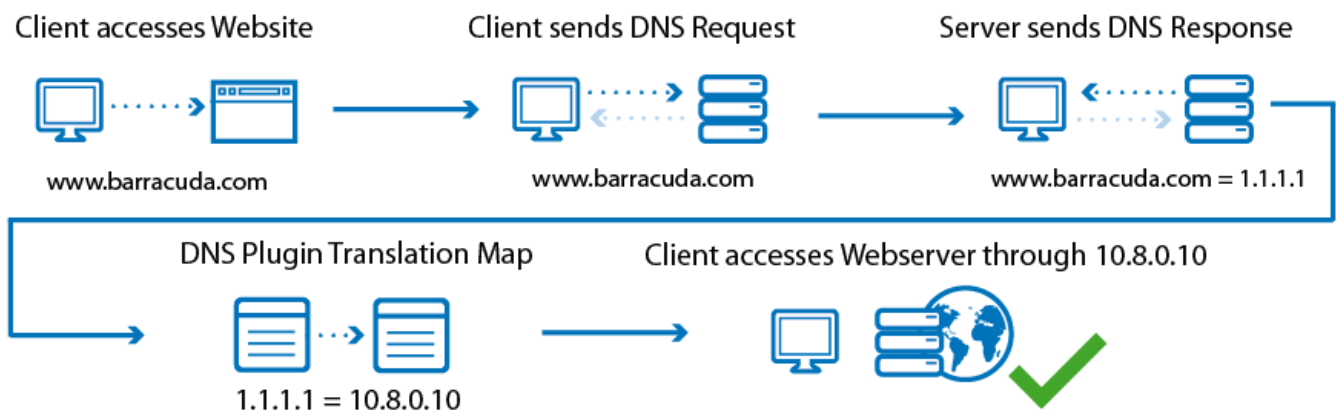


## How to Configure DNS Translation Using the DNS Plugin Module

<https://campus.barracuda.com/doc/46209209/>

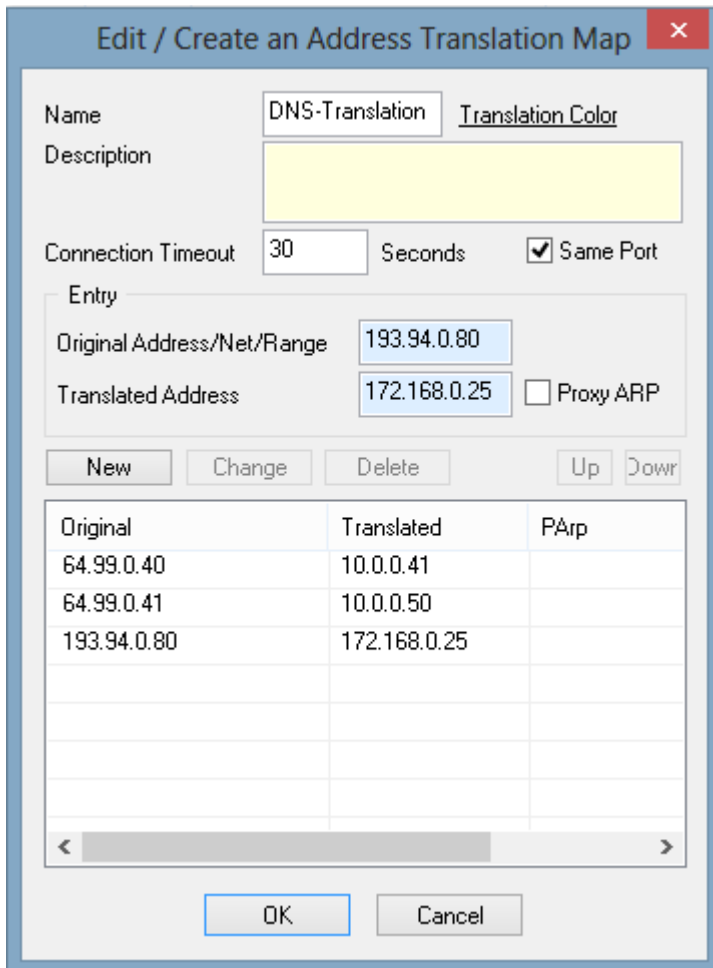
Use the DNS plugin module to replace the result of a DNS query, according to a predefined IP address translation table. A common use case is for users accessing resources that resolve to the public IP address of the firewall. Since the users are behind a NAT, they would not be able to access the resource using this address. The DNS plugin replaces the public IP address in the DNS response with the appropriate internal IP address that can be reached by the client.



### Step 1. Create a new NAT table

Create a NAT table to create a list of public IP addresses and the internal IP addresses the DNS query is translated to.

1. Go to **CONFIGURATION > Configuration Tree > Box > Virtual Servers > your virtual server > Assigned Services > Firewall > Forwarding Rules**.
2. In the left menu, click on **Connections**.
3. Click **Lock**.
4. Create a NAT table mapping the external IP addresses to the internal IP addresses. For more information, see [How to Create NAT Tables \(Translation Maps\)](#)



**Edit / Create an Address Translation Map**

Name:  [Translation Color](#)

Description:

Connection Timeout:  Seconds  Same Port

Entry

Original Address/Net/Range:

Translated Address:   Proxy ARP

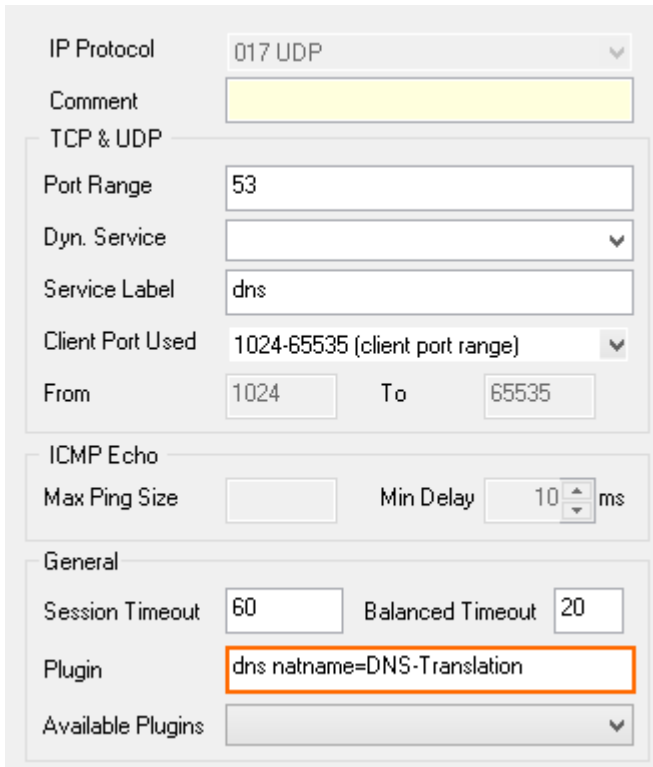
Original	Translated	PArp
64.99.0.40	10.0.0.41	
64.99.0.41	10.0.0.50	
193.94.0.80	172.168.0.25	

5. Click **Send Changes** and **Activate**.

## Step 2. Create or edit a service object

Create or edit a service object matching the DNS query of the client, and modify it to use the NAT table

1. Go to **CONFIGURATION > Configuration Tree > Box > Virtual Servers > your virtual server > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. In the left menu, click on **Services**.
4. Edit or create a new service object for DNS queries.
5. Double-click on the UDP port 53 entry. The **Service Entry Parameters** window opens.
6. From the **Available Plugins** list, select **dns natname=Translation Map**.
7. Add the name of the NAT table to the **Plugin** string in the following format: **dns natname=YOUR NAT TABLE NAME** E.g., **dns natname=DNS-Translation**



IP Protocol: 017 UDP

Comment: [Empty]

TCP & UDP

Port Range: 53

Dyn. Service: [Empty]

Service Label: dns

Client Port Used: 1024-65535 (client port range)

From: 1024 To: 65535

ICMP Echo

Max Ping Size: [Empty] Min Delay: 10 ms

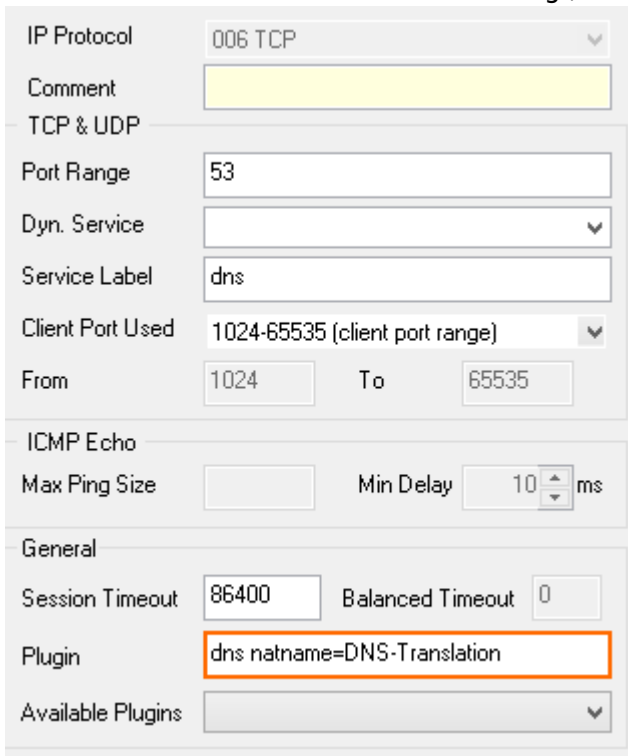
General

Session Timeout: 60 Balanced Timeout: 20

Plugin: dns natname=DNS-Translation

Available Plugins: [Empty]

8. Click **OK**.
9. Double-click on the TCP port 53 entry. The **Service Entry Parameters** window opens.
10. From the **Available Plugins** list, select **dns natname=Translation Map**.
11. Add the name of the NAT table to the **Plugin** string in the following format: **dns natname=YOUR NAT TABLE NAME** E.g., dns natname=DNS-Translation



IP Protocol: 006 TCP

Comment: [Empty]

TCP & UDP

Port Range: 53

Dyn. Service: [Empty]

Service Label: dns

Client Port Used: 1024-65535 (client port range)

From: 1024 To: 65535

ICMP Echo

Max Ping Size: [Empty] Min Delay: 10 ms

General

Session Timeout: 86400 Balanced Timeout: 0

Plugin: dns natname=DNS-Translation

Available Plugins: [Empty]

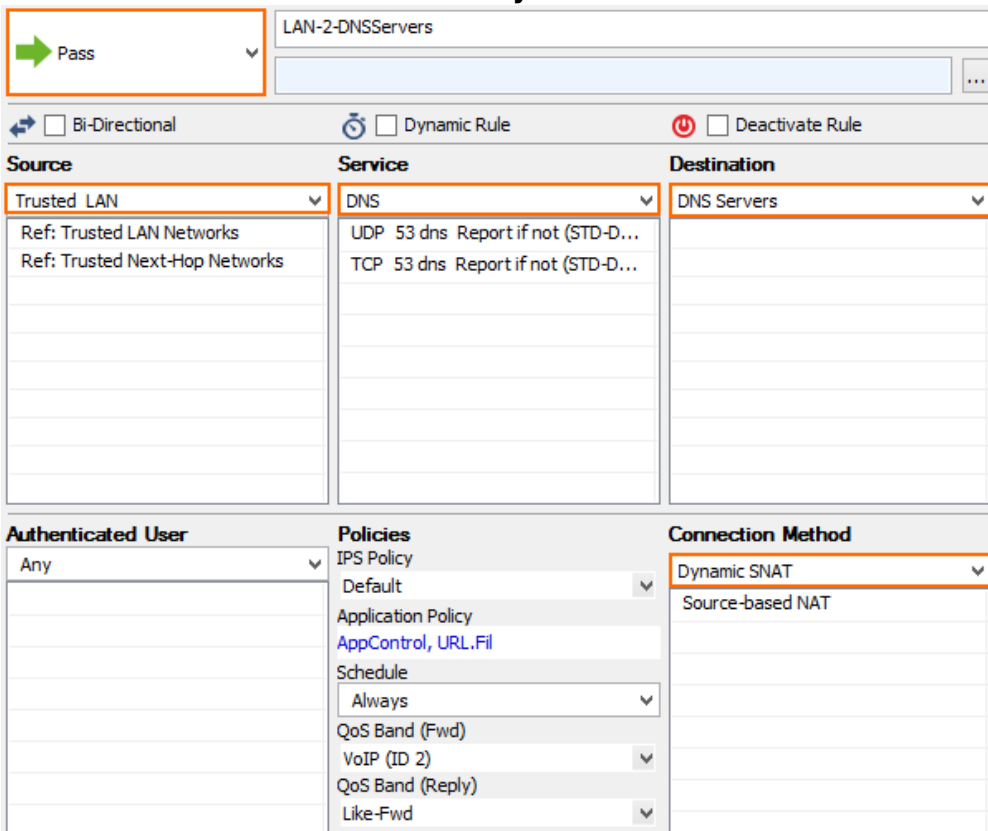
12. Click **OK**

13. Click **OK**.
14. Click **Send Changes** and **Activate**.

### Step 3. Create an access rule to intercept client DNS queries

Create an access rule that matches DNS queries of the client using the modified service object.

1. Go to **CONFIGURATION > Configuration Tree > Box > Virtual Servers > your virtual server > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Create an access rule:
  - o **Action** - Select **PASS**.
  - o **Source** - Select **Trusted LAN**
  - o **Service** - Select the modified DNS service object created in step 2.
  - o **Destination** - Select **Internet** or enter the IP addresses of your DNS Servers.
  - o **Connection Method** - Select **Dynamic SNAT**.



The screenshot shows the configuration page for a Forwarding Rule named "LAN-2-DNSServers". At the top left, the Action is set to "Pass" (indicated by a green arrow icon). Below this, there are checkboxes for "Bi-Directional", "Dynamic Rule", and "Deactivate Rule". The main configuration area is divided into three columns: "Source", "Service", and "Destination".

Source	Service	Destination
Trusted LAN	DNS	DNS Servers
Ref: Trusted LAN Networks	UDP 53 dns Report if not (STD-D...	
Ref: Trusted Next-Hop Networks	TCP 53 dns Report if not (STD-D...	

Below these columns are sections for "Authenticated User" (set to "Any"), "Policies" (including IPS Policy, Application Policy, Schedule, QoS Band, and VoIP), and "Connection Method" (set to "Dynamic SNAT").

4. Click **OK**
5. Drag and drop the access rule so that no access rule above it matches DNS client traffic.
6. Click **Send Changes** and **Activate**

DNS queries returning the **Original** IP address listed in the NAT table are now replaced by the

corresponding **Translated** IP address.

## Figures

1. fw\_dns\_translation.png
2. DNS\_Doctoring\_01.png
3. DNS\_Doctoring\_02.png
4. DNS\_Doctoring\_03.png
5. DNS\_Doctoring\_04.png

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