DuxGate Client - Branch Office VPN Connector

Configuration notes and installation guide

notes:
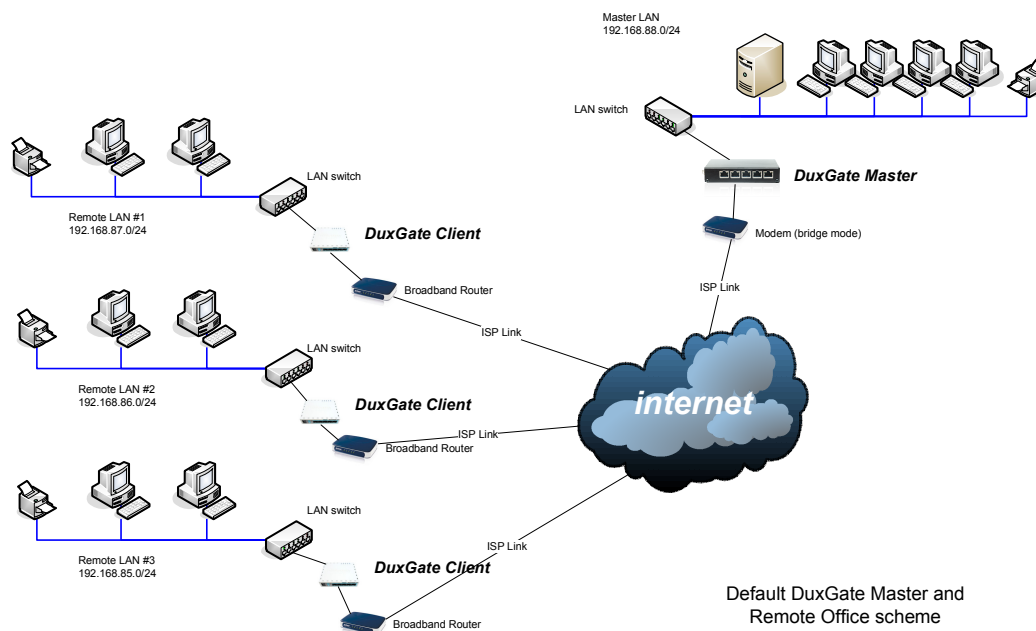
RouterBoard Configuration Notes
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Configuration Name: DuxGate Client

The **DuxGate Client** configuration scheme has been designed to implement an internet gateway with PPTP VPN to **a Duxgate Master** device installed at the head office or corporate HQ.

The default configuration has been applied to provide a basic configuration scheme that will help you get up and running with a minimum of customisation required.

The default network topology and IP addressing is shown in the following diagram:

Master LAN
192.168.88.0/24

LAN switch

DuxGate Master

Modem (bridge mode)

ISP Link

LAN switch

Remote LAN #1
192.168.87.0/24

DuxGate Client

Broadband Router

ISP Link

LAN switch

Remote LAN #2
192.168.86.0/24

DuxGate Client

ISP Link
Broadband Router

internet

LAN switch

Remote LAN #3
192.168.85.0/24

DuxGate Client

ISP Link

Broadband Router

Default DuxGate Master and Remote Office scheme

Figure 1

The following notes should be used as a guide to deploying and configuring the Duxgate Master device.

Step 1: Accessing the device using Winbox

1. Download the mikrotik Winbox configuration tool at: http://www.mikrotik.com/download.html, or

http://www.duxtel.com.au/mikrotik/winbox.exe

2. Connect power to the router using the power supply provided
3. Connect your computer to the router via standard Ethernet cable to port ether2
4. Run WinBox program
5. Click on "…" button adjacent to 'connect'
6. Click on a router entry that appears in the select list
7. Enter username "admin" (leave password blank)
8. Click 'Connect'

Step 2: Set the router password

a. Connect to the router using Winbox as per Step 1
b. Click on "System" in the main menu, and select "Password"
c. Enter the original password (i.e. blank if it is the first login) and enter your new password twice

WARNING: make sure you write down or remember the password – you will need to factory reset the device to gain access without the correct password.

Step 3: Connect the DuxGate Client to the modem

Connect port Eth1 the DuxGate device to your modem using a standard Ethernet cable.

The default Duxgate Client configuration is designed to operate behind a broadband router when the modem/router is acting as DHCP server.

If your broadband modem is *not* acting as DHCP server for the network, or if you prefer to allow the Duxgate device to manage the PPPoE link to the ISP, you should complete step 4, otherwise jump to step .

Step 4: Set the modem to bridge mode (optional)

Consult your router/modem documentation for assistance if required.

Step 5: Enable PPPoE client On the DuxGate device (optional)

Complete this step only if you have completed step 3. If you have elected to skip step 4, then go to step 6.

Connect port Eth1 the DuxGate device to your modem using a standard Ethernet cable.

a. Connect to the router using Winbox as per Step 1
b. Click 'IP' in the main menu, then click 'DHCP Client'
c. Click once on the entry for 'ether1' and click *disable* (red 'x' icon)
d. Click on 'Interfaces' in the main menu
e. Double click on the interface entry named 'pppoe-out1'
f. Click the 'dial out' tab
g. Enter the username and password as supplied by the ISP
h. Click 'Apply' and then watch the status indicator at the bottom of the PPPoE configuration form to observe that the PPP session comes online.

Step 6: Enable DHCP server on the LAN (optional)

If you require the DuxGate to act as DHCP server on the network, follow these steps, otherwise skip to step 7.

a. Connect to the router using Winbox as per Step 1
b. Click on "IP" in the main menu, then click "DHCP Server"
c. Click (once) on the dhcp1 in the list, then click on the enable icon (blue tick)

Step 7: Set router LAN address (optional)

If you have completed step 6, skip this step. Otherwise, if your LAN DHCP service is managed from some other device, you will need to set the LAN address of the DuxGate to match the default gateway address assigned by the DHCP server.

a. Connect to the router using Winbox as per Step 1
b. Click on "IP" then "Addresses"
c. Click on 'add' (Blue '+' icon)
d. Enter the LAN IP address in the form 'a.b.c.d/m' where 'a.b.c.d' is the default gateway IP address assigned by your DHCP server, and 'm' is the number of mask bits for your network (e.g. 255.255.255.0 is /24)
e. Select "LANBridge" from the list of interfaces.
f. Leave all other fields as default (blank) and click 'add'

Step 8: Enter VPN client connection details

The default configuration is designed to connect to a Duxgate Master device using the default *remote1* profile as shipped with the DuxGate Master. If there is only one DuxGate client, you may use

the default credentials, but changing the passwords is recommended as a minimum.

Note that the credential entered at this step must first be configured at the DuxGate Master end.

a. Connect to the router using Winbox as per Step 1
b. Click on "Interfaces" in the main menu
c. Double click on the entry named 'DuxGateClient'
d. Click the 'enable' button
e. Select the 'dial out' tab
f. Enter the public IP address of the DuxGate Master device internet connection
g. Change the username and password values as required

Step 9: Set remote IP network routing

If you intend to use the default IP addressing for the remote networks (as per Figure 1 above) then you may skip this step.

In order to make sure that the DuxGate Master network is available to hosts on the local LAN, you will need to create static route entries for each remote LAN.

a. Connect to the router using Winbox as per Step 1
b. Click on "IP" in the main menu, then click "Routes"
c. Click on 'add' (blue '+' icon)
d. Enter the network address of the Duxgate Master LAN in the form 'a.b.c.0/m' where 'a.b.c.0' is the remote network (e.g. 192.168.11.0) and 'm' is the number of mask bits for the remote network (e.g. 255.255.255.0 = /24)
e. Enter the IP address of the master end of the VPN link (the default setting is 172.16.21.1)

IMPORTANT: *note that all DuxGate Client LANs must use unique IP network ranges to any other DuxGate Client, AND the DuxGate master network.*

Your DuxGate router is now connected to the head office network.

Test the link by issuing ping tests to IP addresses at the head office network from any host on the client LAN.

Restoring Default Configuration.

Note that you can undo any configuration changes in the order that they were applied by click on the UNDO button found at the top left corner of the Winbox application.

If you have become lost during the configuration process, you can restore the default configuration by using the system restore function to reset to the original state as follows:

a. Connect to the router using Winbox as per Step 1
b. Click on "Files" in the main menu
c. Click once on the backup file listed
d. Click the 'Restore' button
e. Allow the router to restart

Note that all settings will be restored to the original state, including system passwords.

Getting Remote Assistance:

The default DuxGate Master configuration provides for remote assistance capability. If you require assistance from a DuxTel consultant to assist in configuration and deployment, complete the following steps:

a. Restore to the default configuration as per the instructions above.
b. Click on 'Interfaces' in the main menu
c. Click once on the entry named 'pptp-out1' and click the enable icon (blue tick)
d. Click 'IP' in the main menu, then click 'DHCP Client'
e. Click once on the entry for 'ether1' and click *enable* (blue tick icon)
f. Contact DuxTel support, quoting the topmost mac address shown for on the DuxGate ID label fixed to the bottom of the router case.

For general RouterOS Documentation:
http://wiki.mikrotik.com/wiki/Contents

For further assistance & support: support@duxtel.com.au