



August 2007

## AOS Quick Configuration Guide

### Configuring UDP Relay

#### Understanding UDP Relay

Many services, such as DHCP, rely on clients being able to reach a server by broadcasting a request. These requests are limited by being broadcast. Broadcast traffic propagates only throughout the local subnet. If the client is not on the same subnet as the server, the broadcast will not reach the server. If it is necessary for clients to have the ability to communicate with a remote server through broadcast traffic, then UDP Relay must be enabled. UDP Relay, once set up, will not simply forward the broadcast packets. It also examines them, checks their validity, and adds any appropriate changes, such as its own IP address (which enables the server to return the traffic to the router). The router will then forward this traffic to the client.

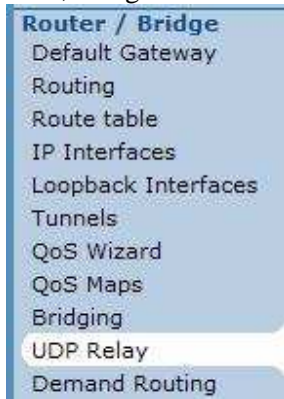
#### Hardware/Software Requirements/Limitations

All current AOS router platforms are capable of supporting UDP Relay. UDP relay for bootps (DHCP relay) cannot be used on an AOS device also configured as a DHCP server.

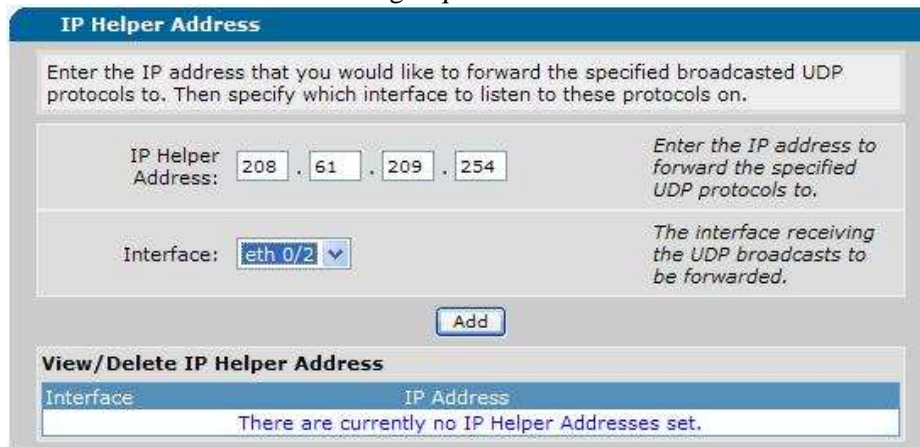
### Configuring UDP Relay

#### Configuring UDP Relay in the GUI

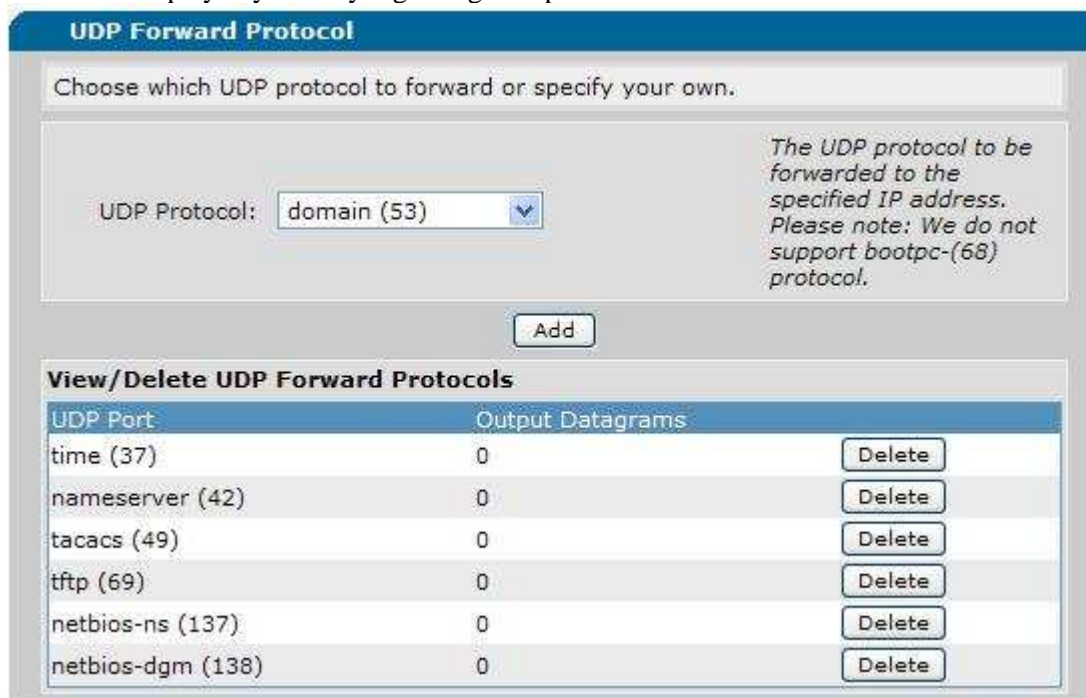
First, navigate to the UDP Relay menu.



Next, enter in the IP Helper address. This is the address of the server that will be receiving the forwarded traffic from the router. Also, select the interface that will be receiving the requests. This will be the interface that is connected to the PCs that will be initiating requests. Click “Add”.



Finally, enter the ports that need to be forwarded to the server. Multiple ports can be added. The table below the add menu will display any activity regarding the specified traffic.



UDP Port	Output Datagrams	Delete
time (37)	0	Delete
nameserver (42)	0	Delete
tacacs (49)	0	Delete
tftp (69)	0	Delete
netbios-ns (137)	0	Delete
netbios-dgm (138)	0	Delete

### Configuring UDP Relay in the CLI

1. Navigate to the interface that is connected to the PCs broadcasting traffic. Use the **ip helper** command to specify the server that will be receiving the forwarded broadcasts.

*Syntax:* **ip helper** <A.B.C.D>

*EX:* (config-eth 0/1)# **ip helper 208.61.209.254**

2. Exit to the global configuration prompt and specify the ports that will be forwarded to the previously specified server.

*Syntax:* **ip forward-protocol udp** <udp port OR protocol>

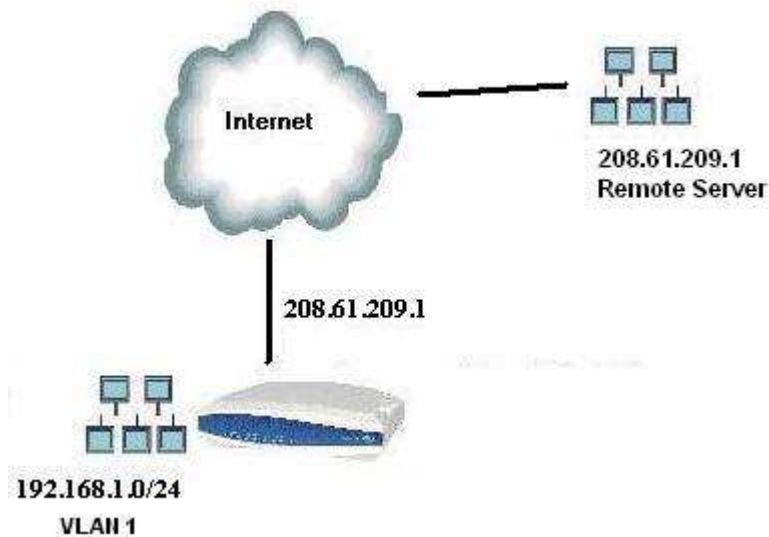
*EX:* (config)# **ip forward-protocol udp 53**

*EX:* (config)# **ip forward-protocol udp domain**

## Command Summary Table

	<b>Command</b>	<b>Description</b>
<b>Step 1</b>	(config-eth 0/1)# <b>ip helper</b> <A.B.C.D>	Specify the server to forward traffic to from within the interface that will be receiving the traffic
<b>Step 2</b>	(config)# <b>ip forward-protocol</b> <udp port OR protocol>	Specify the ports that will be forwarded to the previously specified server.

## Example configuration



```
(config-eth 0/1)# ip address 208.61.209.1 255.255.255.0
```

```
(config-eth 0/2)# ip address 192.168.1.1 255.255.255.0
```

```
(config-eth 0/2)# ip helper 208.61.209.254
```

```
(config)# ip forward-protocol udp domain
```

```
(config)# ip forward-protocol udp bootps
```