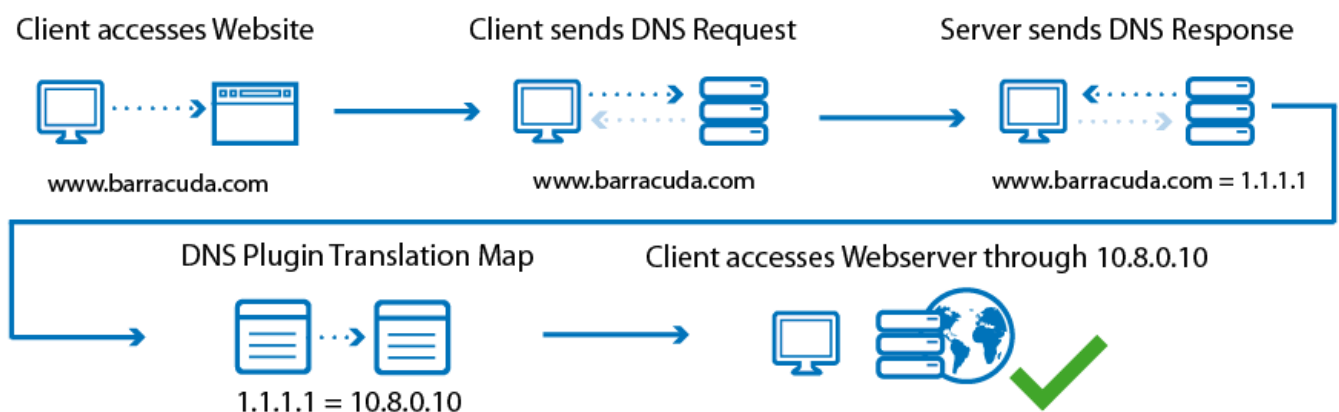


## How to Configure DNS Translation Using the DNS Plugin Module

<https://campus.barracuda.com/doc/53248516/>

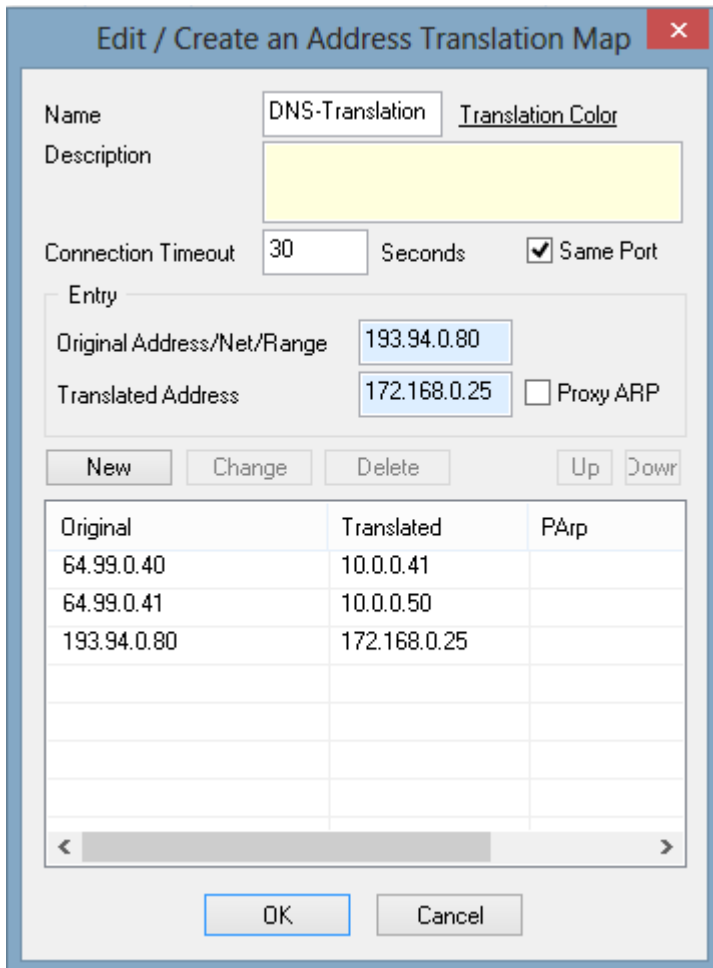
Use the DNS plugin module to replace the result of a DNS query, according to a predefined IP address translation table. A common use case is for users accessing resources that resolve to the public IP address of the firewall. Since the users are behind a NAT, they would not be able to access the resource 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		
TCP & UDP		
Port Range	53	
Dyn. Service		
Service Label	dns	
Client Port Used	1024-65535 (client port range)	
From	1024	To 65535
ICMP Echo		
Max Ping Size		Min Delay 10 ms
General		
Session Timeout	60	Balanced Timeout 20
Plugin	dns natname=DNS-Translation	
Available Plugins		

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		
TCP & UDP		
Port Range	53	
Dyn. Service		
Service Label	dns	
Client Port Used	1024-65535 (client port range)	
From	1024	To 65535
ICMP Echo		
Max Ping Size		Min Delay 10 ms
General		
Session Timeout	86400	Balanced Timeout 0
Plugin	dns natname=DNS-Translation	
Available Plugins		

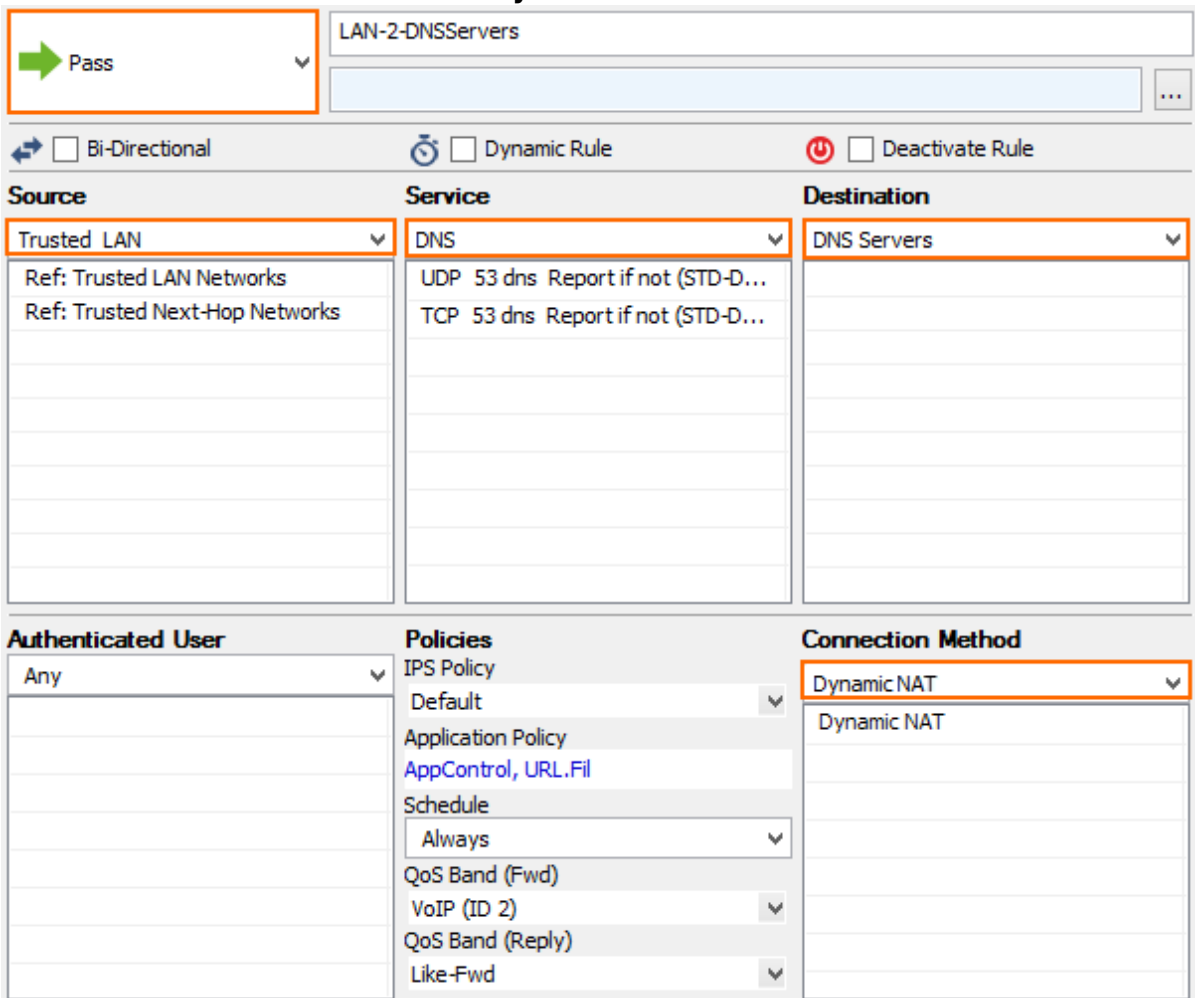
12. Click **OK**

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:
  - **Action** - Select **PASS**.
  - **Source** - Select **Trusted LAN**
  - **Service** - Select the modified DNS service object created in step 2.
  - **Destination** - Select **Internet** or enter the IP addresses of your DNS Servers.
  - **Connection Method** - Select **Dynamic NAT**.



<input type="checkbox"/> Bi-Directional		<input type="checkbox"/> Dynamic Rule		<input type="checkbox"/> Deactivate Rule	
<b>Source</b> Trusted LAN Ref: Trusted LAN Networks Ref: Trusted Next-Hop Networks		<b>Service</b> DNS UDP 53 dns Report if not (STD-D... TCP 53 dns Report if not (STD-D...		<b>Destination</b> DNS Servers	
<b>Authenticated User</b> Any		<b>Policies</b> IPS Policy Default Application Policy AppControl, URL.Fil Schedule Always QoS Band (Fwd) VoIP (ID 2) QoS Band (Reply) Like-Fwd		<b>Connection Method</b> Dynamic NAT	

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

© Barracuda Networks Inc., 2020 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.