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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

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

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:
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:

   ![Virtual Service Configuration](image)

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. Under Persistence, click Advanced to show more options
10. Set Persistence Timeout to 480, i.e. 8 hours
11. Under Health Checks, click Advanced to show more options
12. Configure the health check settings as shown below:

   ![Health Check Configuration](image)

13. Change Health Checks to Negotiate HTTPS (GET)
14. Set Check Port to 443
15. Set Request to Send to /websso/HealthStatus
16. Set Response Expected to GREEN
17. Click **Update**

**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:

- ![Real Server Configuration](image)

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).
## Document Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Change</th>
<th>Reason for Change</th>
<th>Changed By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.0</td>
<td>5 November 2019</td>
<td>Styling and layout</td>
<td>General styling updates</td>
<td>AH</td>
</tr>
<tr>
<td>1.1.1</td>
<td>28 August 2020</td>
<td>New title page</td>
<td>Branding update</td>
<td>AH</td>
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<td></td>
<td></td>
<td>Updated Canadian contact details</td>
<td>Change to Canadian contact details</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>New screenshot and amended instructions for configuring health check</td>
<td>Changes to the appliance WebUI</td>
<td></td>
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</table>
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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