

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 Mode¹ 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" - <u>http://www.Peplink.com/document/howto_dropin.pdf</u>



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.)

Additional Public IP	Settings				
IP Address List	0	IP Address Subnet Mask	255.255.255.255 ¥		
			+		
		22.2.2.1 22.2.2.2			
		22.2.2.3			
		22.2.2.5	~	Delete	
		Those settings pressed.	will not be saved	until the save butt	on below has been

- 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.

peplink	M	ain	Setup Wizard	Network	System	Status	Apply Changes
Interfaces WAN	0	Net	<u>twork</u> > Inbound A	.ccess > Ser	vers		
LAN	0	Ser	ver Name			IP Address	
 Site-to-Site VPN 	0	mai	<u>11</u>			210.10.10.20	Delete
Outbound Policy	у	mai	12			210.10.10.30	Delete
Service						Add Server	

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).

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peplink	Main	Setup Wizard	Network	Gira System	Status			Apply Cha	nges
Interfaces									
• WAN O	Ne	<u>twork</u> > Inbound A	ccess > Se	ervices > Add/I	Edit Ser	vice			
LAN O	En	ahle	0						
 Site-to-Site VPN 	Sei	vice Name *	© ?	SMTP_Mail1					
Outbound Policy	IP	Protocol	0	TCP 💽 🗲	:: Proto	col Selection Tool :	: 💌		
Service Forwarding	Por	t	?	Single Port 💌		Service Port: 25			
Inbound Access	Inb (Re add	ound IP Address(e quire at least one IP Iress)	es)* 🕐	Connection	/ IP Ad	dress(es)		All	Clear
Servers				WAN2			22.2	2.20	~
 Services 							2		
DNS Settings O									
NAT Mappings				WAN3			338	3 20	
Firewall								.0.20	
Misc. Settings									
 High Availability 	Inc	luded Server(s) *	Ô	Sarvar					
 Traffic Prioritization 	(Re		rver)	☑ mail1 (210	.10.10.	20)	Weig	jht 1	~
 Service Passthrough 				mail2 (210	.10.10.	Cancel			

- 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:

peplink	Main	Setup Wizard	Network	System	Status	Арј	oly Changes
Interfaces WAN	Ne	twork > Inbound	Access > Ser	vices			
LAN O	Sa	aved! Changes v	vill be effecti	ve after cl	icked the 'Apply Changes	' button.	
Site-to-Site							
VPN	Se	rvice	IP Address(e	es)	Servers (Weight)	Protocol	Action
Outbound Policy	SM	1TP_Mail1	WAN2: 22.2.2	.20	mail1(1)	TCP:25	Delete
Service		onan a siste an m at i A	WAN3: 33.3.3	.20			
Forwarding	SM	1TP_Mail2	WAN2: 22.2.2	.30	mail2(1)	TCP:25	Delete
Inbound Access			WAN3: 33.3.3	.30			
					Add Service		

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.