

VMware Horizon View 6

Deployment Guide

UPDATED: 28 July 2023

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

These materials and all Progress® software products are copyrighted and all rights are reserved by Progress Software Corporation. The information in these materials is subject to change without notice, and Progress Software Corporation assumes no responsibility for any errors that may appear therein. The references in these materials to specific platforms supported are subject to change.

#1 Load Balancer in Price/Performance, 360 Central, 360 Vision, Chef, Chef (and design), Chef Habitat, Chef Infra, Code Can (and design), Compliance at Velocity, Corticon, Corticon.js, DataDirect (and design), DataDirect Cloud, DataDirect Connect, DataDirect Connect64, DataDirect XML Converters, DataDirect XQuery, DataRPM, Defrag This, Deliver More Than Expected, DevReach (and design), Driving Network Visibility, Flowmon, Inspec, Ipswitch, iMacros, K (stylized), Kemp, Kemp (and design), Kendo UI, Kinvey, LoadMaster, MessageWay, MOVEit, NativeChat, OpenEdge, Powered by Chef, Powered by Progress, Progress, Progress Software Developers Network, SequeLink, Sitefinity (and Design), Sitefinity, Sitefinity (and design), Sitefinity Insight, SpeedScript, Stylized Design (Arrow/3D Box logo), Stylized Design (C Chef logo), Stylized Design of Samurai, TeamPulse, Telerik, Telerik (and design), Test Studio, WebSpeed, WhatsConfigured, WhatsConnected, WhatsUp, and WS_FTP are registered trademarks of Progress Software Corporation or one of its affiliates or subsidiaries in the U.S. and/or other countries.

Analytics360, AppServer, BusinessEdge, Chef Automate, Chef Compliance, Chef Desktop, Chef Workstation, Corticon Rules, Data Access, DataDirect Autonomous REST Connector, DataDirect Spy, DevCraft, Fiddler, Fiddler Classic, Fiddler Everywhere, Fiddler Jam, FiddlerCap, FiddlerCore, FiddlerScript, Hybrid Data Pipeline, iMail, InstaRelinker, JustAssembly, JustDecompile, JustMock, KendoReact, OpenAccess, PASOE, Pro2, ProDataSet, Progress Results, Progress Software, ProVision, PSE Pro, Push Jobs, SafeSpaceVR, Sitefinity Cloud, Sitefinity CMS, Sitefinity Digital Experience Cloud, Sitefinity Feather, Sitefinity Thunder, SmartBrowser, SmartComponent, SmartDataBrowser, SmartDataObjects, SmartDataView, SmartDialog, SmartFolder, SmartFrame, SmartObjects, SmartPanel, SmartQuery, SmartViewer, SmartWindow, Supermarket, SupportLink, Unite UX, and WebClient are trademarks or service marks of Progress Software Corporation and/or its subsidiaries or affiliates in the U.S. and other countries. Java is a registered trademark of Oracle and/or its affiliates. Any other marks contained herein may be trademarks of their respective owners.

Please refer to the NOTICE.txt or Release Notes – Third-Party Acknowledgements file applicable to a particular Progress product/hosted service offering release for any related required third-party acknowledgements.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Table of Contents

1 Introduction **4**

1.1 How VMware Horizon (with View) Works 4

1.2 Solution Environment 4

1.3 Product Versions and Platforms Tested 5

2 Service Configuration **6**

2.1 Configuring LoadMaster for View 6 6

2.2 Enable Check Persist Globally 7

2.3 Template 7

2.4 Virtual Service Settings on LoadMaster 7

2.5 Configuring the Initial SSL Connection Virtual Service 8

2.5.1 Configuring the Redirect Virtual Service 9

2.6 Configuring the Load-Balanced HTTPS Virtual Service 10

2.7 Configuring the PCoIP Virtual Service 11

2.8 Configuring the Blast Virtual Service 11

3 Configuring VMware Horizon (with View) **13**

References **15**

Last Updated Date **16**

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

1 Introduction

VMware Horizon (with View) delivers virtualized remote desktops and applications to remote users using desktop client and browser interfaces. This document describes how to balance client traffic in a VMware Horizon (with View) environment using the Kemp LoadMaster. For clarity, the VMware Horizon (with View) product will be referred to as View throughout this document.

1.1 How VMware Horizon (with View) Works

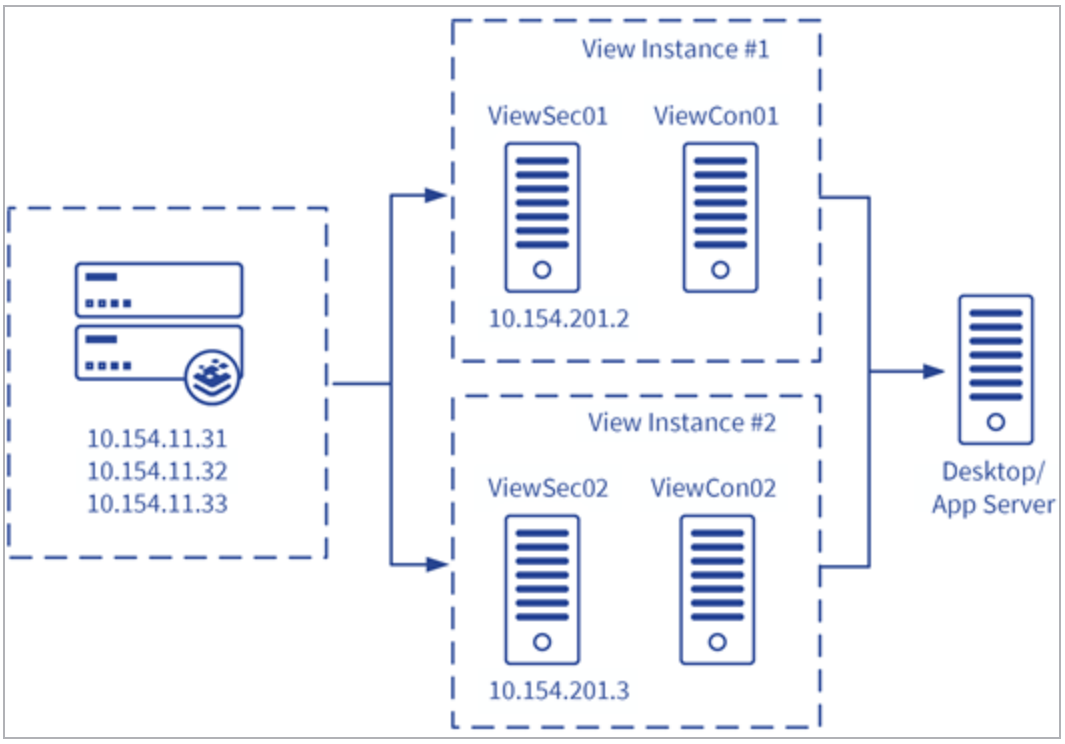
A simple View environment consists of a Security server and a Connection server which authenticate and connect remote users to the virtual desktop/application environment. These servers act together and are deployed in 1:1 pairs. From a LoadMaster point of view, all connections are with the security server. The initial connection is made over HTTPS and once authenticated, the security server provides the client with connection details (URL for web connections and an IP address for PCoIP). The client then establishes a connection to the services on the URL/IP address provided in the authentication reply.

Only the initial (HTTPS) connection needs to be load-balanced as there is a 1:1 mapping between the URL/IP address provided and the security/connection server pair that will service the client session.

1.2 Solution Environment

The LoadMaster is deployed in-line as a proxy for all services including PCoIP. Alternative deployment options could have PCoIP bypass the LoadMaster as it is only the initial session establishment (HTTPS) that needs to be load balanced.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



On the LoadMaster, the 10.154.11.31 Virtual IP (VIP) address is used to balance the client's initial HTTPS connection between the two View instances which are represented by the 10.154.11.32/10.154.11.33 VIPs. Each of the View instance VIPs offers services on HTTPS, on port 4172 for PCoIP (UDP and TCP) and on port 8443 for View Blast.

1.3 Product Versions and Platforms Tested

Product	Product Version	Deployment Platform
Kemp LoadMaster	7.1-20c	Applies to all virtual and physical platforms
View Client	3.1.0.21879	Windows 8.1 Enterprise
View Connection/Security server	6.0.0-1884746	Windows 2012 R2 Server

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

2 Service Configuration

2.1 Configuring LoadMaster for View 6

To support the environment outlined above, a number of Virtual Services need to be defined on the LoadMaster. The table below outlines example details that would need to be configured on the LoadMaster.

VIP	Real Server (s)	Purpose
10.154.11.31:443 (TCP)	10.154.201.2 10.154.201.3	Balance the initial SSL connection from the client between the View Connection/Security server instances
10.154.11.32:443 (TCP)	10.154.201.2	Accept load-balanced client connections on HTTPS
10.154.11.32:4172 (TCP)	10.154.201.2	PCoIP connections can be over UDP or TCP. These Virtual Services forward connections to the View Connection Server.
10.154.11.32:4172 (UDP)	10.154.201.2	
10.154.11.32:8443 (TCP)	10.154.201.2	Blast is the View via a browser protocol which we deliver on port 8443
10.154.11.33:443 (TCP)	10.154.201.3	Second View instance of the above services
10.154.11.33:4172 (TCP)	10.154.201.3	
10.154.11.33:4172 (UDP)	10.154.201.3	
10.154.11.33:8443 (TCP)	10.154.201.3	

HTTPS is being offered on three Virtual Services in the configuration above. Each of these will require a certificate and associated private key for the Fully Qualified Domain Name (FQDN) of the

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

VIP. In the example, we are using a wildcard certificate (*.viewlab.net) on all of the Virtual Services supporting HTTPS.

2.2 Enable Check Persist Globally

It is recommended that you change the **Always Check Persist** option to **Yes – Accept Changes**. Use the following steps:

1. Go to **System Configuration > Miscellaneous Options > L7 Configuration**.
2. Click the **Always Check Persist** drop-down arrow and select **Yes – Accept Changes**.

2.3 Template

Kemp has developed a template containing our recommended settings for this workload. You can install this template to help create Virtual Services (VSs) because it automatically populates the settings. You can use the template to easily create the required VSs with the recommended settings. For some workloads, additional manual steps may be required such as assigning a certificate or applying port following, these steps are covered in the document, if needed.

You can remove templates after use and this will not affect deployed services. If needed, you can make changes to any of the VS settings after using the template.

Download released templates from the following page: LoadMaster Templates.

For more information and steps on how to import and use templates, refer to the Virtual Services and Templates, Feature Description on the Kemp Documentation page.

2.4 Virtual Service Settings on LoadMaster

Virtual IP Address	Prot	Name	Layer	Certificate Installed	Status	Real Servers	Operation
10.154.11.31:443	tcp	VHViewLogin	L7	on Real Server	Up	10.154.201.2 10.154.201.3	Modify Delete
10.154.11.32:443	tcp	ViewHTTP01	L7	on Real Server	Up	10.154.201.2	Modify Delete
10.154.11.32:4172	tcp	ViewPCoIP01	L4		Up	10.154.201.2	Modify Delete
10.154.11.32:4172	udp	PCoIPUDP01	L4		Up	10.154.201.2	Modify Delete
10.154.11.32:8443	tcp	ViewBlast01	L7		Up	10.154.201.2	Modify Delete
10.154.11.33:443	tcp	ViewHTTP02	L7	on Real Server	Up	10.154.201.3	Modify Delete
10.154.11.33:4172	tcp	ViewPCoIP02	L4		Up	10.154.201.3	Modify Delete
10.154.11.33:4172	udp	PCoIPUDP02	L4		Up	10.154.201.3	Modify Delete
10.154.11.33:8443	tcp	ViewBlast02	L7		Up	10.154.201.3	Modify Delete

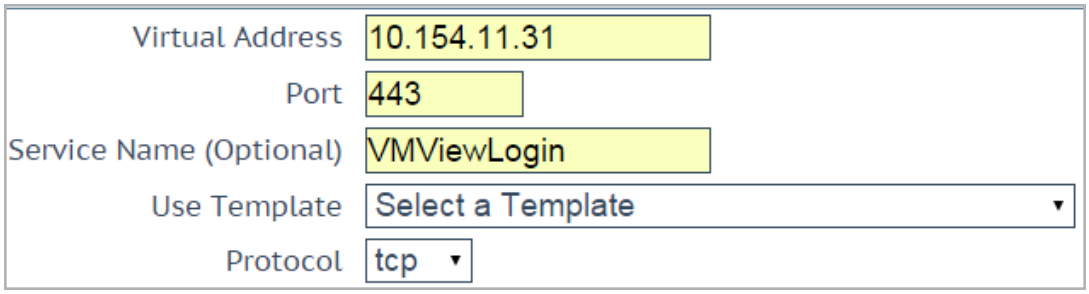
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

For clarity in the example, each of the services is explicitly defined giving a Virtual Services list as in the above screenshot.

2.5 Configuring the Initial SSL Connection Virtual Service

To configure the initial SSL Virtual Service on the LoadMaster, follow the steps below in the WUI:

1. In the main menu, select **Virtual Services > Add New**.



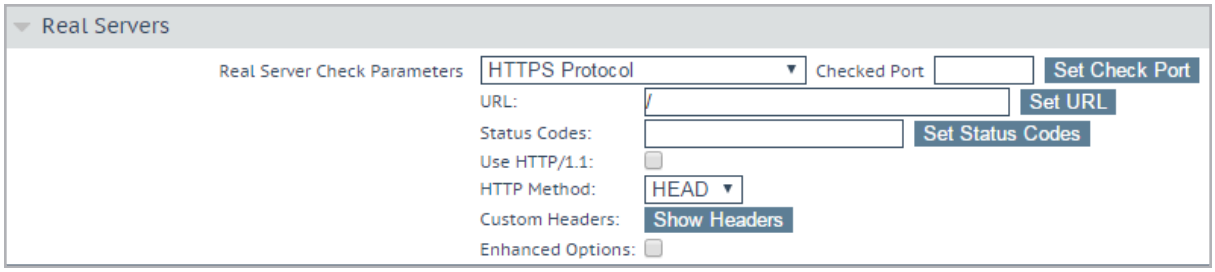
2. Enter a valid **Virtual Address**.
3. Enter **443** as the **Port**.
4. Enter a recognizable **Service Name**.
5. Click **Add this Virtual Service**.
6. Configure the settings as shown in the following table:

Section	Option	Value	Comment
SSL Properties	SSL Acceleration	Enabled	
	Reencrypt	Enabled	
	Certificates	Select the appropriate certificate.	Click **>** to assign the certificate. Click **Set Certificates.**
Standard Options	Persistence Mode	Server Cookie	
	Cookie name	JSESSIONID	Click **Set Cookie**.
	Scheduling Method	Select the appropriate method for the particular View infrastructure	

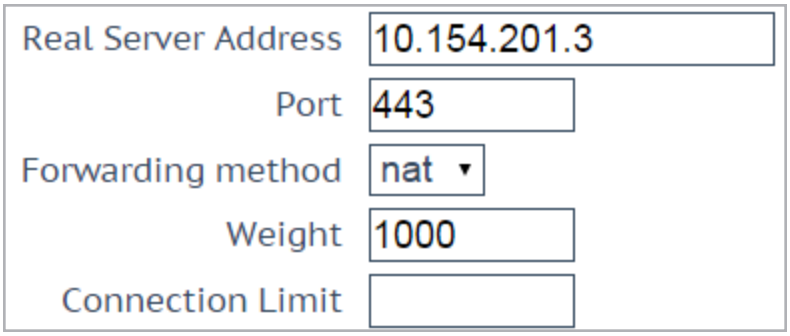
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Section	Option	Value	Comment
		that is deployed.	

7. Expand the **Real Servers** section.



8. Click **Add New**.



9. Enter the relevant **Real Server Address**, for example **10.154.201.3**.

10. Click **Add This Real Server**.

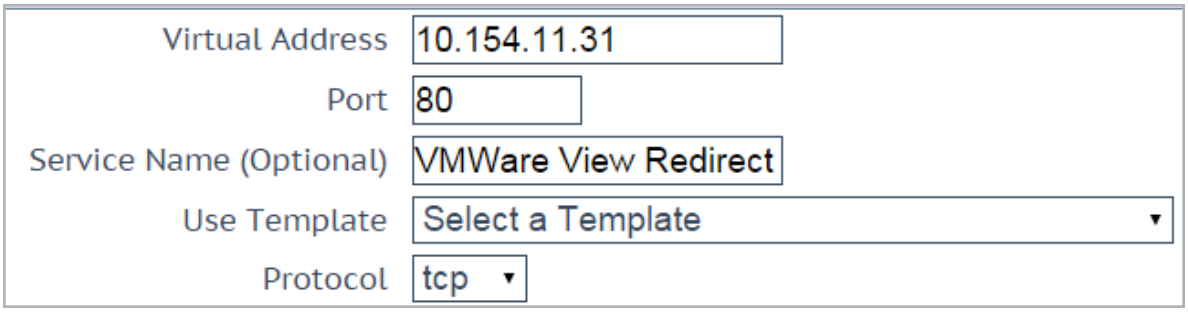
In some environments, it may be appropriate to create a HTTP to HTTPS redirect to automatically forward unencrypted connection requests to the secure service. To add the redirect Virtual Service, follow the steps in the section below.

2.5.1 Configuring the Redirect Virtual Service

To create and configure the Redirect Virtual Service, follow the steps below:

1. In the main menu of the LoadMaster, go to **Virtual Services > Add New**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



2. Enter the same IP address as the one used when creating the initial SSL connection Virtual Service in the **Configuring the Initial SSL Connection Virtual Service** section.

3. Enter **80** as the **Port**.

4. Click **Add this Virtual Service**.

5. Configure the settings as shown in the following table:

Section	Option	Value
Advanced Properties	Error Code	302 Found
	Redirect URL	https://%h%s
Standard Options	Transparency	Disabled

2.6 Configuring the Load-Balanced HTTPS Virtual Service

This Virtual Service needs to be defined for each security server in the View environment. There is a 1:1 relationship between this Virtual Service and the Security server so scheduling options can be left at default.

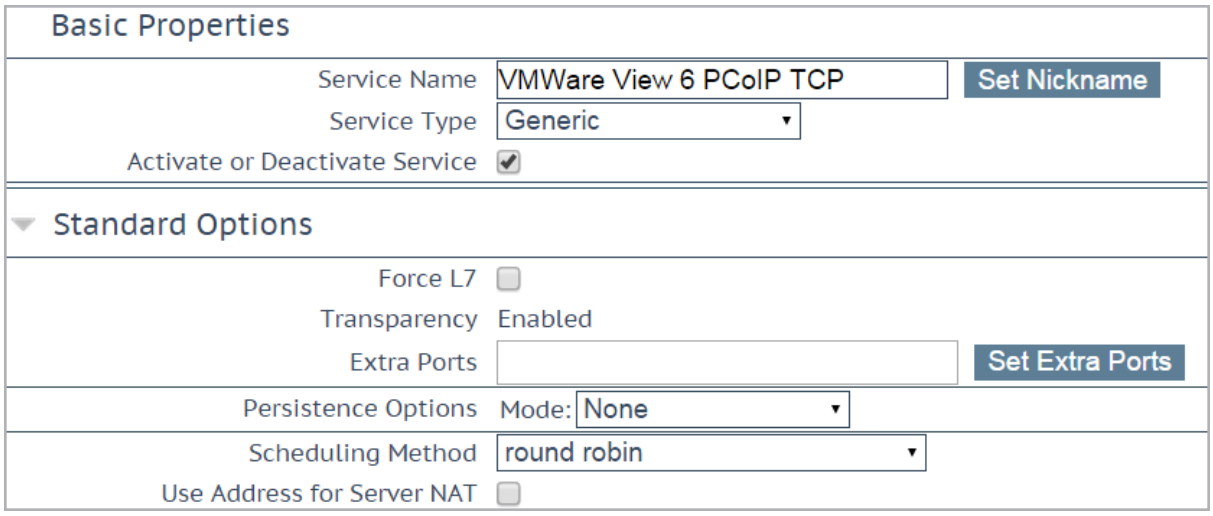
Configure the settings as shown in the following table:

Section	Option	Value	Comment
Standard Options	Persistence Mode	Server Cookie	
	Cookie name	JSESSIONID	Click **Set Cookie**.
SSL Properties	SSL Acceleration	Enabled	
	Reencrypt	Enabled	

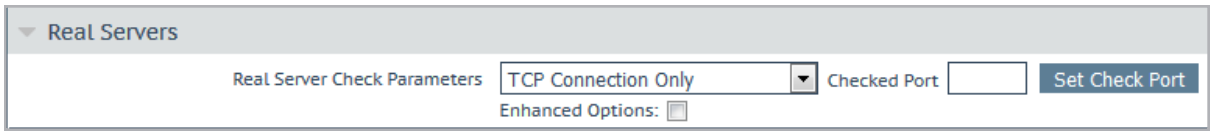
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

2.7 Configuring the PCoIP Virtual Service

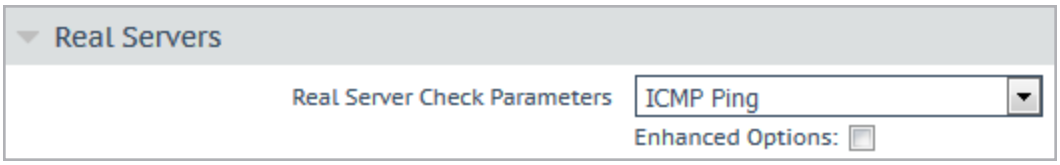
The PCoIP Virtual Service provides a simple Layer 4 reverse proxy connection to the security server on port **4172**. Two variants are required to support both TCP and UDP connections.



SSL offloading is not required for this service. The service should have a **Generic** Service Type with default persistence and scheduling.



In the TCP Virtual Service, the PCoIP system health check is performed by setting the health check to **TCP Connection Only**.

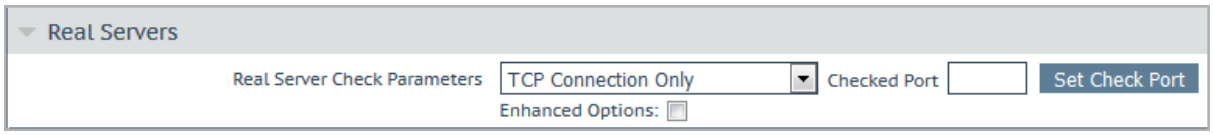


In the UDP Virtual Service, the health check should be set to **ICMP Ping**.

2.8 Configuring the Blast Virtual Service

The Blast Virtual Service provides a reverse HTTPS proxy on port 8443. This protocol may be SSL offloaded and reencrypted or passed directly to the server.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

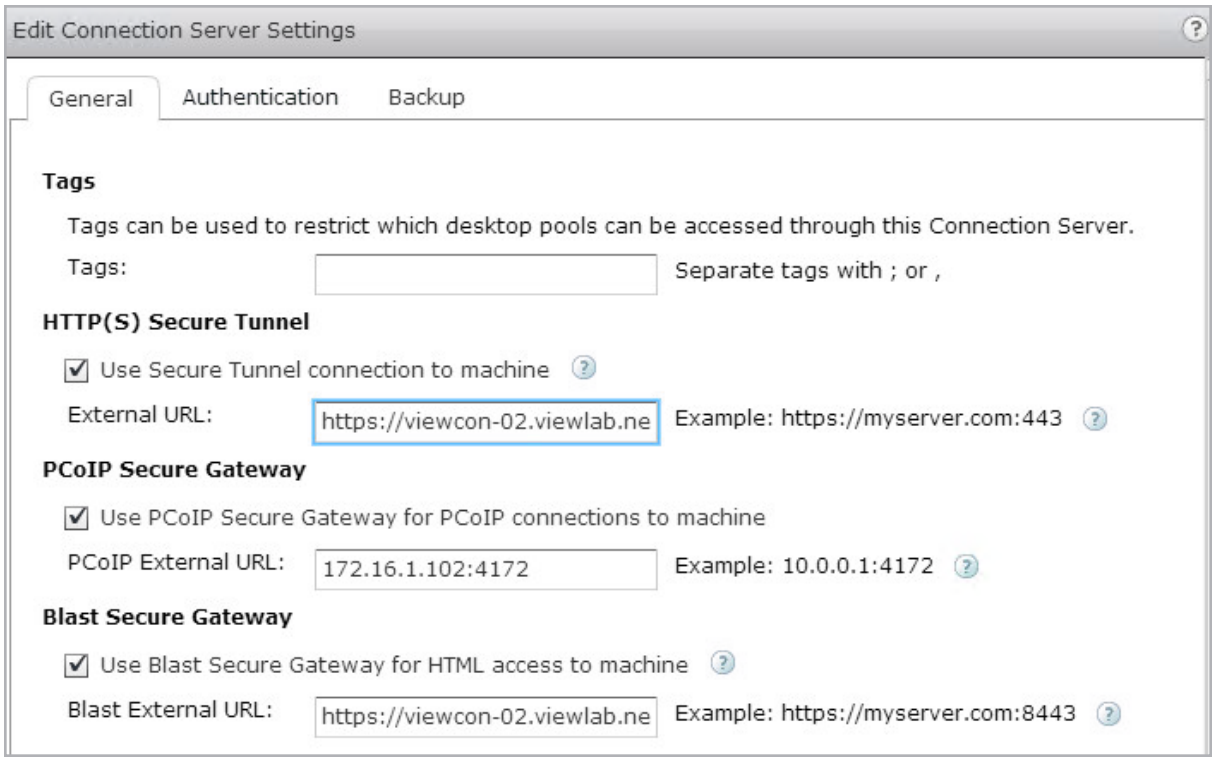


The health check method should be set to **TCP Connection Only**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

3 Configuring VMware Horizon (with View)

The connection points for the remote clients can be set to the relevant LoadMaster Virtual Services in the **Connection Server Settings** screen in VMware view.



> The HTTP(S) and Blast URLs must be an FQDN and the PCoIP URL must be an IP address. The ports specified must match the Virtual Services ports defined in the LoadMaster.

In the context of the example, each Connection Server is configured with the URLs that point to the per-instance Virtual Services on the LoadMaster. The URLs resolve as follows:

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

URL	IP Address
Viewcon-01.viewlab.net	10.154.11.32
Viewcon-02.viewlab.net	10.154.11.33

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

References

Unless otherwise specified, the following documents can be found at http://kemptechnologies.com/documentation.

Virtual Services and Templates, Feature Description

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Last Updated Date

This document was last updated on 28 July 2023.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.