# DFL-800/1600/2500
How to setup Traffic Shaping

You can set your firewall to limit or guarantee bandwidth for certain services or/and for certain computers.

The below steps describe the configuration where we are using 1Mbps up / 1Mbps down link with the following traffic shaping rules:
- inbound and outbound HTTP and HTTPS the max bandwidth is 500Kbps.
- inbound and outbound POP3 the guaranteed bandwidth is 300Kbps, max is 700Kbps.
- other inbound and outbound services use the remaining bandwidth.

Here is the schematic representation of the three traffic shaping pipes we are going to create (we will need three pipes for outbound and three pipes for inbound traffic):
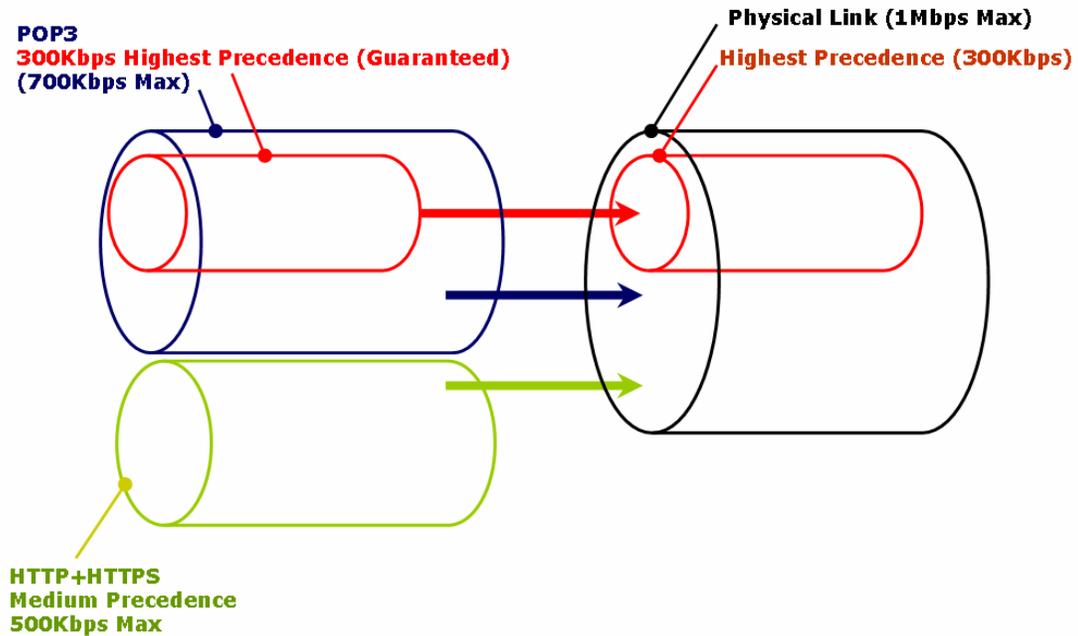
Step 1. Log into your firewall. Go to Traffic Shaping > Pipes.
Create a new entry for a "standard-in" pipe which describes physical connection limitations for download speed. Set the pipe limits: Total - 1000Kb. Under Precedences set "Highest" with 300Kbps (this is for the guaranteed bandwidth).

Create another pipe for "standard-out" (upload speed). Set the pipe limits: Total - 1000Kb. Under Precedences set 'Highest' with 300Kbps.
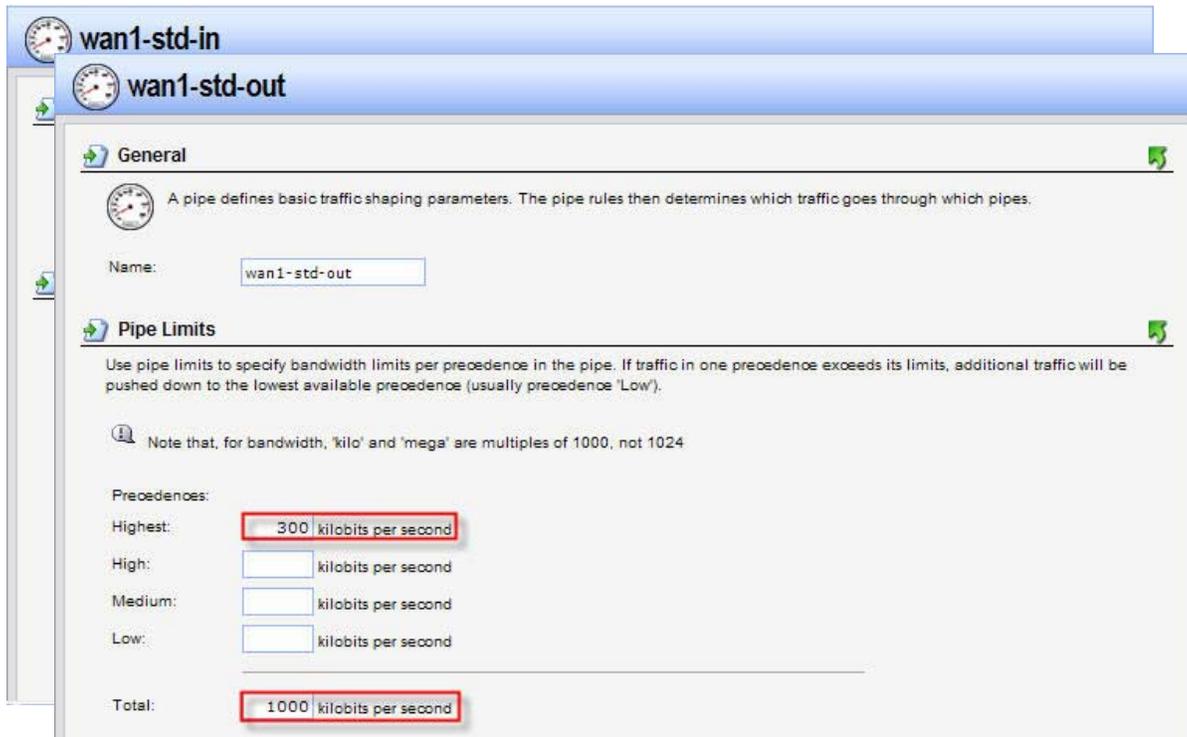
Step 2. Create two pipes (in and out) for HTTP traffic: Total bandwidth – 500 kbps. Precedence: Medium 500 kbps.
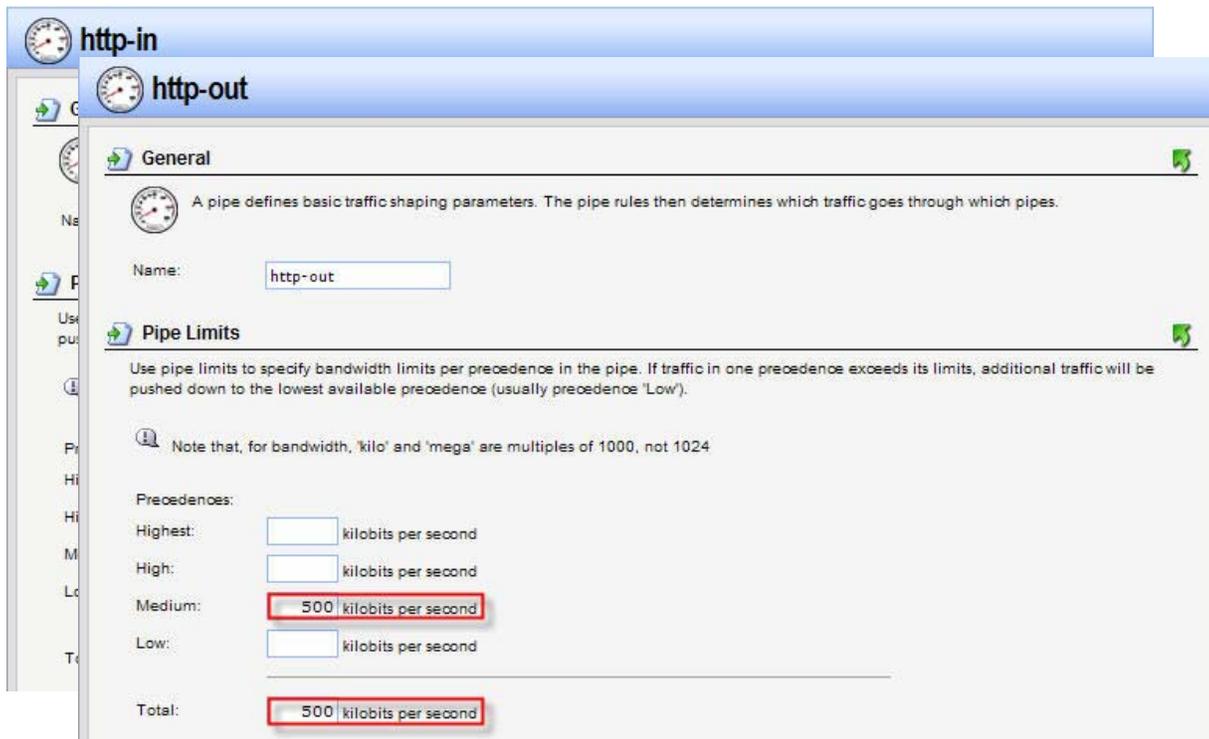
Step 3. Create two pipes (in and out) for POP3 traffic: Total bandwidth – 700 kbps. Precedence: Highest 300 kbps.

pop3-in

pop3-out

General

A pipe defines basic traffic shaping parameters. The pipe rules then determines which traffic goes through which pipes.

Name: pop3-out

Pipe Limits

Use pipe limits to specify bandwidth limits per precedence in the pipe. If traffic in one precedence exceeds its limits, additional traffic will be pushed down to the lowest available precedence (usually precedence 'Low').

ⓘ Note that, for bandwidth, 'kilo' and 'mega' are multiples of 1000, not 1024

Precedences:

|		
Highest:	300	kilobits per second
High:		kilobits per second
Medium:		kilobits per second
Low:		kilobits per second

Total:	700	kilobits per second

Step 4. Go to Traffic Shaping > Pipe Rules. Create a Pipe Rule for HTTP traffic. Service - HTTP-All; Source - LAN/LAN-Net; Destination - WAN/All-nets. Click on Traffic Shaping tab and add the pipes for outgoing traffic (Forward Chain - HTTP-out, Standard-out) and incoming traffic (Return Chain - HTTP-in, Standard-in). Set Precedence to "Low".
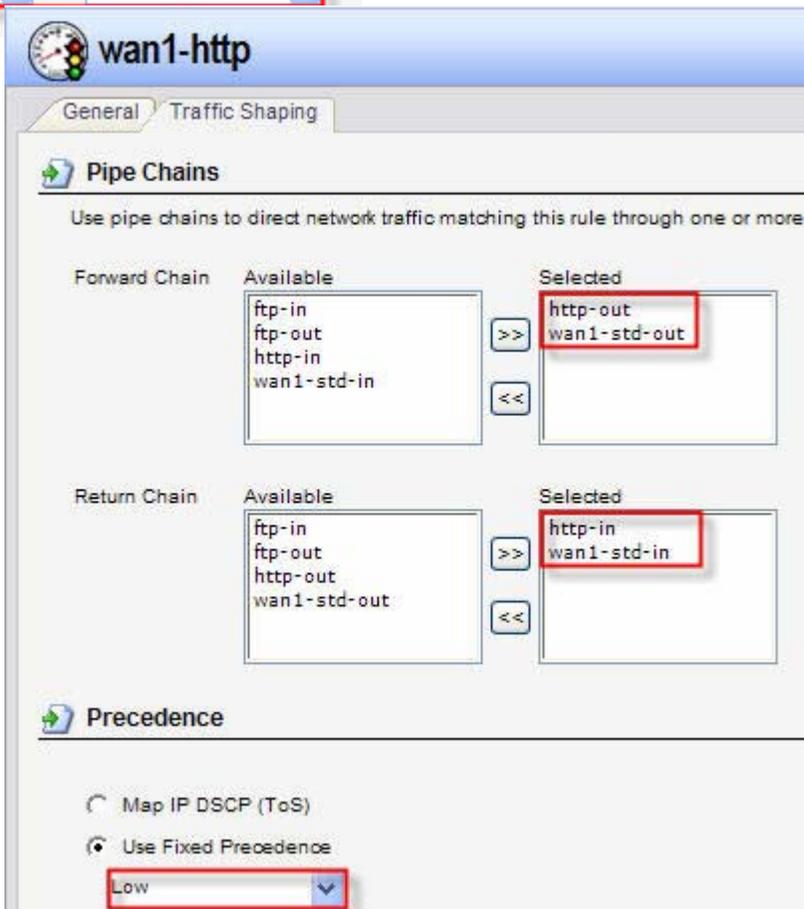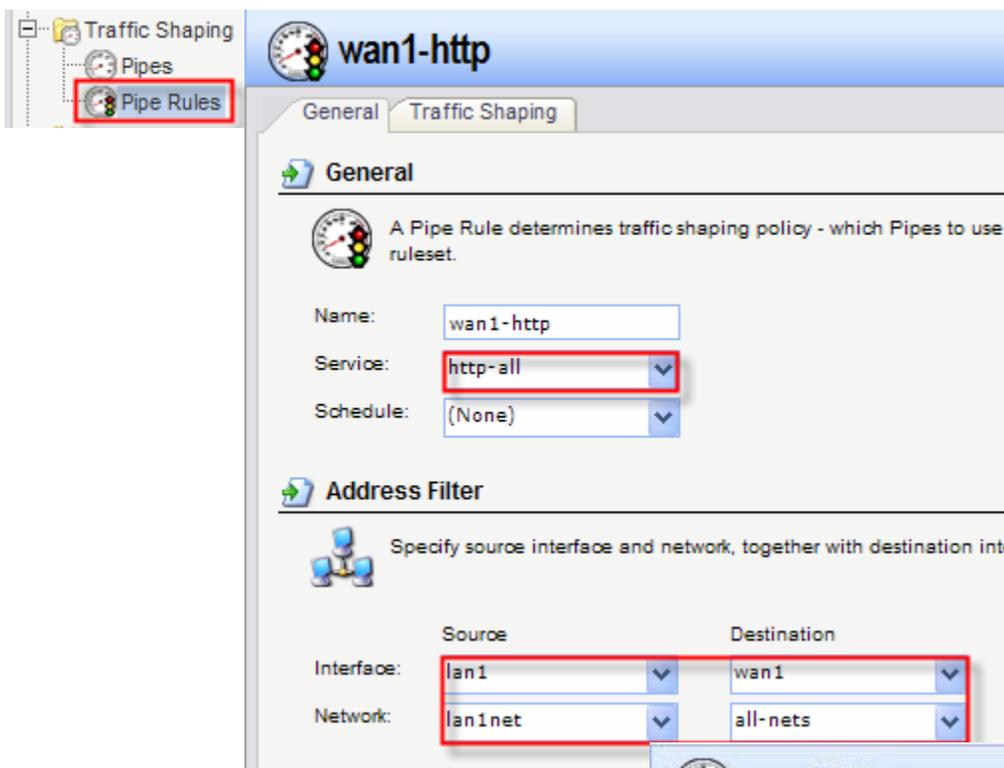
Step 5. Create another Pipe Rule for the POP3 traffic. Service - POP3; Source - LAN/LAN-Net; Destination - WAN/All-nets. Click on Traffic Shaping tab and add the pipes for outgoing traffic (Forward Chain - POP3-out, Standard-out) and incoming traffic (Return Chain - POP3-in, Standard-in). Set Precedence to "Low".

Step 6. Create another Pipe Rule for the rest of the services. Click on Traffic Shaping tab and add the pipes for outgoing traffic (Forward Chain - Standard-out) and incoming traffic (Return Chain - Standard-in). Set Precedence to Low.

Step 7. In the top menu bar select Configuration > Save and Activate > OK.