



# Load Balancing VMware Platform Services Controller

Quick Reference Guide

v1.1.0



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## About this Guide

This document provides a quick reference guide on how to load balance multiple VMware Platform Services Controllers using Loadbalancer.org appliances.

Platform Services Controller (PSC) was introduced in vSphere 6.0 as a mechanism to simplify and centralize common vSphere infrastructure services. The PSC handles vSphere single sign-on (SSO), licensing, tagging, global permissions, custom roles, and certificate management.

If the PSC is down, you cannot start any new vCenter Server sessions or any second party VMware products that depends on it. Also, vCenter Server is unable to fully restart until PSC is restored.

### Related Documentation

For additional information about the Loadbalancer.org appliance, please also refer to the following documents:

- [Quick Start Guide](#)
- [Administration Manual](#)

## Load Balanced Ports

Port	Use	Transport Layer Protocol
389	Active Directory	TCP
443	PSC / vCenter communications	TCP
636	vCenter Single Sign-On LDAPS	TCP
2012	Control interface RPC for vCenter Single Sign-On	TCP
2014	RPC port for all VMCA (VMware Certificate Authority) APIs	TCP
2020	Authentication framework management	TCP

## Load Balancer Configuration

### Deploy The Loadbalancer.org Appliance

1. Deploy a Loadbalancer.org appliance as detailed in the [Quick Start Guide](#)

### Accessing The Appliance WebUI

Using a browser, navigate to the appliance's IP address on HTTPS port **9443**, i.e.

`https://<IP-Address>:9443`

Note: For HTTPS connections you'll receive a warning about the certificate as it's a self signed cert not related to an Internet based CA.

Use the following default credentials to login:

Username: loadbalancer

Password: loadbalancer

Note: To change the password for the 'loadbalancer' account, use the WebUI option: *Maintenance > Passwords*.

Once logged in, the WebUI is displayed:

The screenshot displays the Loadbalancer.org Enterprise VA MAX web interface. The top navigation bar includes the logo, the product name 'Enterprise VA MAX', and status indicators: 'Master | Slave', 'Active | Passive', 'Link', and '4 Seconds'. A sidebar on the left contains a menu with items: System Overview, Local Configuration, Cluster Configuration, Maintenance, View Configuration, Reports, Logs, and Support. The main content area is titled 'SYSTEM OVERVIEW' and shows a timestamp of '2018-01-02 11:02:07 UTC'. A dark grey dialog box asks 'Would you like to run the Setup Wizard?' with 'Accept' and 'Dismiss' buttons. Below the dialog is a filter bar with dropdown menus for 'VIRTUAL SERVICE', 'IP', 'PORTS', 'CONNS', 'PROTOCOL', 'METHOD', and 'MODE'. The text 'No Virtual Services configured.' is displayed below the filters. A 'Network Bandwidth' graph is shown, plotting 'Bytes/s' on the y-axis (0.0 to 1.0) against time on the x-axis (Mon 12:00 to Tue 06:00). The graph includes a legend for 'RX' (light blue) and 'TX' (dark blue) with columns for Min, Avg, and Total, all showing '-nan'. A 'System Load Average' section is partially visible at the bottom of the graph area.

## Configure The Virtual Service (VIP)

Create a new Virtual Service as described below. A multi-port VIP is used which includes all required ports.

1. Using the WebUI, navigate to: *Cluster Configuration > Layer 7 – Virtual Services* and click **Add a New Virtual Service**
2. Enter the following details:

<b>Label</b>	<input type="text" value="VMwarePSC"/>	?	
<b>Virtual Service</b>	<b>IP Address</b>	<input type="text" value="192.168.1.100"/>	?
	<b>Ports</b>	<input type="text" value="389,443,636,2012,2014,2020"/>	?
<b>Layer 7 Protocol</b>	<input type="text" value="TCP Mode"/>	?	
<b>Manual Configuration</b>	<input type="checkbox"/>	?	

3. Define the required *Label* (name) for the VIP, e.g. **VMwarePSC**
4. Set the *Virtual Service IP address* field to the required IP address, e.g. **192.168.1.100**
5. Set the *Virtual Service Ports* field to **389,443,636,2012,2014,2020** , i.e. all required ports
6. Set the *Layer 7 Protocol* to **TCP Mode**
7. Click **Update**
8. Now click **Modify** next to the newly created Virtual Service
9. Set *Persistence Timeout* to **480** , i.e. 8 hours
10. Configure the health check settings as shown below:

<b>Health Checks</b>	<input type="text" value="Negotiate HTTPS"/>
<b>Check Port</b>	<input type="text" value="443"/>
<b>Request to send</b>	<input type="text" value="websso/HealthStatus"/>
<b>Response expected</b>	<input type="text" value="GREEN"/>
<b>Host Header</b>	<input type="text"/>

11. Change *Health Checks* to **Negotiate HTTPS**
12. Set *Check Port* to **443**
13. Set *Request to Send* to **websso/HealthStatus**
14. Set *Response Expected* to **GREEN**
15. Click **Update**

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## Define The Real (Platform Services Controller) Servers

1. Using the WebUI, navigate to: *Cluster Configuration > Layer 7 – Real Servers* and click **Add a new Real Server** next to the newly created VIP
2. Enter the following details:

Label	<input type="text" value="PSC1"/>	?
Real Server IP Address	<input type="text" value="192.168.1.110"/>	?
Real Server Port	<input type="text"/>	?
Re-Encrypt to Backend	<input type="checkbox"/>	?
Weight	<input type="text" value="100"/>	?

3. Enter an appropriate label for the Real Server , e.g. **PSC1**
4. Change the *Real Server IP Address* field to the required address, e.g. **192.168.1.110**
5. Leave the *Real Server Port* field blank
6. Click **Update**
7. Repeat the above steps to add your other VMware PSC server(s)

Once everything is configured correctly and all load balanced Platform Services Controllers are up, the VIP should be displayed green in the System Overview of the WebUI.

## VMware PSC & vSphere Configuration

You'll need to create a DNS entry for the VIP, then use this FQDN rather than the FQDN for an individual PSC when configuring your environment.

## Loadbalancer.org Technical Support

If you have any questions regarding the appliance or would like assistance designing your deployment, please don't hesitate to contact our support team: [support@loadbalancer.org](mailto:support@loadbalancer.org).

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## Document Revision History

Version	Date	Change	Reason for Change	Changed By
1.1.0	5 November 2019	Styling and layout	General styling updates	AH

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## About Loadbalancer.org

Loadbalancer.org's mission is to ensure that its clients' businesses are never interrupted. The load balancer experts ask the right questions to get to the heart of what matters, bringing a depth of understanding to each deployment. Experience enables Loadbalancer.org engineers to design less complex, unbreakable solutions - and to provide exceptional personalized support.



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