

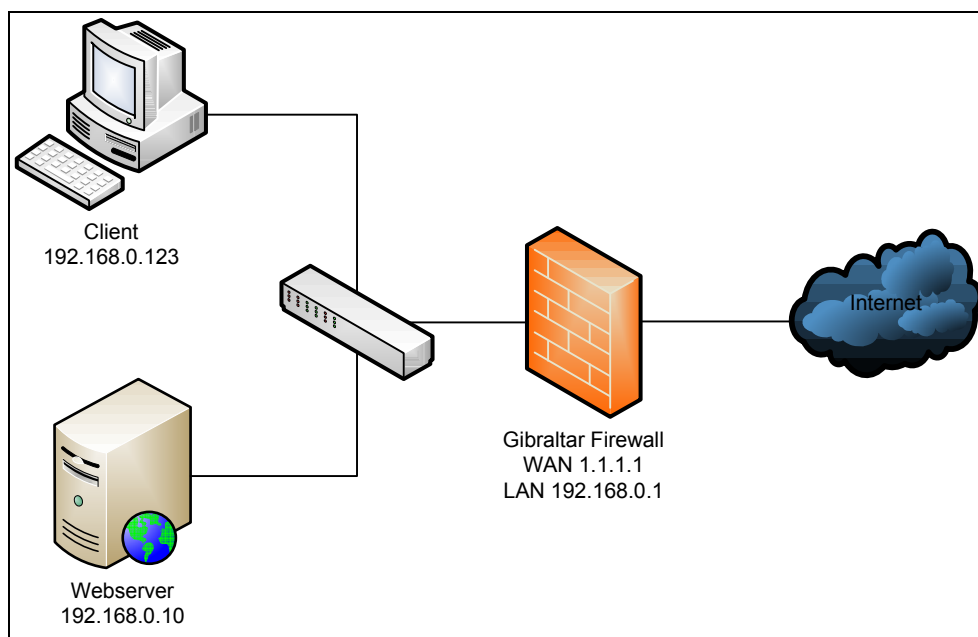
ACCESSING A SERVER FROM THE INTERNET AND FROM THE INTERNAL LAN BY USING THE SAME URL

The Situation

A server is situated in the LAN. It should be available by using the same URL both from the Internet and from the local net.

The Preconditions

- The external interface is named "WAN".
- The internal interface is named "LAN" and is configured with the IP address 192.168.0.1.
- The internal network is a class C net (192.168.0.0/24).
- The URL of the server is www.example.com. This URL shows to the IP address 1.1.1.1.
- The internal IP address of the server is 192.168.0.10.
- The server offers a website at port 80 (http; this description can also be used for all other services).



The Solution

First we allow the traffic from the Internet to the internal server:

- Add a NAT rule to forward all incoming traffic at the interface WAN at port 80 to the internal IP address of the server:
 - Track: incoming WAN
 - Source address: ANY

- Destination address: 1.1.1.1
- Service: http
- Action: DNAT
- --to IP address: 192.168.0.10
- Additionally add a firewall rule to allow the http traffic from WAN to LAN:
 - Interface: incoming WAN outgoing: LAN
 - Source address: ANY
 - Destination address: 192.168.0.10
 - Service: http
 - Action: ACCEPT

Now we add rules to allow the internal access to the server by using the same URL:

- Add a NAT rule to forward the incoming traffic at the interface LAN at port 80 with the destination address 1.1.1.1 to the internal address of the server:
 - Track: incoming LAN
 - Source address: ANY
 - Destination address: 1.1.1.1
 - Service: http
 - Action: DNAT
 - --to IP address: 192.168.0.10
- Add a second NAT rule that replaces the source IP address of the packets with the internal IP address of the firewall. If the source address is not replaced, the answering packets from the server will be returned directly to the requesting client. But this client does not know anything about these packets, because he sent his request to the external IP address:
 - Track: outgoing LAN
 - Source address: 192.168.0.0/24
 - Destination address: 192.168.0.10
 - Service: http
 - Action: SNAT
 - --to IP address: 192.168.0.1
- Additionally add a firewall rule to allow the traffic passing the firewall from LAN to LAN:
 - Interface: incoming LAN outgoing: LAN
 - Source address: 192.168.0.0/24
 - Destination address: 192.168.0.10
 - Service: http
 - Action: ACCEPT

Now the server should be available by using the URL www.example.com independently if from the LAN or from the Internet.

Another possibility to solve this issue is to add the URL to a local DNS server if there is one.