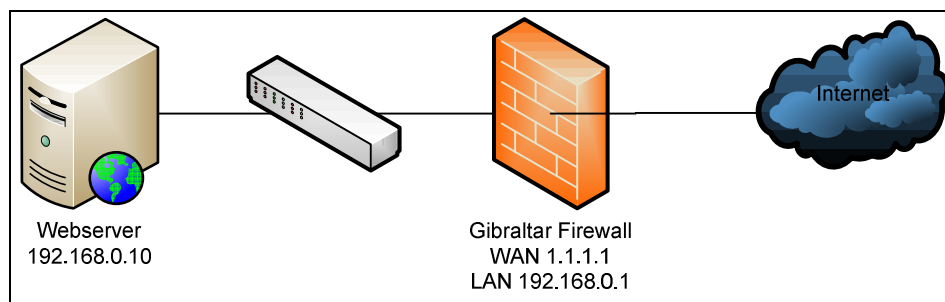# PORT FORWARDING TO INTERNAL SERVERS

The Situation

A server is situated in the LAN or DMZ and it should be available from the Internet by port forwarding.

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).

Webserver
192.168.0.10

Gibraltar Firewall
WAN 1.1.1.1
LAN 192.168.0.1

The Solution

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

Now the server is available from the Internet by using the URL www.example.com.

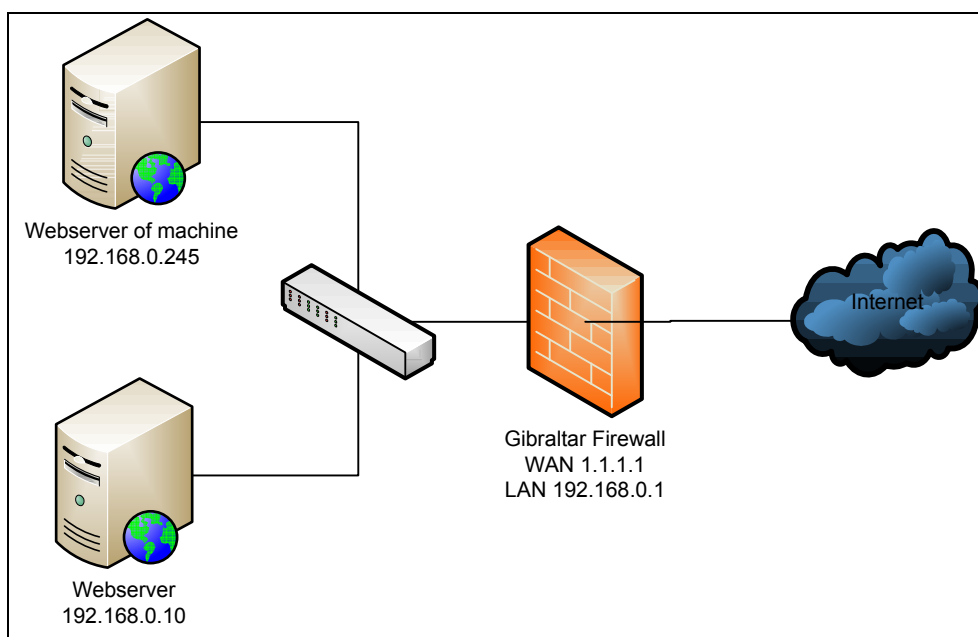## Special case: changing the forwarded port at the firewall

The Situation
Port 80 is already used by a webpage. Another webpage (web interface) must be reachable at the same public IP address.

The Preconditions
Look above. The administrator has already created a NAT rule to forward requests at port 80 to the internal web server 192.168.0.10.

A specific machine has a web interface for maintenance also running at port 80.This interface must be reachable for the maintenance staff. The machine has the IP address 192.168.0.245.

The Solution
The maintenance staff sends its request to the port 81. The Gibraltar firewall redirects the requests to the port 80 at the specific machine.

- Add a NAT rule to forward all incoming traffic at the interface WAN at port 81 to the internal IP address of the server and change the port to 80:
  - Track: incoming WAN
  - Source address: ANY
  - Destination address: 1.1.1.1
  - Service: CUSTOM
  - Protocol: TCP
  - Destination port: 81

- o Action: DNAT
- o --to IP address: 192.168.0.10
  - ▪ optional: Port: 80
- Additionally add a firewall rule to allow the traffic from WAN to LAN:
  - o Interface: incoming WAN outgoing: LAN
  - o Source address: ANY
  - o Destination address: 192.168.0.10
  - o Service: http
  - o Action: ACCEPT