DuxGate Master - Head Office VPN Server

Configuration notes and installation guide

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RouterBoard Configuration Notes
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Configuration Name: DuxGate Master

The **DuxGate Master** configuration scheme has been designed to implement an internet gateway with PPTP VPN server for deployment at the master or corporate HQ, and supporting one or more remote or branch offices with **DuxGate Client** devices.

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:
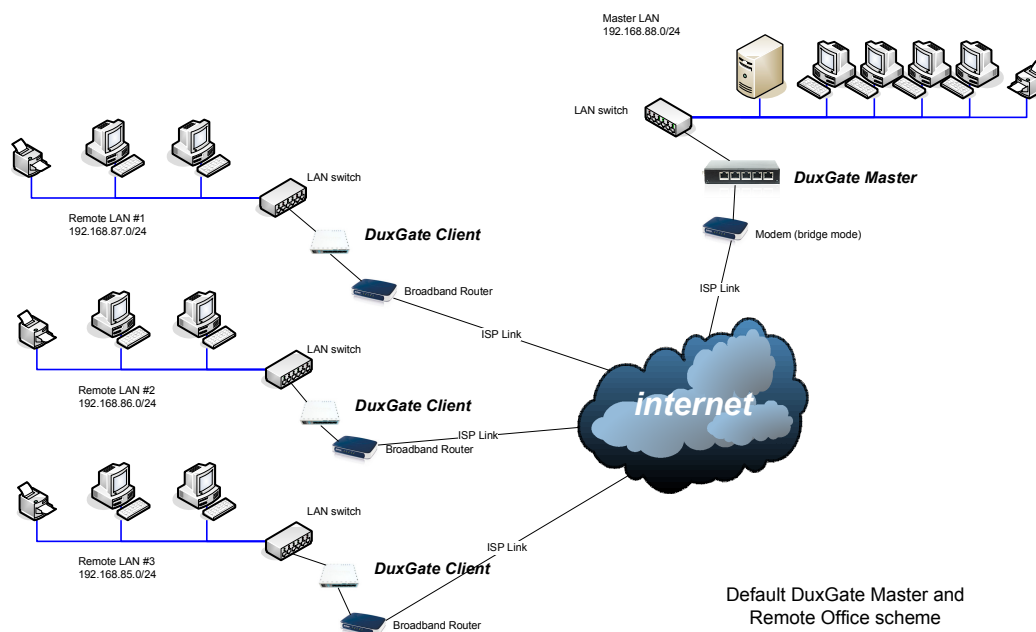

Figure 1

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: Set the modem to bridge mode.

Consult your router/modem documentation for assistance if required.

Step 4: Enable PPPoE client On the DuxGate device

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 on 'Interfaces' in the main menu
c. Double click on the interface entry named 'pppoe-out1'
d. Click the 'dial out' tab
e. Enter the username and password as supplied by the ISP
f. 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 5: 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 6.

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 6: Set router LAN address (optional)

If you have completed step 5, 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 7: Set remote VPN connection security

The Default configuration provides 5 profiles for remote sites. You may use the default if you wish, but changing the passwords is recommended as a minimum.

a. Connect to the router using Winbox as per Step 1
b. Click on "PPP" in the main menu
c. Select the "Secrets" tab
d. Double click on the 'remote1' entry
e. Click the 'enable' button
f. Change the password to the required value
g. Note the IP address for the remote end of the link, needed for step 8e below
h. Repeat for other profiles if required

Step 8: 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.

When remote VPN clients connect to the DuxGate Master, the remote end of the VPN link will be assigned the IP address as defined in the profile. In order to make sure that the remote

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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 remote 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 remote end of the VPN link as defined in the profile at step 7g
f. Repeat for other remote DuxGate Client networks if required.

IMPORTANT: note that all remote LANs must use unique IP network ranges.

Your DuxGate router is now ready to receive remote VPN Connections.

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 'DuxVPN' 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