

Load balancing Vmware View 5.0 – Quick Reference Guide

Port List

Port	Upper level Protocol	Lower level Protocol
80	HTTP	TCP
443	HTTPS	TCP
50002	PCoIP	TCP & UDP
3389	RDP	TCP

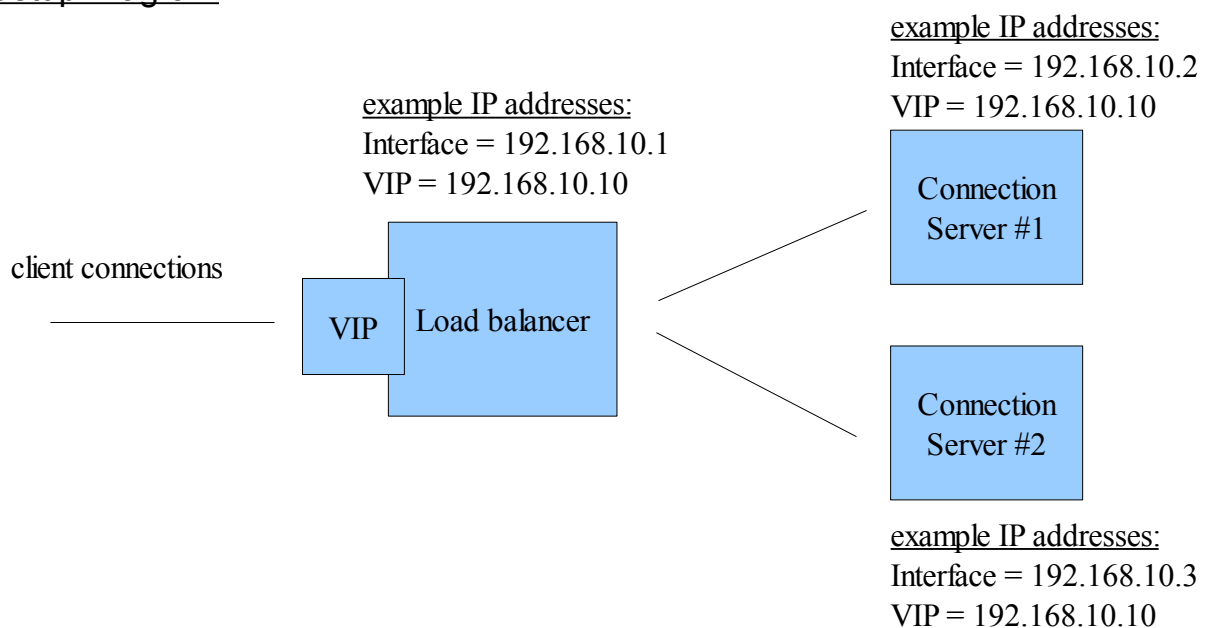
Load Balancer Configuration

Operating Mode

The load balancer is configured in single-arm layer 4 DR (Direct Return) mode. This mode offers very high performance since return traffic passes directly from the Vmware Connection Servers to the clients and bypasses the load balancer.

DR mode works by changing the MAC address on the fly to match the real server. Since packets will still have the IP address of the VIP (Virtual Server), the Connection Servers must be configured to accept this traffic, but must also be configured to not reply to ARP requests for this address. For more details, see the section 'Solving the ARP Problem' later in this guide.

Setup Diagram









Virtual Server Setup (VIP)

Create a new VIP as described below. Note: since both UDP and TCP is required within the same virtual server, Firewall Marks must be used to combine protocols.

- 1) Using the WUI, go to Edit Configuration > Layer 4 Virtual Servers > **[Add a New Virtual Server]**
Enter the following details (Note: the '1' is the reference for the Firewall Mark) :




EDIT CONFIGURATION > ADD A NEW VIRTUAL SERVER

Label	<input type="text" value="VmwareView"/>	
Virtual Server IP address	<input type="text" value="1"/>	
Virtual Server Ports	<input type="text"/>	
Forwarding Method	<input type="text" value="Direct Routing"/>	
Persistent	<input type="text" value="yes"/>	
Protocol	<input type="text" value="Firewall Marks"/>	
<input type="button" value="Update"/>		

NB. If you are running v7.3 enter '0' in the Virtual Server Ports field. This is not required for v7.3.1 and later.

Click **Update**

- 2) In the WUI go to Edit Configuration > Layer 4 Virtual Servers, click **[Modify]** next to the VIP, scroll down to the **Check Port** field and change it to 80 (it can also be set to 4443, 3389 or 50002 if preferred). This is the port used to verify the health of each Connection Server.

Check Type	<input type="text" value="Connect to port"/>	
Negotiate Check Service	<input type="text" value="None"/>	
Check Port	<input type="text" value="80"/>	

Click **Update**

- 3) In the WUI, go to Edit Configuration > Floating IPs, enter the required IP address used for the VIP (in this example 192.168.10.10)

EDIT CONFIGURATION > ADD NEW FLOATING IP

Click **Update**

- 4) In the WUI, go to Maintenance > Firewall Script, scroll down to the Firewall Marks section and edit/modify the firewall script as shown below (note the same value '1' for the **--set-mark** directive) :

MAINTENANCE > FIREWALL SCRIPT

```
##### FIREWALL MARKS #####  
  
# Now setup any Firewall marks that are required  
# Firewall marks allows you to associate multiple ports with one VIP  
# This is useful if you need to keep HTTP & HTTPS persistent  
  
# This example marks HTTP & HTTPS connections only  
  
VIP1="192.168.10.10"  
iptables -t mangle -A PREROUTING -p tcp -d $VIP1 --dport 80 -j MARK --set-mark 1  
iptables -t mangle -A PREROUTING -p tcp -d $VIP1 --dport 443 -j MARK --set-mark 1  
iptables -t mangle -A PREROUTING -p tcp -d $VIP1 --dport 3389 -j MARK --set-mark 1  
iptables -t mangle -A PREROUTING -p tcp -d $VIP1 --dport 50002 -j MARK --set-mark 1  
iptables -t mangle -A PREROUTING -p udp -d $VIP1 --dport 50002 -j MARK --set-mark 1
```





Click **Update**

Real Server Setup (RIP)

- 1) Using the WUI, go to Edit Configuration > Layer 4 Real Servers , and click **[Add a new Real Server]**

Add both connection servers as follows:

EDIT CONFIGURATION > ADD A NEW REAL SERVER

Label	<input type="text" value="ConnectionServer2"/>	
Real Server IP Address	<input type="text" value="192.168.10.3"/>	
Weight	<input type="text" value="1"/>	
Minimum Connections	<input type="text" value="0"/>	
Maximum Connections	<input type="text" value="0"/>	
<input type="button" value="Update"/>		

EDIT CONFIGURATION > REAL SERVERS

<i>VIEW</i>	Firewall Mark 1	Direct Routing	[Add a new Real Server]	
<i>ConnectionServer1</i>	192.168.10.2	Weight 1	[Modify]	[Delete]

Solving the ARP Problem

For Windows 2000, 2003 & 2008 a loopback adapter must be added to the connection servers to enable them to accept traffic destined for the VIP.

For detailed steps on solving the ARP problem , please refer to quick start guide here :

<http://www.loadbalancer.org/pdf/quickstartguideLBVMv7.pdf>

For Windows 2003 , pages 23-26

For Windows 2008 , pages 27-30