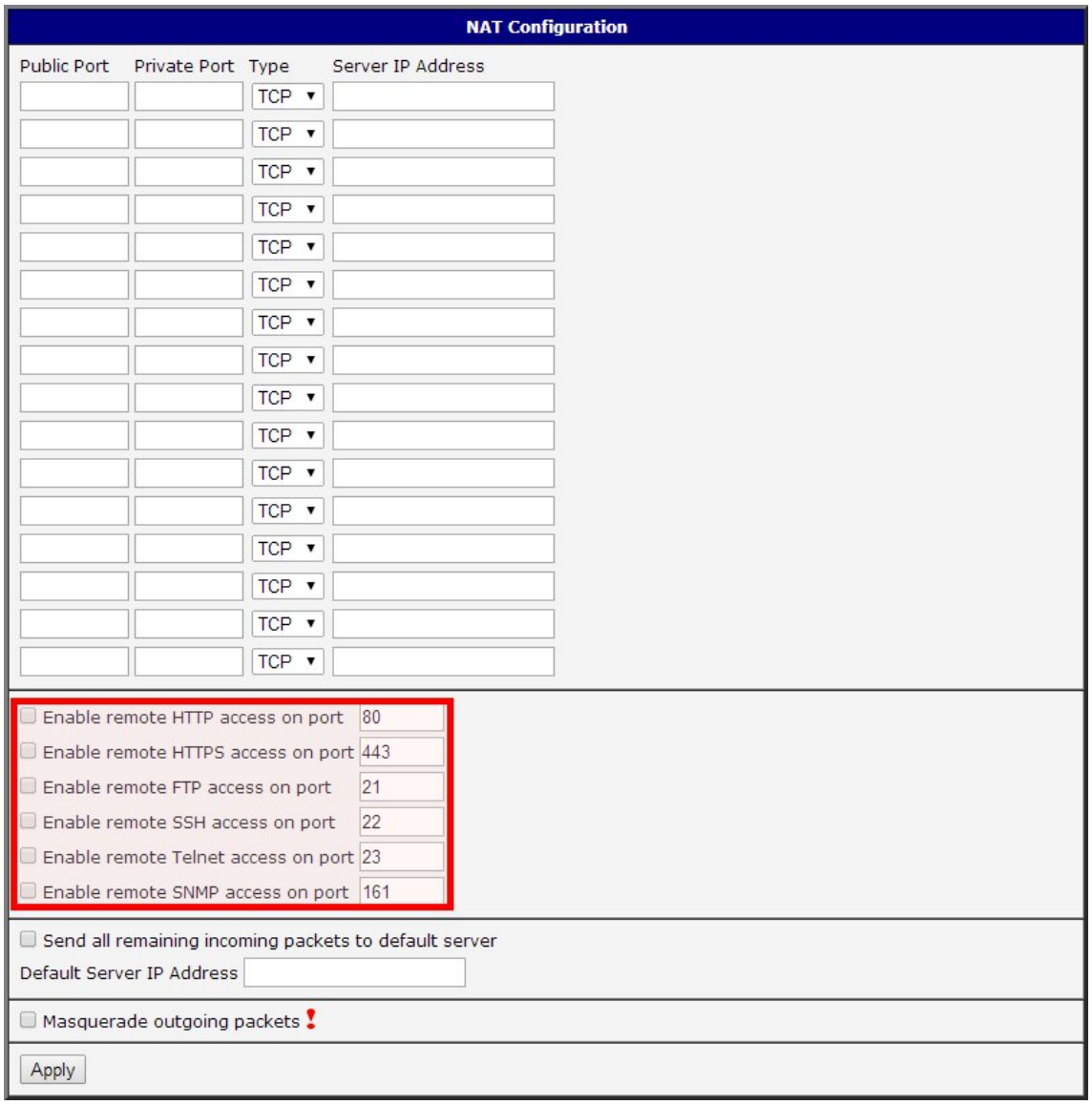

Figure 3: Configuration of forwarding

3.3 Access to the router

As already mentioned in the first chapter, router with *Transparent Mode* module is normally available only for a device which is located behind the router. Use the default IP address of the router – 192.168.1.1 (configuration can be performed only by logged in user – name and password is *root* by default).

However, it is also possible to set access to the router from the outside using selected protocol. In that case, communication within this protocol is not forwarded to the device behind the router. Configuration is done using the form on *NAT* page of the router web interface. It is necessary to set values for *Public Port* and *Private Port*, select protocol and enter 192.168.1.1 to the *Server IP address* field (see the figure below).

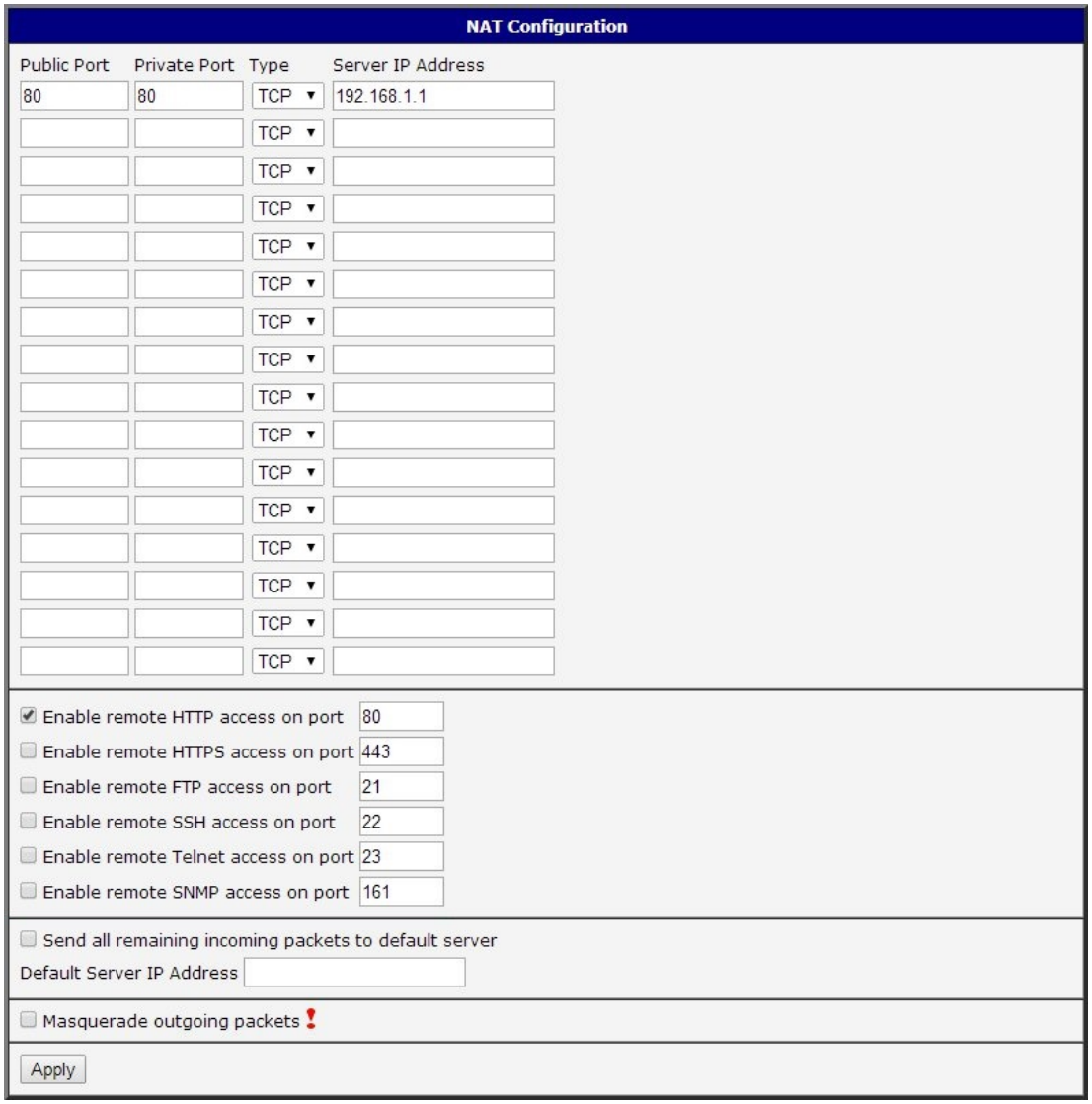

Figure 4: Access to the router from the outside

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.