How to set up Inbound Load Balance under Drop-in Mode

Background

Customers often wonder whether Drop-in Mode and Inbound Load Balance can co-exist. The good news is yes they can. The purpose of this how-to is to guide you through a typical setup of such environment so that you can plan your installation easily.

Prerequisite

This document assumes that you already have a good understanding of Drop-in Mode. If not, please read the how-to on Drop-in Mode[1] before proceeding further.

Scenario

We will use an example throughout this note. Suppose you currently have a network similar to the following:

- Peplink Balance installed and connected to three ISPs, using Drop-in Mode
- Static IP address ranges (subnets) from the ISPs
- A firewall protecting your trusted LAN
- Hosts and servers on the trusted LAN are using private IP addresses

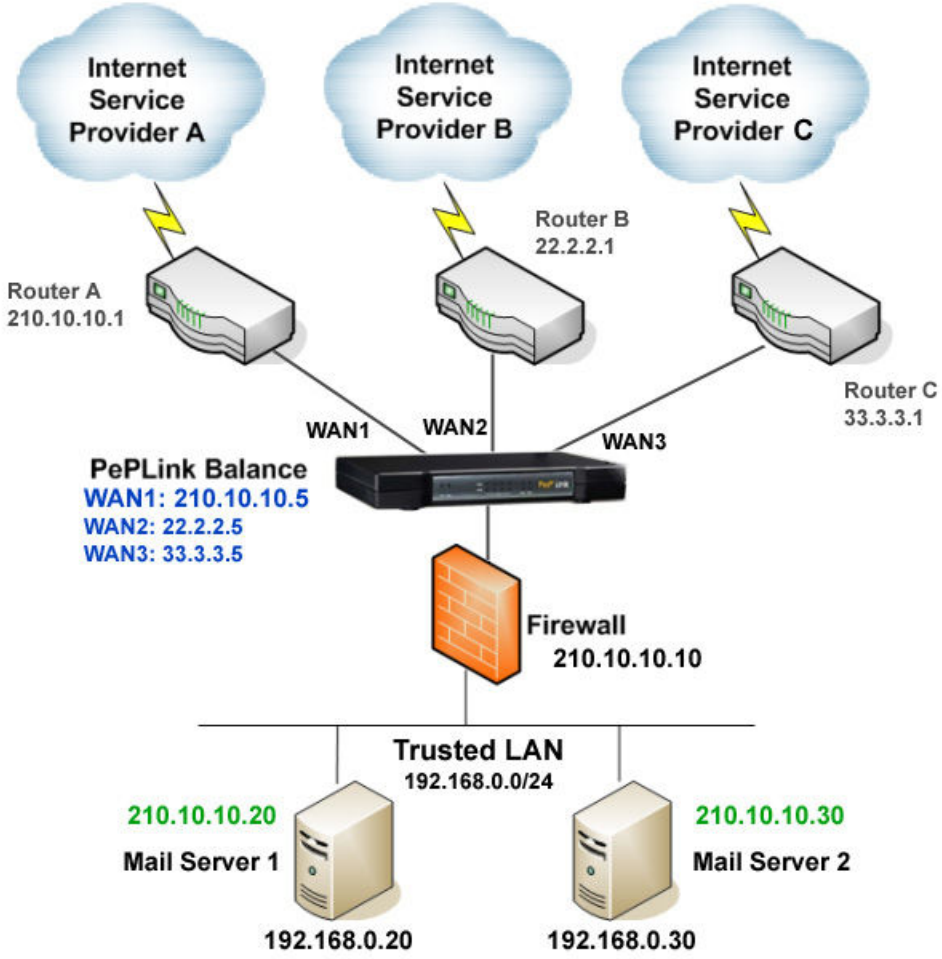
Now you have enabled Drop-in mode, you are wondering what happens when the first link fails. Can Inbound Load Balancing be enabled on WAN2, WAN3? If so, how?

Don't worry; we will address all these in this document.

Conceptually, we enable NAT on WAN2 and WAN3 to masquerade IP addresses of ISP A to achieve inbound load balancing.

[1] How-to "Set up Drop-in Modes in 30 Minutes" - http://www.Peplink.com/document/howto_dropin.pdf

Graphically, the scenario is like this:



In this example, we assume:

- ISP A
  - Network: 210.10.10.0/24
  - Router A (Default Gateway) IP: 210.10.10.1
- ISP B
  - Network: 22.2.2.0/24
  - Router B (Default Gateway) IP: 22.2.2.1
- ISP C
  - Network: 33.3.3.0/24
  - Router C (Default Gateway) IP: 33.3.3.1

- Peplink Balance (Interface addresses)

  - WAN1 and LAN: 210.10.10.5
  - WAN2: 22.2.2.5
  - WAN3: 33.3.3.5
- Firewall IP: 210.10.10.10
- Trusted LAN Network: 192.168.0.0/24
- NAT Mappings (at Firewall)
  - 210.10.10.20:SMTP -> 192.168.0.20:SMTP
  - 210.10.10.30:SMTP -> 192.168.0.30:SMTP

Our Target: we want to map IP addresses from ISP B and ISP C to "logically" point to the mail servers.

Rolling Up Sleeves and Get Started

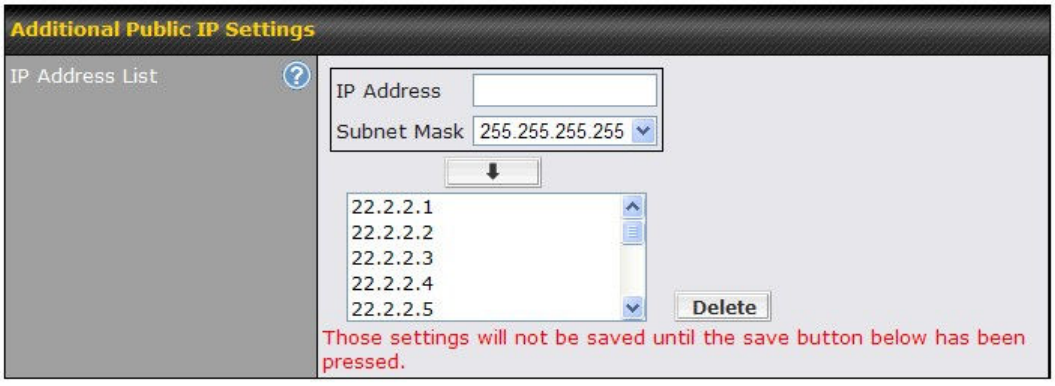
Assumption: Drop-in Mode already configured and working.

Step 1 Configure the Router and Firewall

Any configuration changes to the existing router and firewall? None. That's the beauty of Drop-in Mode.

Step 2 Define Additional Public IP addresses of ISP B and ISP C

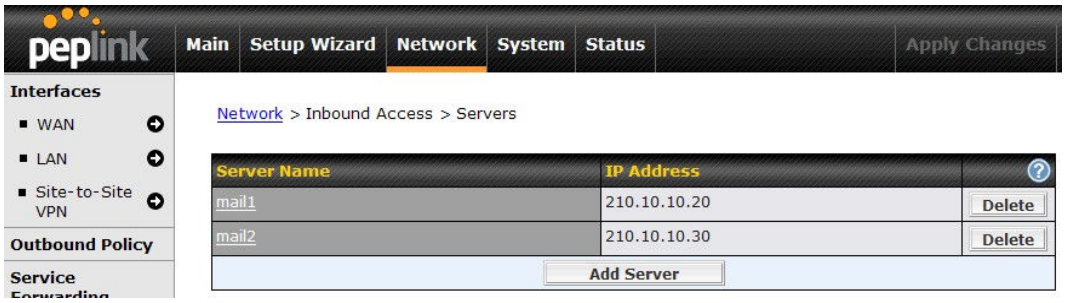
1. Go to ***Network-> Interfaces -> WAN -> WAN2 -> Additional Public IP Settings***
2. Add the public IP addresses assigned to you by ISP B
3. You can add a series of IP addresses easily using the tool. (But remember to remove the default gateway and Balance IP addresses from the auto-generated list by the tool.)



4. Repeat the same step for WAN3 (if applicable for you).
5. Purpose: To tell Balance what IP addresses are available for inbound use.

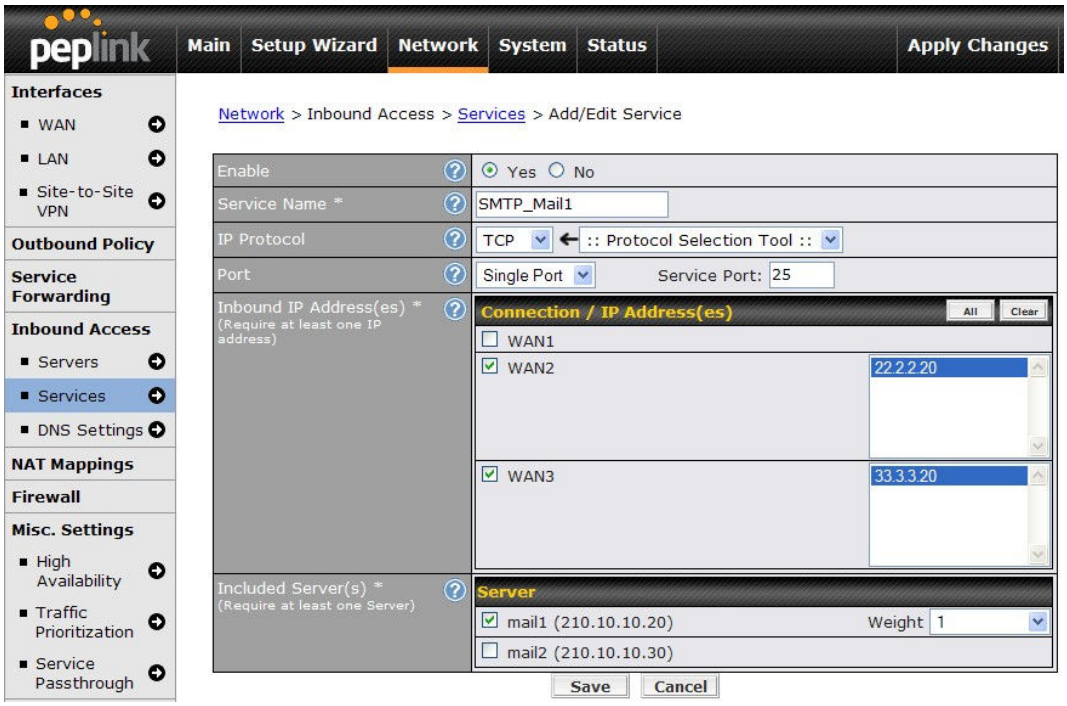
Step 3 Define Inbound Servers

1. Go to Advanced ***Network -> Inbound Access -> Servers***
2. Add the two mail servers
3. Notice the use of IP addresses from ISP A here. To Peplink Balance, it only "sees" IP addresses on its LAN interface.



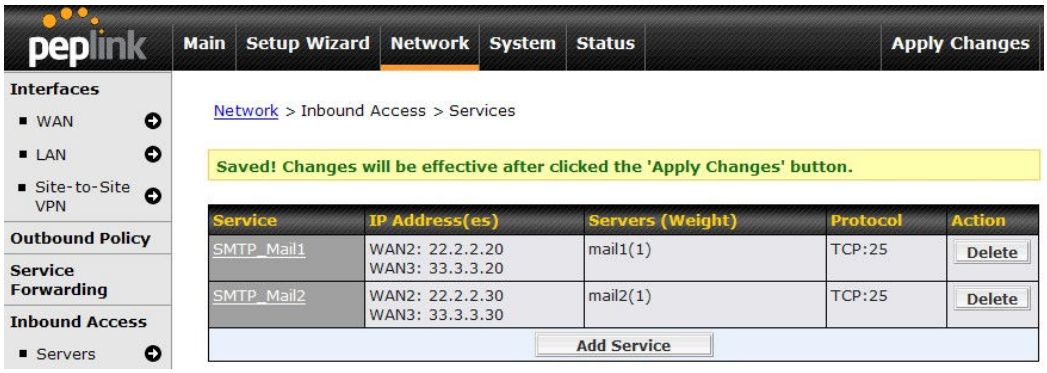
Step 4 Define Inbound Services

1. Go to ***Network-> Inbound Access -> Services***
2. Add a new service rule, tying up IP addresses of ISP B and ISP C to existing server(s).



3. The above screenshot essentially says:
   - Map 22.2.2.20:SMTP -> 210.10.10.20:SMTP
   - Map 33.3.3.20:SMTP -> 210.10.10.20:SMTP

4. Notice that no mapping is required for ISP A. (Uncheck it)
5. Repeat the same step for other service(s).
6. Finally you get something like this:



7. Save and apply changes.

Disclaimer:

This how-to is distributed in the hope that it will be useful, but without any warranty. You should read the manual for official information regarding the functionality of Peplink Balance.