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Configuring a Vyatta 4.0 release as a PPTP VPN server with basic authentication using a DSL internet connection with a dynamic IP address

Tutorial Introduction

- Configure the Vyatta router for DSL internet connection sharing.
- Configure the Vyatta router as a PPTP VPN server with basic authentication.

This tutorial introduces the configuration of the Vyatta 4.0 router as a PPTP VPN server using a DSL internet connection with a dynamic IP address, as well as a router for internet connection sharing in a LAN.

Tutorial Requirements

This tutorial requires the following material for its successful completion:

- An available physical or virtual machine that contains at least two Ethernet network interfaces.
- The machine should have a clean installation of Vyatta 4.0 with all Ethernet network interfaces detected.
- An available DSL internet connection for testing purposes.
- An available machine for VPN client connection testing purposes, either Linux, Mac OS X or Windows.

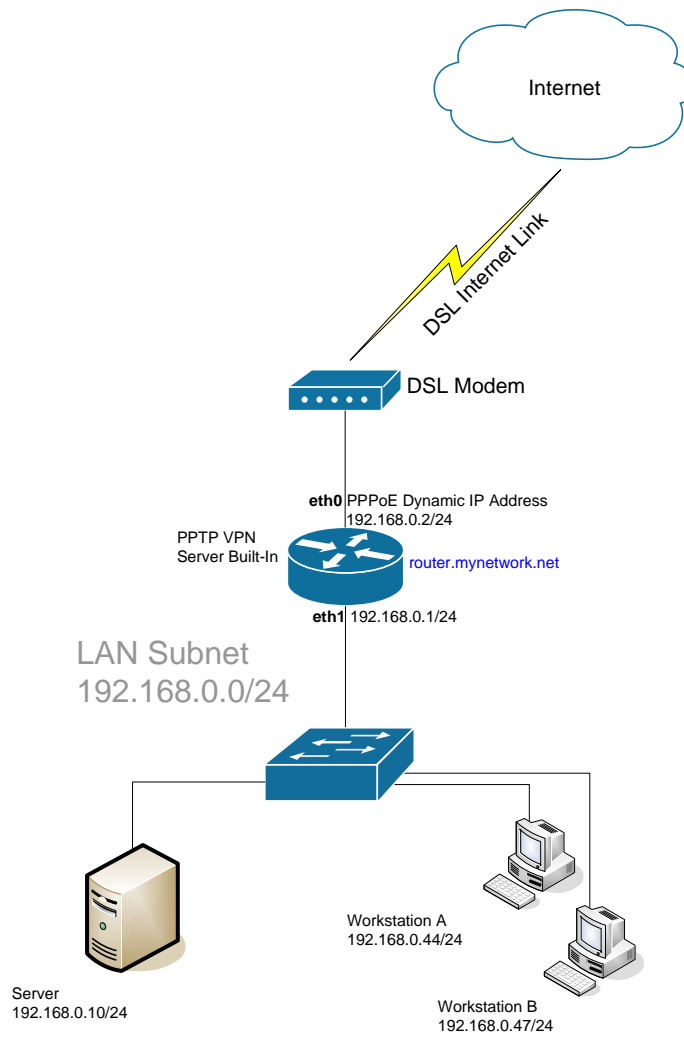
Tutorial Notes

This tutorial assumes the reader is familiar with concepts of TCP/IP networking, network routing protocols, Virtual Private Networking and basic Vyatta commands. The PPTP VPN server configuration used in this tutorial has been successfully tested using the integrated Windows VPN client, as well as using the Linux PPTP VPN client, both inside and outside of the network.

Tutorial

For reference take a look at the simple network diagram on page 2. The network consists of a single network router, which is used for internet connection sharing and VPN access purposes.

Tutorial Example Network



Configuring the Vyatta router as the internet gateway

Configure the router host name, domain name, gateway address and the name servers:

```
set system host-name router
set system domain-name mynetwork.net
set system gateway-address 192.168.0.1
set system name-server 4.2.2.1
set system name-server 4.2.2.2
```

Configure the ethernet interfaces, using ethernet interface eth0 as the WAN interface, and the ethernet interface eth1 as the LAN interface as follows:

```
set interfaces ethernet eth1 address 192.168.0.1/24
set interfaces ethernet eth0 pppoe1 1
set interfaces ethernet eth0 pppoe1 1 user-id <dsl_service_username>
set interfaces ethernet eth0 pppoe1 1 password <dsl_service_password>
set interfaces ethernet eth0 pppoe1 1 connect-on-demand
set interfaces ethernet eth0 address 192.168.0.2/24
commit
show interfaces ethernet eth0 pppoe 1
show interfaces ethernet
```

Configure the NAT service rules in order to enable the translation of internal IP traffic with the outside world, in other words, enabling internet connection sharing:

```
set service nat rule 1 source address 192.168.0.0/24
set service nat rule 1 outbound-interface pppoe1
set service nat rule 1 type masquerade
commit
show service nat
```

Save the configuration permanently:

```
save
```

Configuring the Vyatta router as a PPTP VPN server with basic authentication

Configure the PPTP VPN server authentication mode, VPN client username and password:

```
set vpn pptp remote-access authentication mode local
set vpn pptp remote-access local-users username <vpn_username> password <vpn_password>
```

Configure the PPTP VPN client IP address pool and DNS server options:

```
set vpn pptp remote-access dns-servers server-1 4.2.2.1
set vpn pptp remote-access dns-servers server-2 4.2.2.2
set vpn pptp remote-access client-ip-pool start 192.168.10.1
set vpn pptp remote-access client-ip-pool stop 192.168.10.254
```

Configure the interface IP address to which the PPTP VPN server will bind to:

```
set vpn pptp remote-access outside-address 192.168.0.2
commit
```

Save the configuration permanently:

```
save
```

Configuring the NAT rule for forwarding of PPTP VPN (TCP port 1723) traffic from the PPPoE interface with a dynamically assigned public IP address

Configure the NAT rule 2 for the PPTP VPN service, as TCP port 1723 to forward to Ethernet eth0 (192.168.0.2). This is done as a result of the internet connection having a dynamically assigned public IP address, thus the Ethernet interface eth0 needs to have all TCP port 1723 traffic forwarded to its IP address of 192.168.0.2, which was binded to the PPTP VPN server in the previous steps.

```
set service nat rule 3
set service nat rule 3 destination port 1723
set service nat rule 3 inbound-interface pppoe1
set service nat rule 3 inside-address address 192.168.0.2
set service nat rule 3 outbound-interface pppoe1
set service nat rule 3 protocol tcp
set service nat rule 3 source address 0.0.0.0/0
set service nat rule 3 type destination
```

Load the new configuration:

```
commit
```

Save the configuration permanently:

```
save
```

Test the given configuration to ensure the PPTP VPN server can be accessed from outside, as well as inside the network.

This concludes the tutorial. Open Informatics hopes IT professionals working with the given technology will find this tutorial useful in their research and final deployment of the demonstrated technology in their IT environment. Any feedback on material published by Open Informatics is greatly appreciated.