Progress®
Kemp® LoadMaster®

Deployment Guide Progress Chef Automate and Infra Server

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Introduction

Progress Chef Infra allows DevOps teams to define automation policies that are consistent, repeatable, and reusable. Progress Chef Automate provides single dashboard and analytics for the infrastructure automation.

The Progress LoadMaster delivers an exceptional, cost effective, and easy to use solution which (by employing intelligent server health checking, load balancing, high availability, and security) can support an always-on application experience for both Chef Infra and Chef Automate.

Contents

- Document Purpose
- Intended Audience

Document Purpose

This document provides the recommended LoadMaster settings used when providing load balancing for Chef. The Progress Support team is available to provide solutions for scenarios not explicitly defined. For further details, refer to the: LoadMaster Support and Learning Hub.

Intended Audience

This document is intended to be read by anyone who is interested in configuring the LoadMaster to optimize Chef deployments.

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Template

Progress 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.

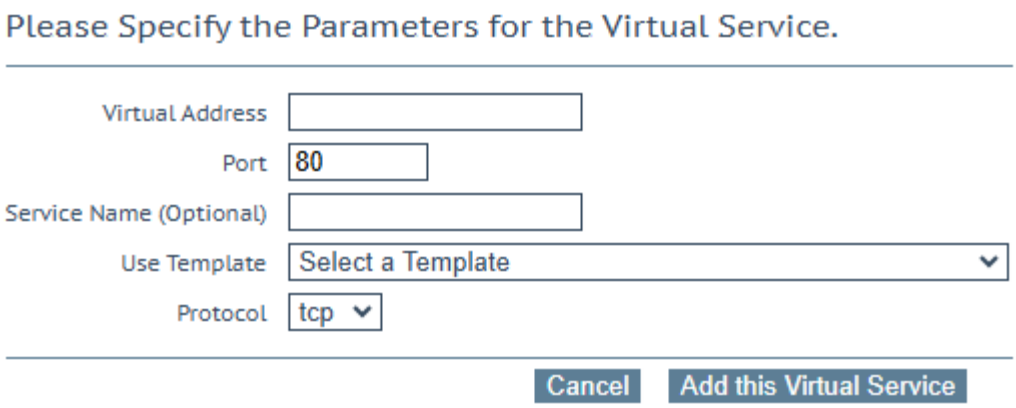
You can remove templates after use and this will not affect deployed services. If needed, you can make changes to any of the VS settings after using the template.

Download released templates from the following page: LoadMaster Templates.

You can import templates to the LoadMaster through the **Manage Templates** page under **Virtual Services** in the main menu of the LoadMaster User Interface (UI).

Click **Choose File**, select the template to install and click **Add New Template**. The template will then be available to select when you are adding a new Virtual Service.

To begin the process of creating a new Virtual Service, click **Virtual Services** and **Add New** in the main menu.



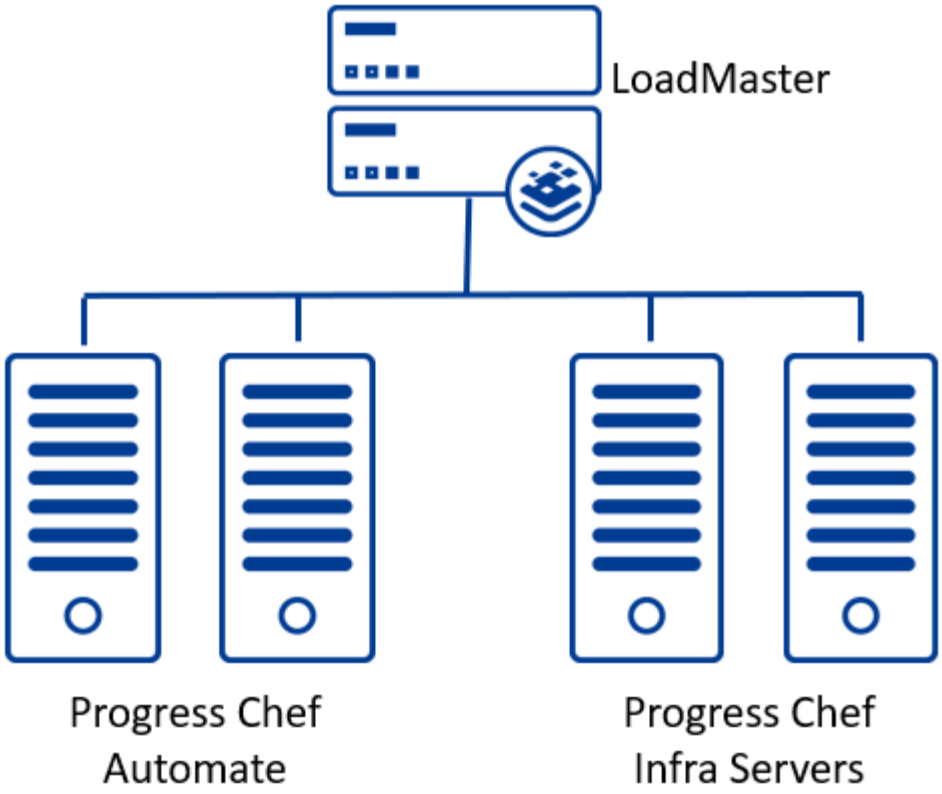
This opens the Virtual Service parameters page which prompts to enter the Virtual IP (VIP) address of the Virtual Service, the port, and the name to give the service and the protocol. You can select a previously-imported template in the **Use Template** drop-down list.

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

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Architecture

Progress Chef deployments consist of multiple servers behind a load balancer. The Automate and Infra Servers can be deployed on the same systems or dedicated.


LoadMaster
Progress Chef Automate
Progress Chef Infra Servers

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Configure the LoadMaster

Refer to the sections below for details on some recommended global settings.

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- Enable Subnet Originating Requests Globally

Enable Subnet Originating Requests Globally

It is best practice to enable the **Subnet Originating Requests** option globally.

In a one-armed setup (where the Virtual Service and Real Servers are on the same network/subnet) **Subnet Originating Requests** is usually not needed. However, enabling **Subnet Originating Requests** should not affect the routing in a one-armed setup.

In a two-armed setup where the Virtual Service is on network/subnet A, for example, and the Real Servers are on network B, **Subnet Originating Requests** should be enabled on LoadMasters with firmware version 7.1-16 and above.



When **Subnet Originating Requests** is enabled, the Real Server sees traffic originating from 10.20.20.21 (LoadMaster eth1 address) and responds correctly in most scenarios.

With **Subnet Originating Requests** disabled, the Real Server sees traffic originating from 10.0.0.15 (LoadMaster Virtual Service address on **eth0**) and responds to **eth0** which could cause asymmetric routing.

When **Subnet Originating Requests** is enabled globally, it is automatically enabled on all Virtual Services. If the **Subnet Originating Requests** option is disabled globally, you can choose whether to enable **Subnet Originating Requests** on a per-Virtual Service basis.

To enable **Subnet Originating Requests** globally, follow the steps below:

1. In the main menu of the LoadMaster User Interface (UI), go to **System Configuration > Miscellaneous Options > Network Options**.
2. Select the **Subnet Originating Requests** check box.

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Virtual Services

This step-by-step setup of Virtual Services (VSs) leverages the Progress Kemp application template for Chef Infra and Chef Automate. This template configures the Virtual Services to publish Chef using HTTPS.

The table in each section outlines the settings configured by the application template. You can use this information to manually configure Virtual Services or use the Progress LoadMaster Application Programming Interface (API) and automation tools.

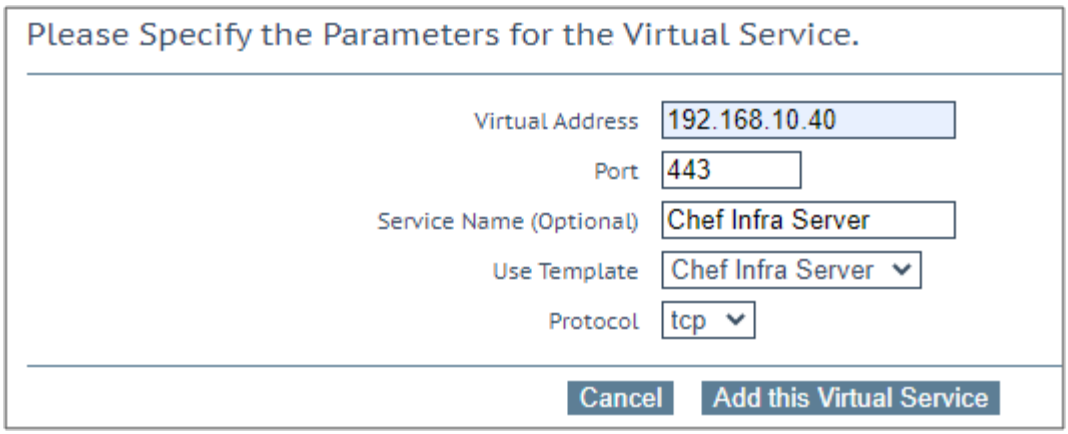
Contents

- Create the Chef Infra Server– HTTPS Virtual Service
- Create the Chef Automate – HTTPS Virtual Service

Create the Chef Infra Server– HTTPS Virtual Service

The following are the steps involved and the recommended settings to configure the Chef Infra HTTPS Virtual Service.

1. In the main menu of the LoadMaster User Interface (UI), go to **Virtual Services > Add New**.



2. Type a valid **Virtual Address**.
3. Select the **Chef Infra Server** template in the **Use Template** drop-down list.
4. Click **Add this Virtual Service**.
5. Click **Virtual Services** and **View/Modify Services**.
6. Click **Modify** on the **Chef Infra Server** Virtual Services on port 443.
7. Expand the **Real Servers** section.
8. Click **Add New**.
9. Type the **Real Server Address**.
10. Click **Add This Real Server**.
11. Repeat these steps to add more Real Servers as needed.

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- Chef Infra Server HTTPS Virtual Service Recommended Settings (Optional)

Chef Infra Server HTTPS Virtual Service Recommended Settings (Optional)

This table outlines the recommended settings set using the Progress Kemp application template. You can use the API parameters and values with scripts and automation tools.

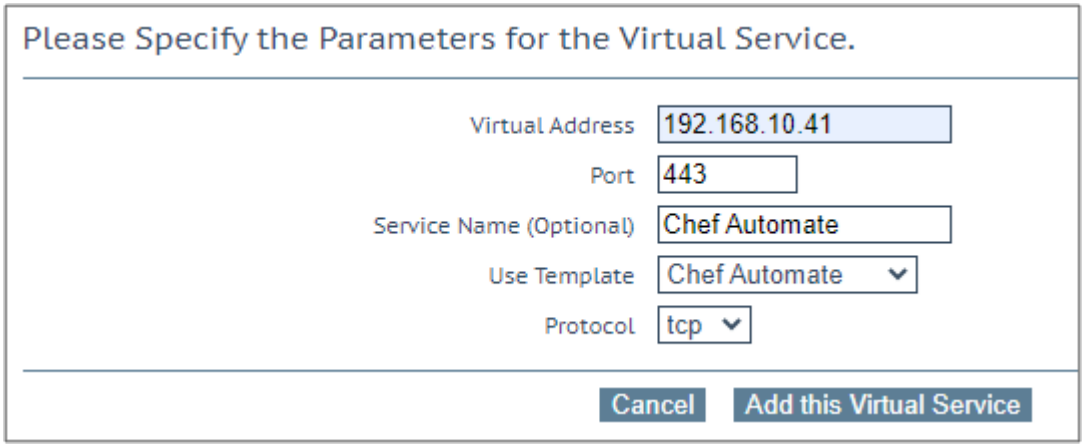
API Parameter	API Value	WUI Field Name	WUI Field Value
port	443	Port	443

API Parameter	API Value	WUI Field Name	WUI Field Value
prot	tcp	Protocol	tcp
VStype	http	Service Type	HTTP-HTTP/2-HTTPS
Schedule	lc	Scheduling Method	least connection
Persist	none	Persistence Options	None
CheckType	https	Real Server Check Method	HTTPS Protocol
CheckPort	443	Checked Port	443

Create the Chef Automate – HTTPS Virtual Service

The following are the steps involved and the recommended settings to configure the Chef Automate HTTPS Virtual Service.

1. In the main menu of the LoadMaster User Interface (UI), go to **Virtual Services > Add New**.



2. Type a valid **Virtual Address**.
3. Select the **Chef Automate** template in the **Use Template** drop-down list.
4. Click **Add this Virtual Service**.

5. Click **Virtual Services** and **View/Modify Services**.
6. Click **Modify** on the **Chef Automate** Virtual Services on port 443.
7. Expand the **Real Servers** section.
8. Click **Add New**.
9. Type the **Real Server Address**.
10. Click **Add This Real Server**.
11. Repeat these steps to add more Real Servers as needed.

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- Chef Automate HTTPS Virtual Service Recommended Settings (Optional)

Chef Automate HTTPS Virtual Service Recommended Settings (Optional)

This table outlines the recommended settings set using the Progress Kemp application template. You can use the API parameters and values with scripts and automation tools.

API Parameter	API Value	WUI Field Name	WUI Field Value
port	443	Port	443
prot	tcp	Protocol	tcp
VStype	http	Service Type	HTTP-HTTP/2-HTTPS
Schedule	lc	Scheduling Method	least connection
Persist	none	Persistence Options	None
CheckType	https	Real Server Check Method	HTTPS Protocol
CheckPort	443	Checked Port	443