Progress®
Kemp® LoadMaster®

Deployment Guide RabbitMQ

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Table of Contents

Chapter 1: Introduction 4

Document Purpose 4

Intended Audience 5

Chapter 2: Template 6

Chapter 3: Architecture 8

Chapter 4: Service Configuration 10

Enable Subnet Originating Requests Globally 10

Configuring the RabbitMQ Virtual Service. 11

Chapter 5: References 13

1

Introduction

RabbitMQ is an open source application that enables robust messaging for applications. It implements the Advanced Message Queuing Protocol (AMQP), the emerging standard for high performance enterprise messaging. The RabbitMQ server is a robust and scalable implementation of an AMQP broker.

The LoadMaster is used to load balance the RabbitMQ workload. The LoadMaster offers advanced Layer 4 and Layer 7 server load balancing, SSL Acceleration and a multitude of other advanced Application Delivery Controller (ADC) features. The LoadMaster intelligently and efficiently distributes user traffic among the application servers so that users get the best experience possible. Note that the Progress Kemp template supports up to version 3.6 of RabbitMQ.

Contents

- Document Purpose
- Intended Audience

Document Purpose

This document provides the recommended LoadMaster settings used when load balancing the RabbitMQ workload. The Progress Kemp 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 RabbitMQ Application Server.

2

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.

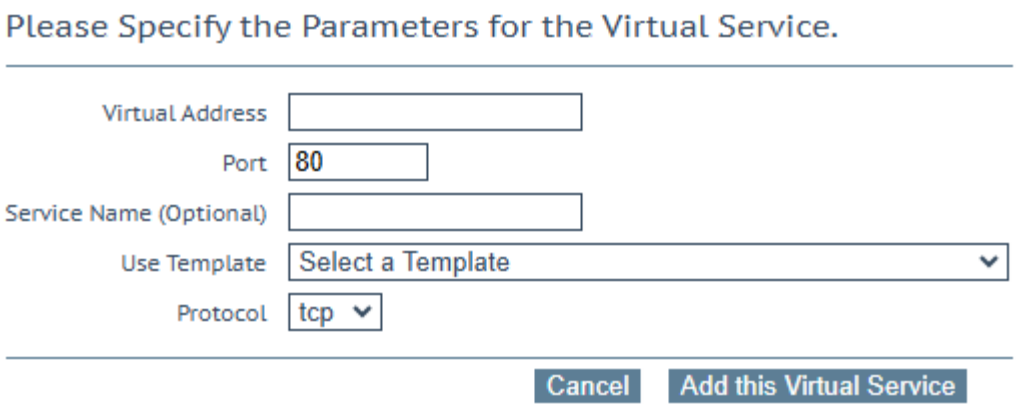
You can remove templates after use and this will not affect deployed services. If needed, you can make changes to any of the VS settings after using the template.

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.

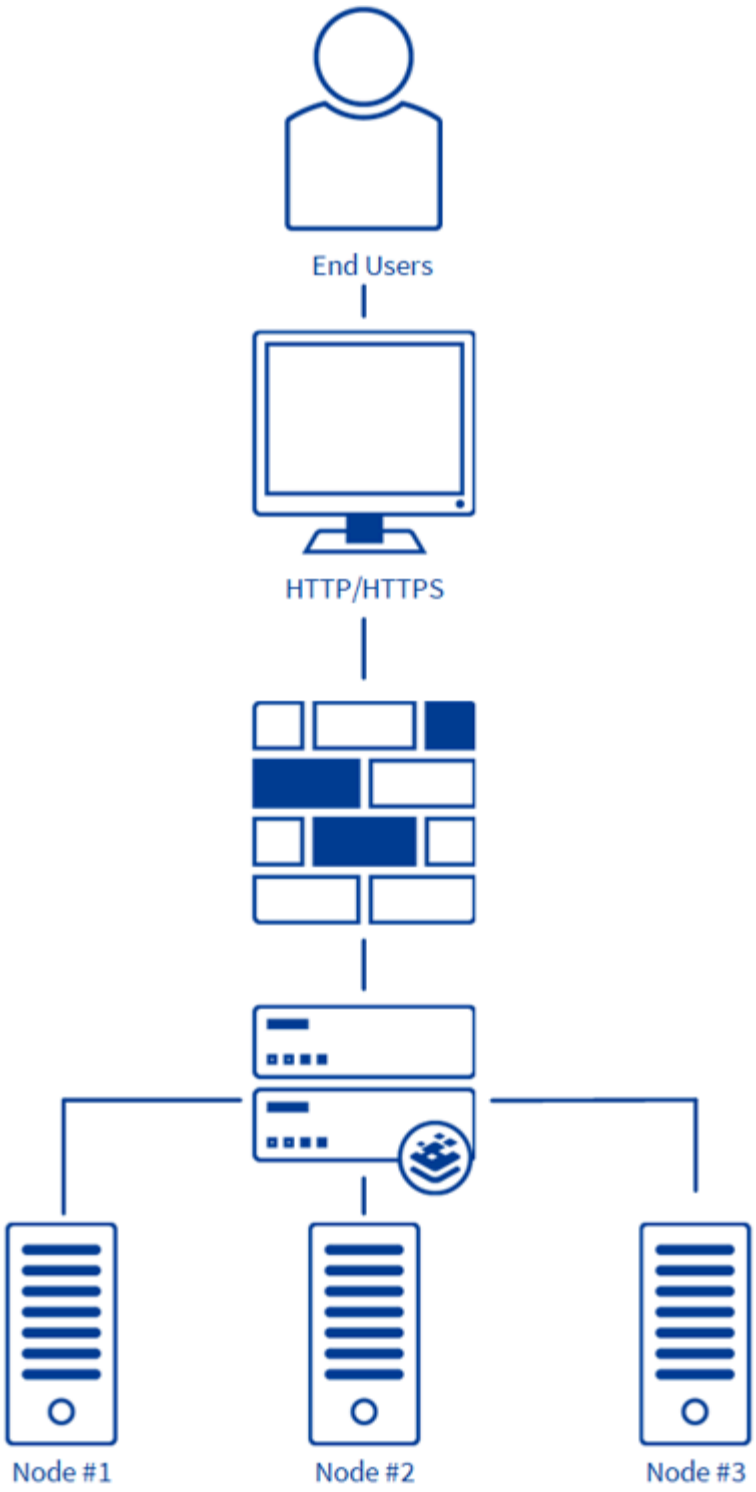


This opens the Virtual Service parameters page which prompts to enter the Virtual IP (VIP) address of the Virtual Service, the port, and the name to give the service and the protocol. You can select a previously-imported template in the **Use Template** drop-down list.

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

3

Architecture


End Users
HTTP/HTTPS
Node #1
Node #2
Node #3

4

Service Configuration

Refer to the following sections for information on configuring the LoadMaster with the recommended settings for RabbitMQ.

Contents

- Enable Subnet Originating Requests Globally
- Configuring the RabbitMQ Virtual Service

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.

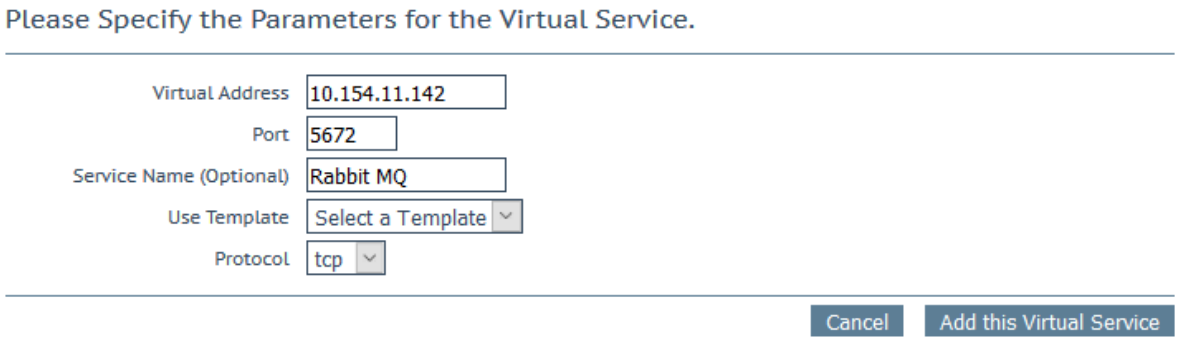
To enable **Subnet Originating Requests** globally, follow the steps below:

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.

Configuring the RabbitMQ Virtual Service

To configure the 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. Type **5672** as the **Port**.
4. Type a recognizable **Service Name** such as **RabbitMQ**.
5. Click **Add this Virtual Service**.
6. Configure the settings as recommended in the following table:

Section	Option	Value	Comment
Standard Options	Force L7	Disabled	
	Persistence Mode	Source IP Address	
	Timeout	10 minutes	
	Scheduling Method	least connection	
Real Servers	Checked Port	5672	Click **Set Check Port**

7. Add the Real Servers:
   1. Expand the **Real Servers** section.
   2. Click **Add New**.
   3. Enter the address of the relevant Real Server.
   4. Complete the other fields as required.
   5. Click **Add this Real Server** then click **OK** to the pop-up message.
   6. Repeat the steps above to add more Real Servers as needed, based on your environment.

5

References

Unless otherwise specified, the following documents can be found at https://docs.progress.com/.

Virtual Services and Templates, Feature Description