



RabbitMQ

Deployment Guide

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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 Kemp 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 Kemp template supports up to version 3.6 of RabbitMQ.

1.1 Document Purpose

This document provides the recommended LoadMaster settings used when load balancing the RabbitMQ workload. The Kemp Support Team is available to provide solutions for scenarios not explicitly defined. The Kemp support site can be found at: <https://support.kemptechnologies.com>

1.2 Intended Audience

This document is intended to be read by anyone who is interested in configuring the LoadMaster to optimize RabbitMQ Application Server.

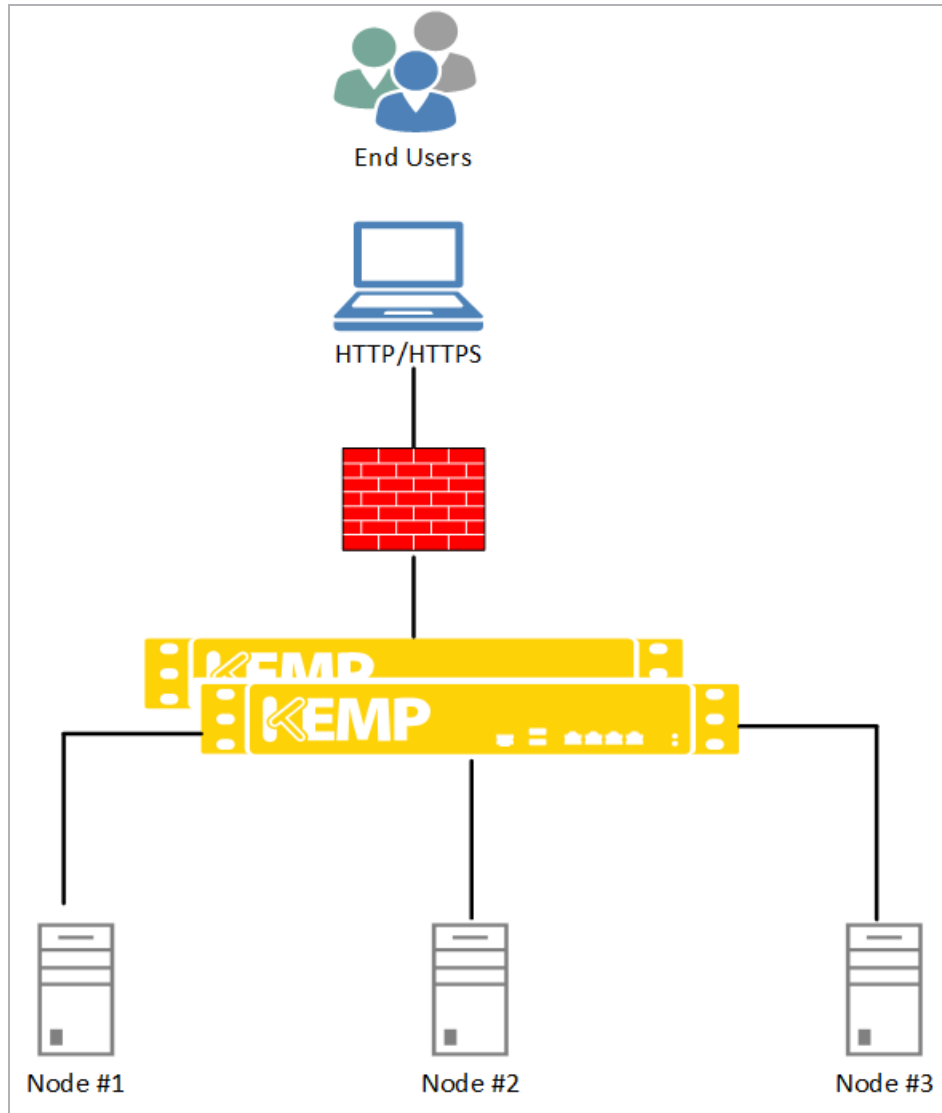
2 Template

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. 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.

3 Architecture



4 Service Configuration

4.1 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.

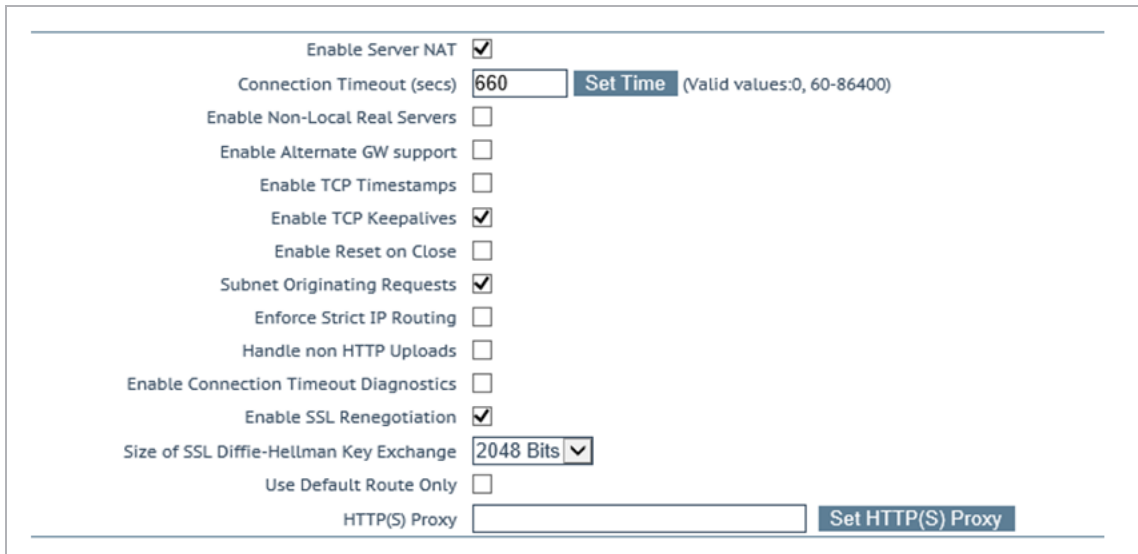
In a two-armed setup where the Virtual Service is on network/subnet A, for example, and the Real Servers are on network B, **Subnet Originating Requests** should be enabled on LoadMasters with firmware version 7.1-16 and above.

When **Subnet Originating Requests** is enabled, the LoadMaster routes traffic so that the Real Server sees traffic arriving from the LoadMaster interface that is in that network/subnet.

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 Web User Interface (WUI), go to **System Configuration > Miscellaneous Options > Network Options**.



The screenshot shows the 'Network Options' configuration page in the LoadMaster WUI. It contains a list of settings with checkboxes and input fields. The 'Subnet Originating Requests' option is checked. Other options include 'Enable Server NAT' (checked), 'Connection Timeout (secs)' (660), 'Enable Non-Local Real Servers' (unchecked), 'Enable Alternate GW support' (unchecked), 'Enable TCP Timestamps' (unchecked), 'Enable TCP Keepalives' (checked), 'Enable Reset on Close' (unchecked), 'Enforce Strict IP Routing' (unchecked), 'Handle non HTTP Uploads' (unchecked), 'Enable Connection Timeout Diagnostics' (unchecked), 'Enable SSL Renegotiation' (checked), 'Size of SSL Diffie-Hellman Key Exchange' (2048 Bits), 'Use Default Route Only' (unchecked), and 'HTTP(S) Proxy' (empty field). There are 'Set Time' and 'Set HTTP(S) Proxy' buttons.

Enable Server NAT	<input checked="" type="checkbox"/>
Connection Timeout (secs)	660 Set Time (Valid values:0, 60-86400)
Enable Non-Local Real Servers	<input type="checkbox"/>
Enable Alternate GW support	<input type="checkbox"/>
Enable TCP Timestamps	<input type="checkbox"/>
Enable TCP Keepalives	<input checked="" type="checkbox"/>
Enable Reset on Close	<input type="checkbox"/>
Subnet Originating Requests	<input checked="" type="checkbox"/>
Enforce Strict IP Routing	<input type="checkbox"/>
Handle non HTTP Uploads	<input type="checkbox"/>
Enable Connection Timeout Diagnostics	<input type="checkbox"/>
Enable SSL Renegotiation	<input checked="" type="checkbox"/>
Size of SSL Diffie-Hellman Key Exchange	2048 Bits <input type="button" value="v"/>
Use Default Route Only	<input type="checkbox"/>
HTTP(S) Proxy	<input type="text"/> Set HTTP(S) Proxy

2. Select the **Subnet Originating Requests** check box.

4.2 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**.

Please Specify the Parameters for the Virtual Service.

Virtual Address	<input type="text" value="10.154.11.142"/>
Port	<input type="text" value="5672"/>
Service Name (Optional)	<input type="text" value="Rabbit MQ"/>
Use Template	<input type="text" value="Select a Template"/>
Protocol	<input type="text" value="tcp"/>

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:
 - a) Expand the **Real Servers** section.
 - b) Click **Add New**.
 - c) Enter the address of the relevant Real Server.

- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

References

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

Virtual Services and Templates, Feature Description

Last Updated Date

This document was last updated on 27 July 2023.