

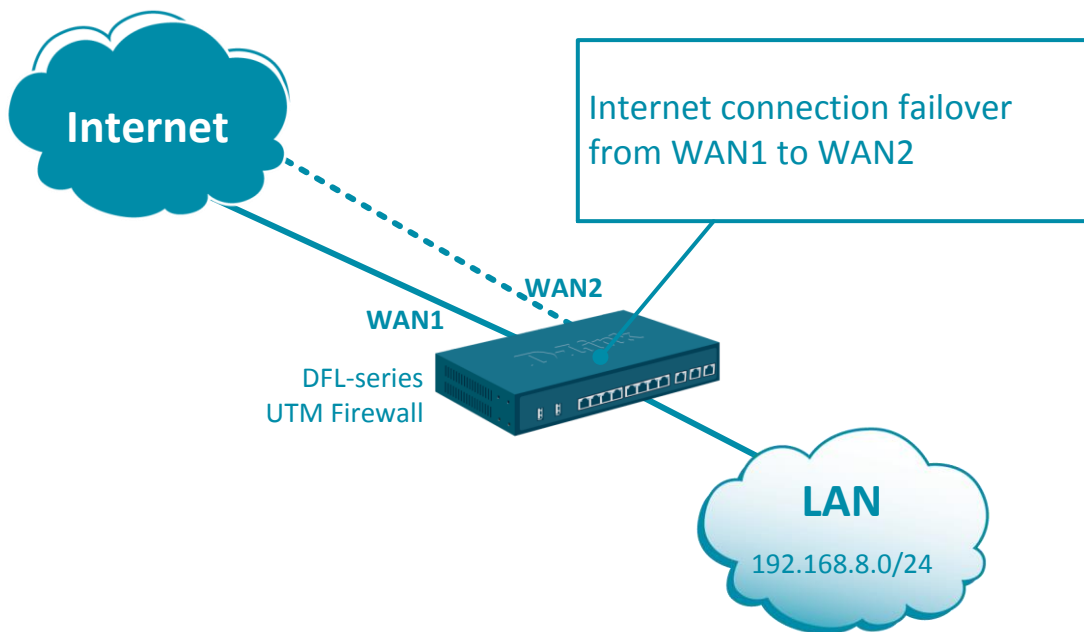
NETDEFEND

Configuration examples for the D-Link NetDefend Firewall series



Setting up two Internet connections with failover

This configuration example is based on the following setup:



Step 1. Log into the firewall. The default access to LAN is via <https://192.168.10.1>. Default username is “admin” and password is “admin”.

Step 2. Set your WAN 1 and WAN2 settings as per Internet provider requirements. In our example WAN 1 is set as DHCP client and WAN 2 with static IP address.

▼ General

- Address Book
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▼ Address Pool

- IP Pools
- NAT Pools

▼ VPN Objects

- LDAP
- IKE Config Mode Pool
- IKE ID Lists
- IKE Algorithms

InterfaceAddresses

An address folder can be used to group related address objects for better overview.

+ Add Edit this object Filter

#	Name	Address	User Auth Groups	Comments
1	wan1_ip	0.0.0.0		IPAddress of interface ...
2	wan1net	0.0.0.0/0		mark on interfac...
3	wan1_gw	0.0.0.0		Default gateway for int...
4	wan2_ip	192.168.120.254		IPAddress of interface ...
5	wan2net	192.168.120.0/24		mark on interfac...
6	wan2_gw	192.168.120.1		

WAN1: DHCP

WAN2: Static IP

Step 3. Go to Network > Ethernet > and set WAN1 and WAN2 with required IP settings.

Click on Advanced tab. Disable the “Add route...” and “Add default route...” options for WAN1 and WAN2 (otherwise you won’t be able to modify the routing settings).

The screenshot shows the 'Network' configuration page with the 'Ethernet' tab selected. A table lists the configured interfaces:

#	Name	IPv4 Address...	IPv6 Address...	Network	Default Gat...	Enable DH...
1	wan1	wan1_ip		wan1net	wan1_gw	Yes
2	wan2	wan2_ip		wan2net		No

The screenshot shows the configuration page for the 'wan1' interface. The 'Advanced' tab is selected. Under the 'Automatic Route Creation' section, the following options are visible:

- Automatically add a route for this interface using the given network.
- Automatically add a default route for this interface using the given default gateway.

The 'Route metric' is set to 100.

The screenshot shows the configuration page for the 'wan2' interface. The 'Advanced' tab is selected. Under the 'Automatic Route Creation' section, the following options are visible:

- Automatically add a route for this interface using the given network.
- Automatically add a default route for this interface using the given default gateway.

The 'Route metric' is set to 100. A note below the metric field states: "Specifies the metric for the auto-created route."

Step 4. Go to Network > Interface Groups. Combine WAN1 and WAN2 into a group.
(This is just to make it easy to apply rules to both interfaces in one go).

The screenshot shows the 'Interface Group' configuration page. The 'Name' field is set to 'WAN1_and_WAN2'. The 'Security/Transport Equivalent' checkbox is unchecked. The 'Interfaces' section has two columns: 'Available' and 'Selected'. The 'Available' column lists 'core', 'dmz', and 'lan'. The 'Selected' column lists 'wan1' and 'wan2', which are highlighted with a red box. There are '+ Include' and 'x Remove' buttons at the bottom of the interface list.

Step 5. Go to Policies > Main IP Rules. Add a new (or modify the existing "Allow_standard") rule which does NAT for all traffic going from LAN to WAN1 and WAN2.
Set LAN as Source and the "WAN1-and-WAN2" interface group as Destination..

The screenshot shows the 'Main IP Rules' configuration page, specifically the 'General' tab. The 'Name' field is 'allow_standard'. The 'Action' dropdown is set to 'NAT', which is highlighted with a red box. The 'Service' is 'all_tcpudp' and 'Schedule' is '(None)'. Under the 'Address Filter' section, the 'Source' is 'lan' and the 'Destination' is 'WAN1_and_WAN', both highlighted with red boxes. There is an information icon and text 'NAT, SAT, SLB S' next to the 'Action' dropdown.

Step 6. Now we need to manually create a default route that routes via WAN1.

Go to Network > Routing > Main routing table. Create a Route for WAN1:

- Network: all-nets (that means Destination IP – Any).
- Gateway: wan1_gw.
- Since we want WAN1 to be our primary route, set lower Metric e.g. 80 (default is 100).

Click on the **Monitor** tab and enable the “Monitor” option.

“Monitor Interface Link Status” – physical connection status;

“Monitor Gateway using ARP” – next hop connectivity status.

Route IPv4

A route defines what interface and gateway to use

General Proxy ARP Monitor

Interface: wan1

Network: all-nets

Gateway: wan1_gw

Local IP address: (None)

Metric: 80

Route IPv4

A route defines what interface and gateway to use in order to reach a

General Proxy ARP **Monitor** Monitored Hosts

Monitor for Route Failover

The health of a route may be monitored for route failover purposes.

Monitor

Method

Monitor Interface Link Status

Monitor Gateway using ARP

Step 7. Create similar Route for WAN2 (or modify existing).
Make sure the destination Network is set to “all-nets”.
Make sure to set Metric higher than WAN1 (e.g. 90).

Click on the **Monitor** tab and enable the “Monitor” option.

Route IPv4

A route defines what interface and gateway to

General Proxy ARP Monitor

Interface: wan2

Network: all-nets

Gateway: wan2_gw

Local IP address: (None)

Metric: 90

Route IPv4

A route defines what interface and gateway to use in order to reach a

General Proxy ARP **Monitor** Monitored Hosts

Monitor for Route Failover

The health of a route may be monitored for route failover purposes.

Monitor

Method

Monitor Interface Link Status

Monitor Gateway using ARP

Step 8. After the configuration is done, click “Configuration” in main bar and select “Save and Activate”. Then click OK to confirm. Wait for 15 sec. You will be automatically redirected to the firewall’s LAN IP address.

NOTE: If you do not re-login into the firewall within 30 sec, the configuration is reverted to its previous state. The validation timeout can be adjusted under System > Remote Management > Advanced Settings.

