

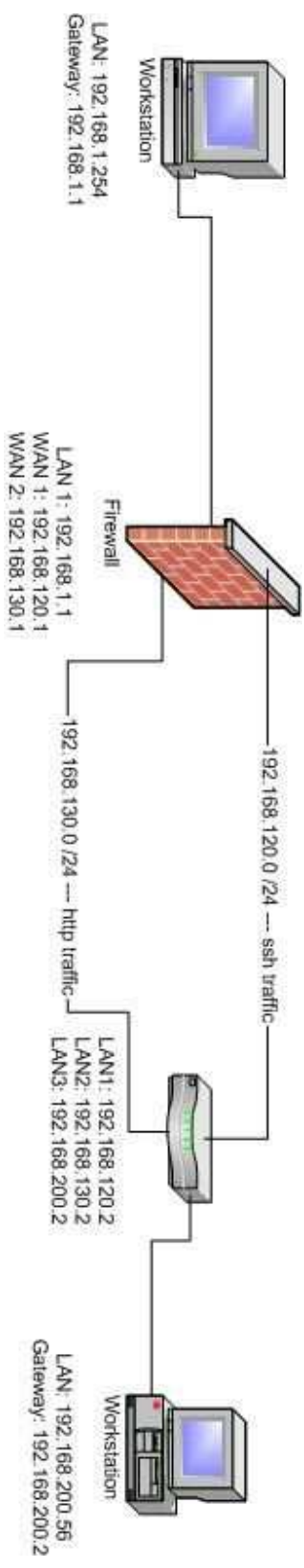
Einrichtung zur Nutzung von zwei WAN-Interfaces für unterschiedliche Protokolle

auf der DFL-800, DFL-1600 und DFL-2500

Um diese Anleitung nutzen zu können werden folgende Kenntnisse vorausgesetzt:
Routing, TCP, UDP, ICMP, Paketfilterung, Connection-Status

Viele dieser Informationen finden Sie beispielsweise unter: <http://de.wikipedia.org/wiki/>

Testaufbau:



In diesem Testaufbau sollen folgende Protokolle über folgende Interfaces weitergeleitet werden:

Interface	IP-Subnetz	WAN-IP	Protokoll
WAN 1	192.168.120.0/24	192.168.120.1	ssh
WAN 2	192.168.130.0/24	192.168.130.1	http

Zuerst müssen die IP-Adressen, Subnetze und Gateways eingerichtet werden:¹



¹ Anzeige unter folgendem Menüpunkt: /Objects / Address Book / Interdace Addresses /

Legen Sie nun ein neues virtuelles Interfaces „wan1-.wan2“ an: ²

wan1-wan2

General

Use an interface group to combine several interfaces for a simplified security policy.

Name:

☐ Security/Transport Equivalent

Interfaces

Available: dmz, lan1, lan2, lan3

Selected: wan1, wan2

Comments

In der Übersicht sieht dies wie folgt aus:

Interface Groups

Use interface groups to combine several interfaces for simplified policy management.

Add ▾

#	Name	Members	Comments
0	wan1-wan2	wan1, wan2	

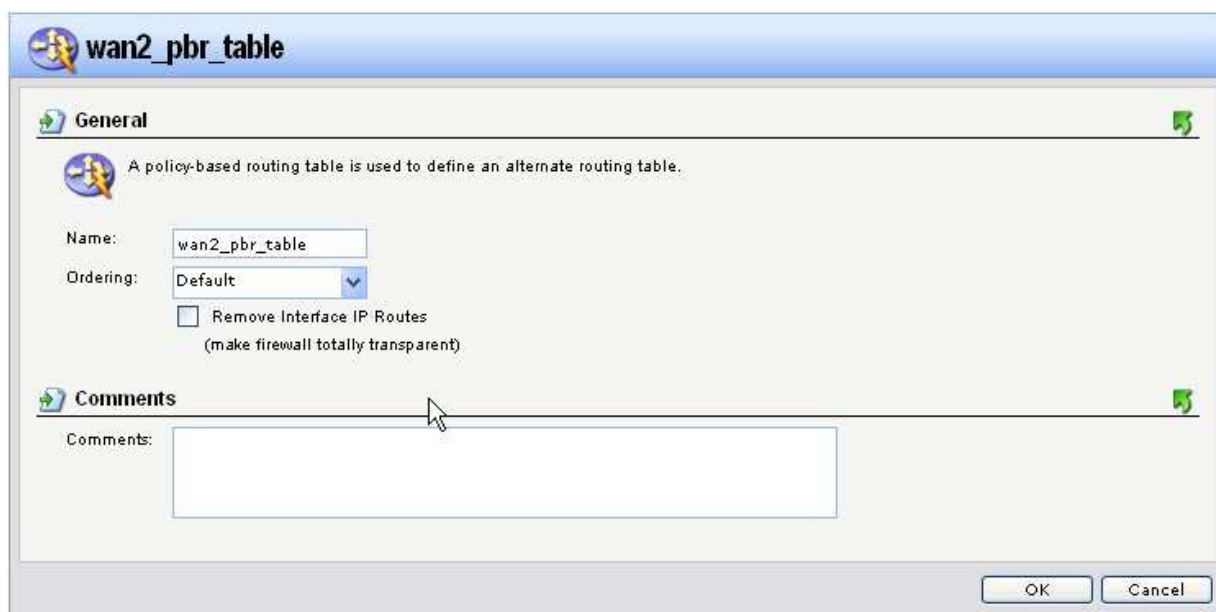
Right-click on a row for further options.

² Anzeige unter folgendem Menüpunkt: / Interfaces / Interfaces Groups /

Weiterhin müssen die eben angelegten IP-Adressen und IP-Subnetze den Interfaces zugewiesen werden.³



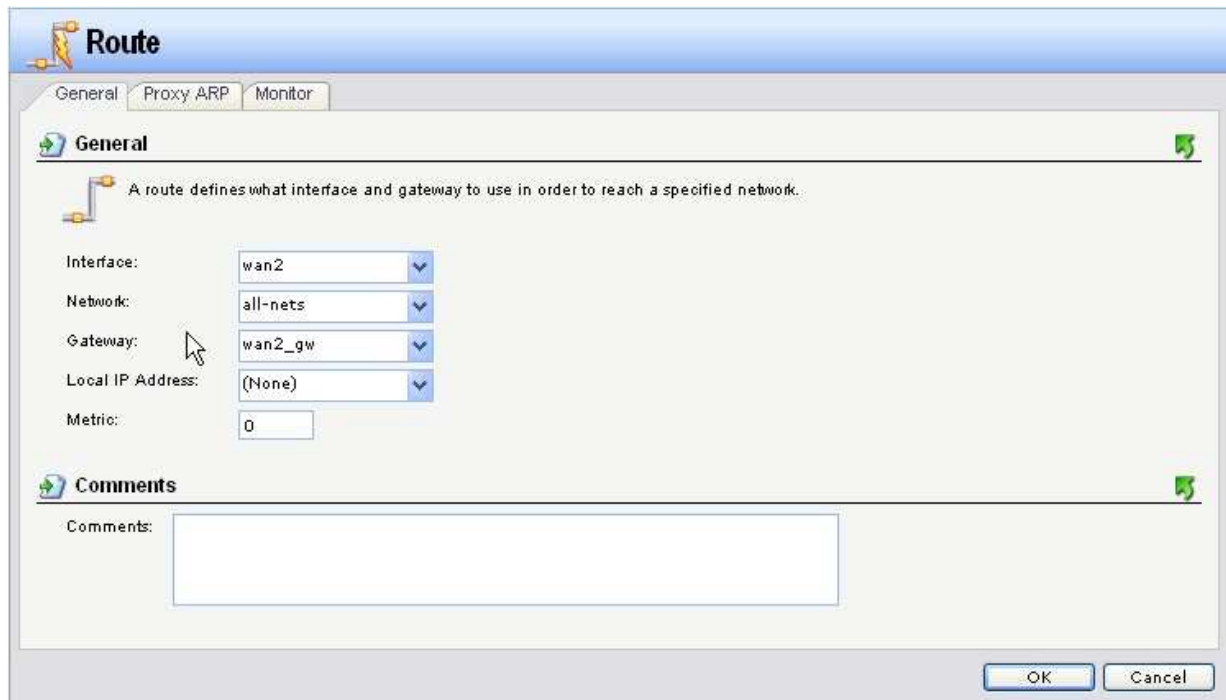
Legen Sie nun das zukünftige Verhalten der „Policy-based Routing Table“ fest:⁴



³ Anzeige unter folgendem Menüpunkt: / Interfaces / Ethernet /

⁴ Anzeige unter folgendem Menüpunkt: / Routing Policy-based Routing Tables /

Nun muss die Route für das PBR (Policy-based Routing) angelegt werden:



The 'Route' configuration window is shown with the 'General' tab selected. It contains fields for Interface, Network, Gateway, Local IP Address, and Metric. The 'Comments' section is empty. The 'OK' and 'Cancel' buttons are at the bottom right.

Route

General Proxy ARP Monitor

General

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

Interface: wan2

Network: all-nets

Gateway: wan2_gw

Local IP Address: (None)

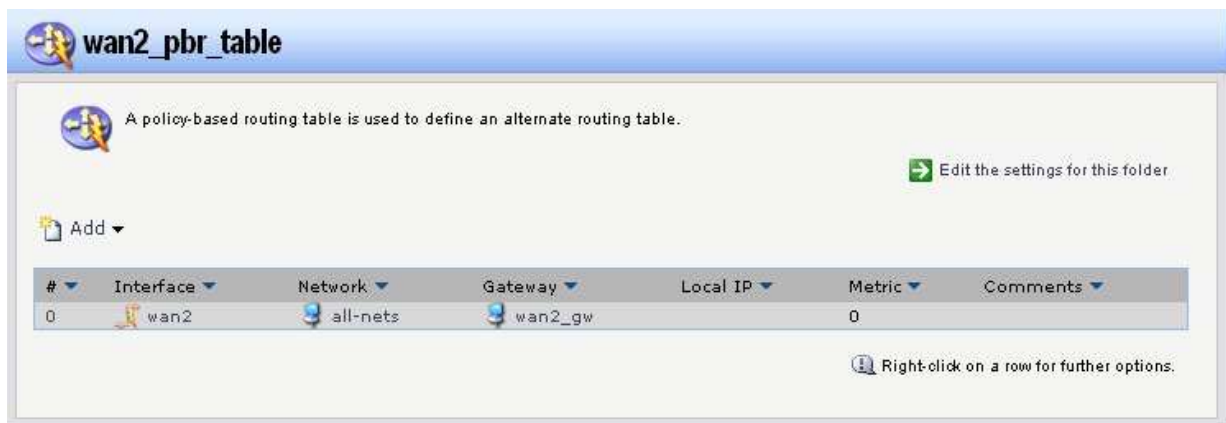
Metric: 0

Comments

Comments:

OK Cancel

In der Übersicht sieht dies dann wie folgt aus:



The 'wan2_pbr_table' overview window shows a table with one row of route data. The table has columns for #, Interface, Network, Gateway, Local IP, Metric, and Comments. A tooltip提示 is visible at the bottom right.

wan2_pbr_table

A policy-based routing table is used to define an alternate routing table.

Edit the settings for this folder

Add

#	Interface	Network	Gateway	Local IP	Metric	Comments
0	wan2	all-nets	wan2_gw		0	

Right-click on a row for further options.

Weiterhin muss nun die zugehörige PBR Policy eingerichtet werden: ⁵

General

A Policy-based Routing Rule forces the use of policy-based routing tables in the forward and/or return direction of traffic on a connection. The 'ordering' parameter of the policy-based routing table determines if the router is consulted before or after the main routing table.

Name: wan2-pbr-rule-1

Forward Table: wan2_pbr_table

Return Table: wan2_pbr_table

Service: http-all

Schedule: (None)

Address Filter

Specify source interface and source network, together with the destination interface and destination network. All parameters have to match for the rule to match.

Source Interface: lan1

Source Network: lan1net

Destination Interface: wan1-wan2

Destination Network: all-nets

Comments

In der Übersicht sieht dies dann wie folgt aus:

Policy-based Routing Policy

Configure a policy for what policy-based routing tables are to be used for what network traffic.

Add

#	Name	Source Interface	Source Network	Destination Interface	Destination Network	Service	Comments
0	wan2-pbr-rule-1	lan1	lan1net	wan1-wan2	all-nets	http-all	

Right-click on a row for further options.

⁵ Anzeige unter folgendem Menüpunkt: / Routing Policy-based Routing Policy /

Legen Sie nun zwei Access Rules an: ⁶

Rule 1 ist für die SSH-Verbindung:

The screenshot shows the Mikrotik WinBox interface for configuring an IP rule. The title bar is 'allow_standard'. The 'General' tab is selected. The 'General' section contains the following fields:

- Name: allow_standard
- Action: NAT
- Service: ssh
- Schedule: (None)

The 'Address Filter' section contains the following fields:

- Source Interface: lan1
- Source Network: lan1net
- Destination Interface: wan1
- Destination Network: all-nets

The 'Comments' section is empty.

Rule 2 ist für die http-Verbindung:

The screenshot shows the Mikrotik WinBox interface for configuring an IP rule. The title bar is 'http-wan2'. The 'General' tab is selected. The 'General' section contains the following fields:

- Name: http-wan2
- Action: NAT
- Service: http-all
- Schedule: (None)

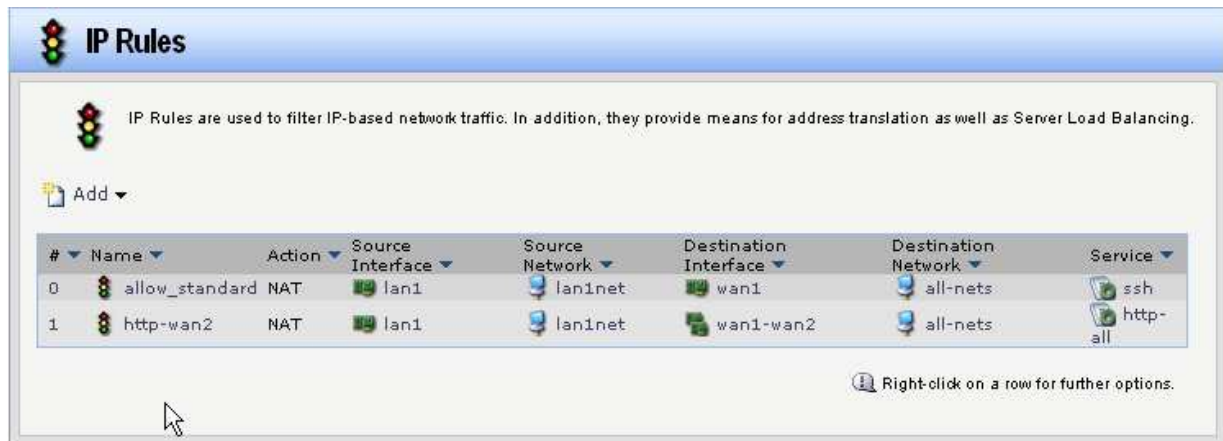
The 'Address Filter' section contains the following fields:

- Source Interface: lan1
- Source Network: lan1net
- Destination Interface: wan1-wan2
- Destination Network: all-nets

The 'Comments' section is empty.

⁶ Anzeige unter folgendem Menüpunkt: / Rules / IP Rules /

In der Übersicht sieht dies dann wie folgt aus:



IP Rules

IP Rules are used to filter IP-based network traffic. In addition, they provide means for address translation as well as Server Load Balancing.

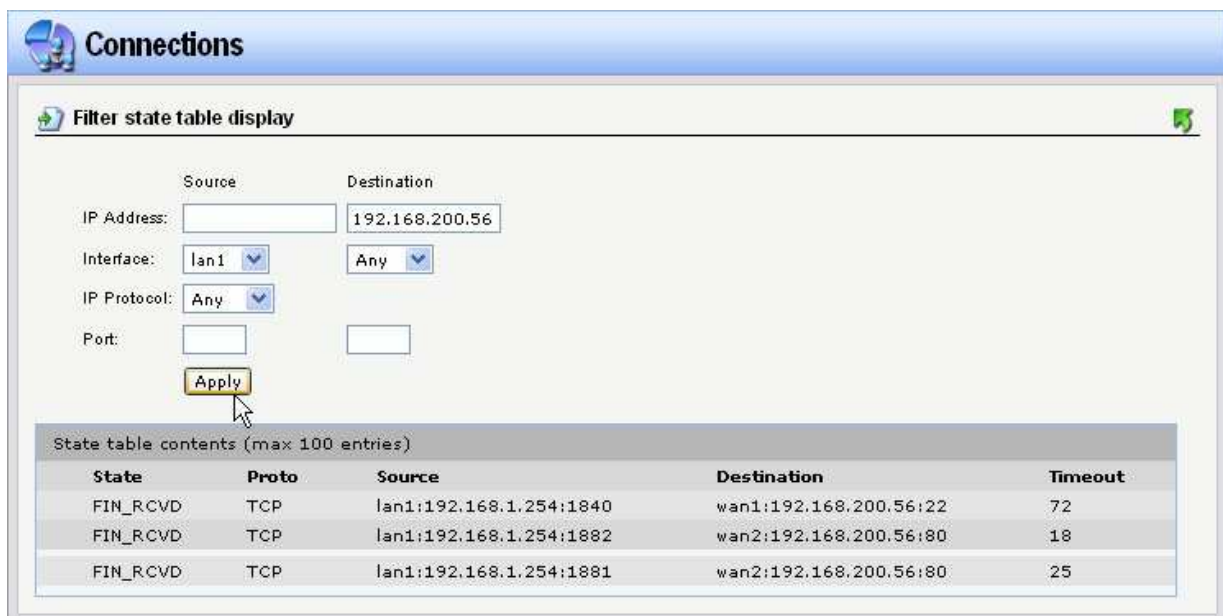
Add

#	Name	Action	Source Interface	Source Network	Destination Interface	Destination Network	Service
0	allow_standard	NAT	lan1	lan1net	wan1	all-nets	ssh
1	http-wan2	NAT	lan1	lan1net	wan1-wan2	all-nets	http-all

Right-click on a row for further options.

Nun kann die Verbindung getestet werden.

Zur Kontrollen der Verbindung kann die Liste der Connections benutzt werden.⁷



Connections

Filter state table display

Source

Destination

IP Address: 192.168.200.56

Interface: Any

IP Protocol:

Port:

Apply

State table contents (max 100 entries)

State	Proto	Source	Destination	Timeout
FIN_RCVD	TCP	lan1:192.168.1.254:1840	wan1:192.168.200.56:22	72
FIN_RCVD	TCP	lan1:192.168.1.254:1882	wan2:192.168.200.56:80	18
FIN_RCVD	TCP	lan1:192.168.1.254:1881	wan2:192.168.200.56:80	25

⁷ Anzeige unter folgendem Menüpunkt: / Status / Connections /