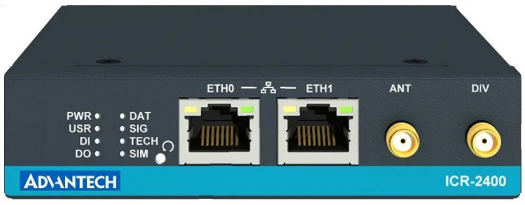

ADVANTECH NAT Router App User Guide

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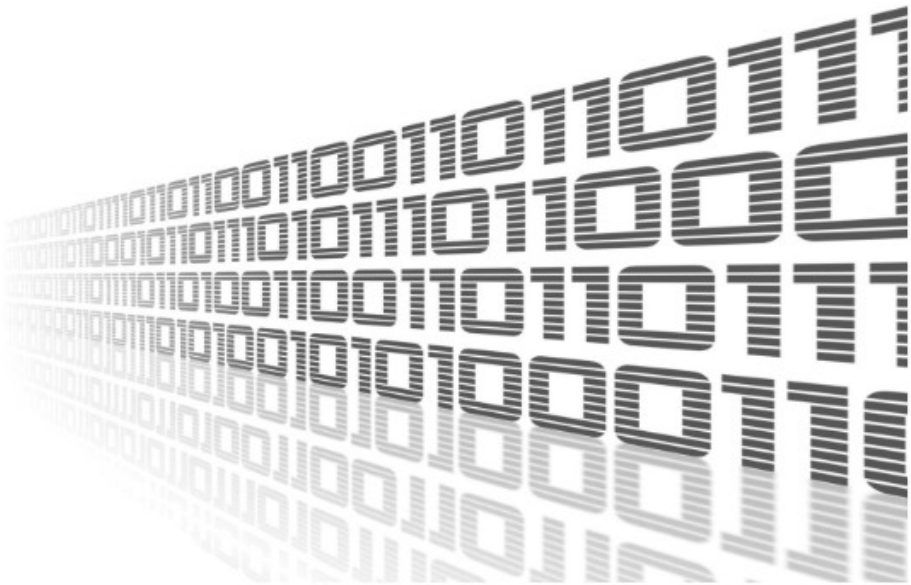
NAT



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NAT Router App

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.

Changelog

1. **NAT Changelog**

   v1.0.0 (2016-10-10)

   • First release.

   v1.1.0 (2020-05-29)

   • Increased number of rules to 32.

   • Added option TCP+UDP.

   v1.2.0 (2020-07-22)

   • Added description field.

v1.3.0 (2020-10-01)

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

v1.3.1 (2022-01-19)

• Widened description field.

Description of the module

Router app NAT is not contained in the standard router firmware. Uploading of this router app is described in the Configuration manual (see Chapter Related Documents).
NAT router app allows router to translate adresses from one IP address space into another by modifying network address information in the IP header of packets.

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 Configuration 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 1.

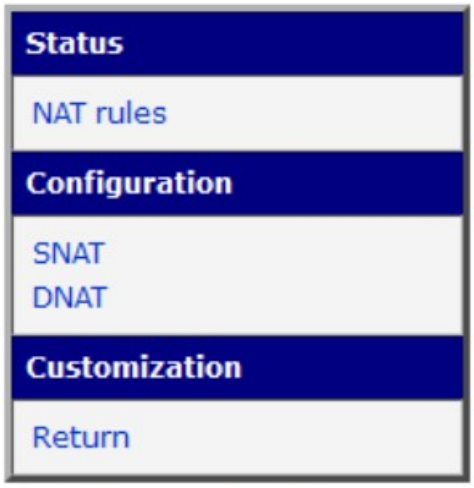

Figure 1: Menu

1. **Status**

   1.1. NAT rules

   An overview of the current status can be viewed by clicking on the Overview item in the main menu of module web interface. At the beginning of this page is a list of SNAT and DNAT rules and information about whether the corresponding service is active or not.

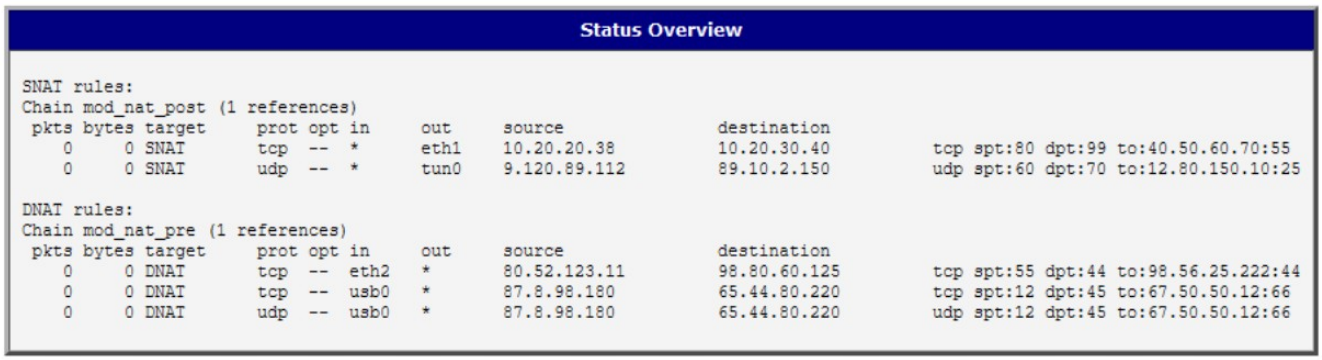

Figure 2: Status Overview

2. **Configuration**

2.1 SNAT

Source NAT (SNAT) is the most common form of NAT. SNAT changes the source address of the packets passing through the Router. SNAT is typically used when an internal (private) host needs to initiate a session to an external (public) host; in this case, the device that is performing NAT changes the private IP address of the source host to some public IP address.

Configuration of SNAT can be done on Global page, under Configuration menu section. All configuration items for SNAT configuration page are described in the table below. SNAT configuration can handle up to 32 rules.

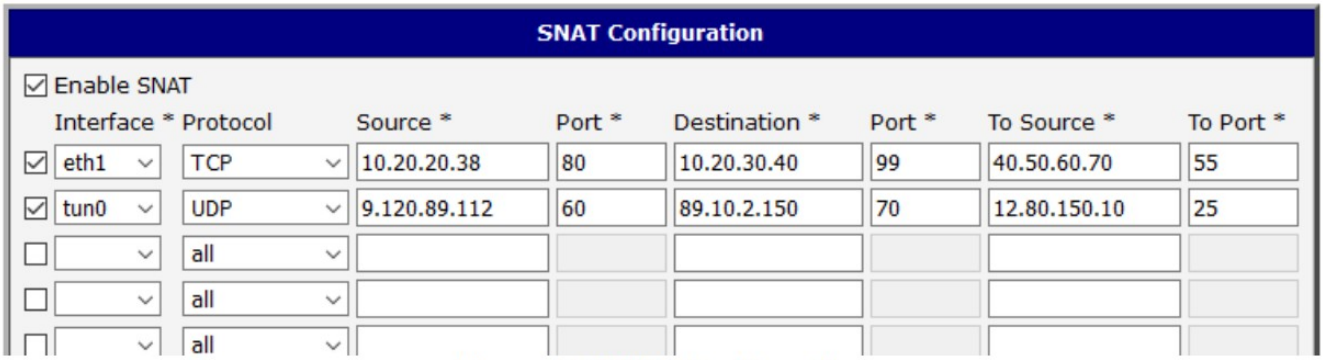

Figure 3: SNAT Configuration

Item	Description
Enable SNAT	Enabled, SNAT functionality of the module is turned on.
Interface	Select router interface for this rule.
Protocol	Select protocol for this rule. You can choose among: • all • TCP • UDP • TCP+UDP • UDP
Source	Enter source IP address.
Port	Enter source port.
Destination	Enter destination IP address.
Port	Enter destination port.
To Source	Enter To Source IP address.
To Port	Enter To Source port.

Table 1: SNAT Configuration Example Items Description

2.2 DNAT

While SNAT changes the source address of packets, destination NAT (DNAT) changes the destination address of packets passing through the Router. DNAT is typically used when an external (public) host needs to initiate a session with an internal (private) host. The source address of return packets is automatically translated back to

the IP address of the source host.

Configuration of DNAT can be done on Global page, under Configuration menu section. All configuration items for DNAT configuration page are described in the table below. DNAT configuration can handle up to 32 rules.

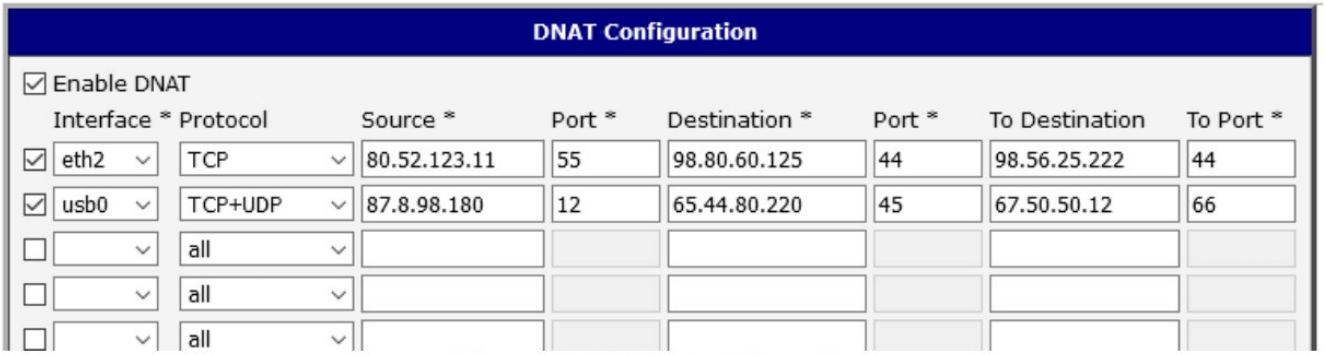

Figure 4: DNAT Configuration

Item	Description
Enable DNAT	Enabled, DNAT functionality of the module is turned on.
Interface	Select router interface for this rule.
Protocol	Select protocol for this rule. You can choose among: • all • TCP • UDP • TCP+UDP • UDP
Source	Enter source IP address.
Port	Enter source port.
Destination	Enter destination IP address.
Port	Enter destination port.
To Destination	Enter To Destination IP address.
To Port	Enter To Destination port.

Table 2: DNAT Configuration Example Items Description

2.3 NAT Example

SNAT (Source Network Address Translation) changes the private IP address of the source host to public IP address. It may also change the source port in the TCP/UDP headers. SNAT is typically used by internal users to access the Internet. It is performed after the routing decision is made.

DNAT (Destination Network Address Translation) changes the destination address in IP header of a packet. It may also change the destination port in the TCP/UDP headers. DNAT is used when we need to redirect incoming packets with a destination of a public address/port to a private IP address/port inside your network. It is performed before the routing decision is made.

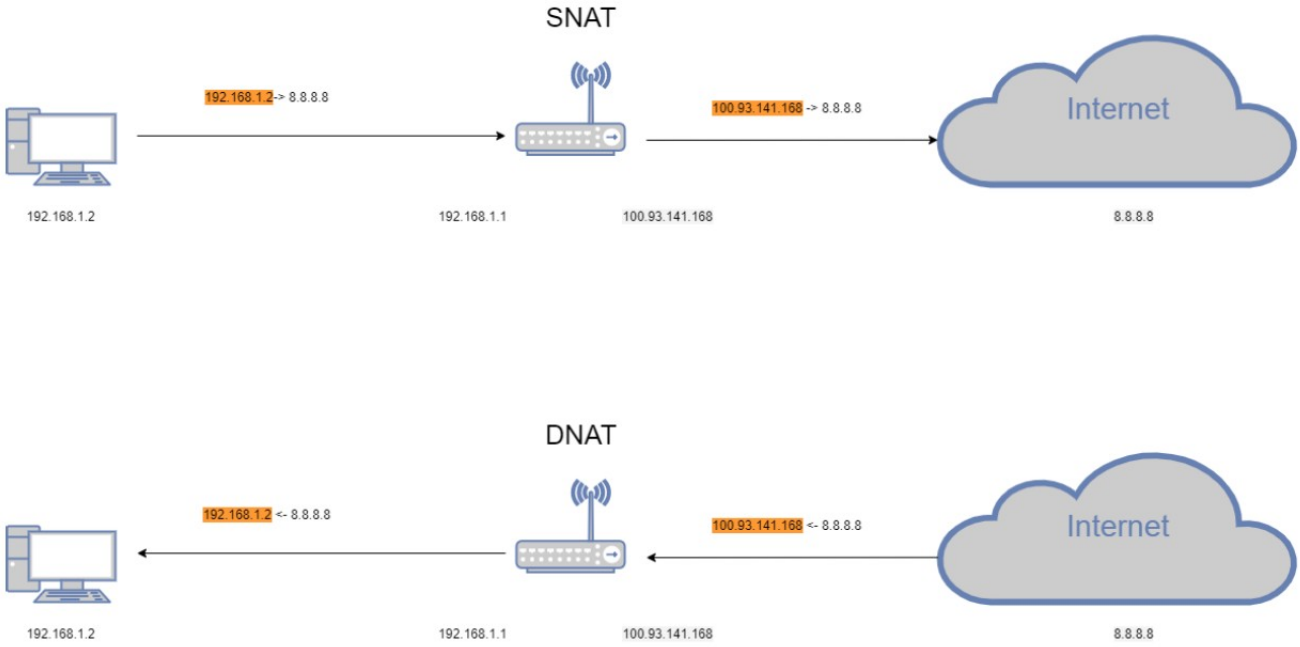

Figure 5: NAT Example

Related Documents

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

ADVANTECH
NAT Manual

Documents / Resources

	**ADVANTECH NAT Router App** [pdf] User Guide NAT Router App, NAT, Router App, App

References

- **Advantech 4G, 5G Cellular Routers & Gateways for IoT applications - Engineering Portal**
- **Advantech 4G, 5G Cellular Routers & Gateways for IoT applications - Engineering Portal**
- **DevZone - Cellular Routers Engineering Portal**
- **Router Apps - Cellular Routers Engineering Portal**

- Router Models - Cellular Routers Engineering Portal