



# Oracle JD Edwards

## Deployment Guide

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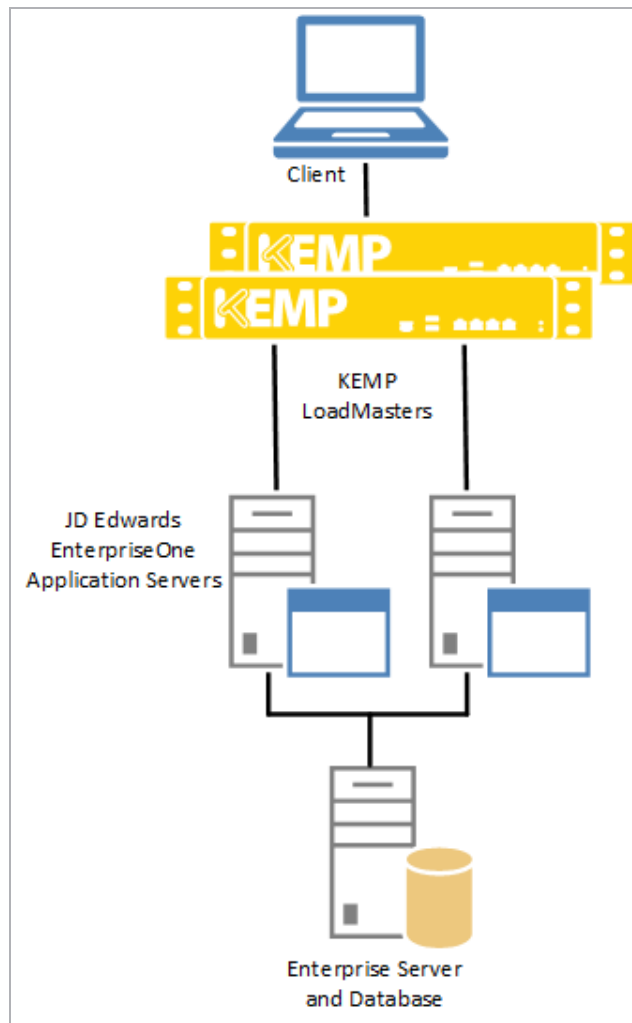
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# 1 Introduction

Oracle's JD Edwards EnterpriseOne is an integrated applications suite of comprehensive enterprise resource planning software that combines business value, standards-based technology and deep industry experience into a business solution with a low total cost of ownership.

JD Edwards EnterpriseOne offers a choice of databases, operating systems and hardware to build and expand an IT solution to meet business requirements. JD Edwards delivers over 80 application modules to support a diverse set of business processes and key industry solutions such as Consumer Package Goods, Manufacturing, Asset Intensive and Projects and Services.



## 1 Introduction

The Kemp LoadMaster can be used to enable scalability, load balancing and High Availability (HA) for JD Edwards environments. The diagram above shows an example network architecture where the LoadMaster is balancing traffic between two application servers.

### 1.1 Document Purpose

The purpose of this document is to explain how to add and configure a Virtual Service in the LoadMaster to load balance JD Edwards traffic. For further information and step-by-step instructions on LoadMaster functionality in general, such as HA, please refer to the Kemp documentation web page: <http://kemptechnologies.com/documentation/>.

### 1.2 Intended Audience

This document is intended to be used by anyone who is interested in finding out how to use a Kemp LoadMaster to load balance the Oracle JD Edwards EnterpriseOne workload.

### 1.3 Prerequisites

LoadMaster firmware version 7.16 or above should be installed.

# 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. 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.

# 3 Configure the LoadMaster

## 3.1 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.

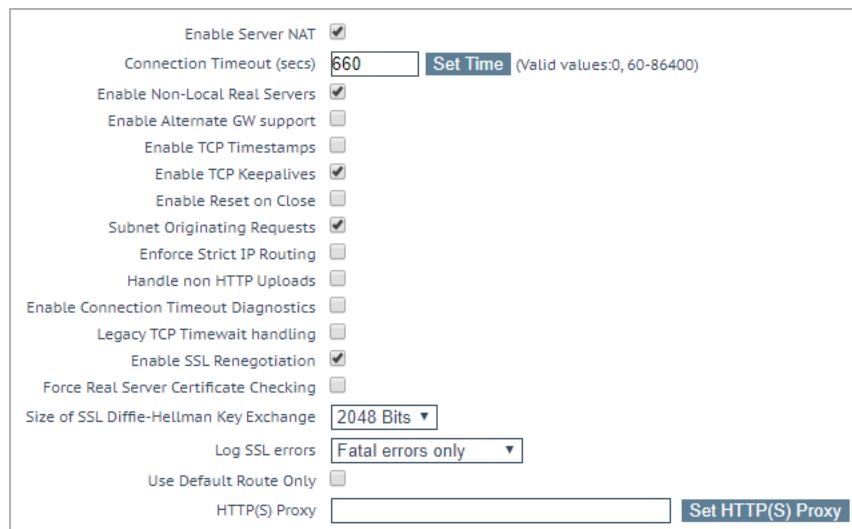
In a two-armed setup where the Virtual Service is on network/subnet A, for example, and the Real Servers are on network B, **Subnet Originating Requests** should be enabled on LoadMasters with firmware version 7.1-16 and above.

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. The page contains a list of settings with checkboxes and dropdown menus. The 'Subnet Originating Requests' option is checked. Other options include 'Enable Server NAT', 'Connection Timeout (secs)' set to 660, 'Enable Non-Local Real Servers', 'Enable Alternate GW support', 'Enable TCP Timestamps', 'Enable TCP Keepalives', 'Enable Reset on Close', 'Enforce Strict IP Routing', 'Handle non HTTP Uploads', 'Enable Connection Timeout Diagnostics', 'Legacy TCP Timewait handling', 'Enable SSL Renegotiation', 'Force Real Server Certificate Checking', 'Size of SSL Diffie-Hellman Key Exchange' set to 2048 Bits, 'Log SSL errors' set to Fatal errors only, 'Use Default Route Only', and 'HTTP(S) Proxy'.

Enable Server NAT	<input checked="" type="checkbox"/>
Connection Timeout (secs)	660 <span>Set Time</span> (Valid values:0, 60-86400)
Enable Non-Local Real Servers	<input checked="" 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"/>
Legacy TCP Timewait handling	<input type="checkbox"/>
Enable SSL Renegotiation	<input checked="" type="checkbox"/>
Force Real Server Certificate Checking	<input type="checkbox"/>
Size of SSL Diffie-Hellman Key Exchange	2048 Bits ▼
Log SSL errors	Fatal errors only ▼
Use Default Route Only	<input type="checkbox"/>
HTTP(S) Proxy	<input type="text"/> <span>Set HTTP(S) Proxy</span>

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

### 3.2 Create a Content Rule (Header Modification)

The Kemp LoadMaster supports content switching, sometimes referred to as URL switching. This allows the LoadMaster to direct specific requests to specific Real Servers based on the contents of the requested URL.

Content switching can be very useful if there are dedicated server types that perform different functions such as image servers, static content servers, mapping servers, specialized content servers, application servers and media servers, that all need to be served from the same general hostname, for example `www.mysite.com`. Content switching also allows for hostname-specific servers and source IP-specific servers.

Content rules give the ability to:

- Strip out server information
- Redirect requests for the root of a server
- Rewrite redirections from HTTP to HTTPS
- Force connections to close
- Secure cookies

The following content rule, which can be used when configuring a Virtual Service with or without SSL offloading, writes the URL so that users are sent to the `domain.com/JDE_Hompage` rather than the default homepage of the server:

### Create Rule

Rule Name	<input type="text" value="Rewrite1"/>
Rule Type	<input type="text" value="Modify URL"/>
Match String	<input type="text" value="/^\/\$/"/>
Modified URL	<input type="text" value="/jde/E1menu.maf"/>
Perform If Flag Set	<input type="text" value="[Unset]"/>
Perform If Flag is NOT Set	<input type="text" value="[Unset]"/>

1. In the main menu, select **Content Rules > Create New**.



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2. Enter a recognisable **Rule Name** in the text box.
3. Select **Modify URL** from the **Rule Type** drop-down list.
4. Enter `/^\$/` in the **Match String** text box.
5. Enter `/jde/E1menu.maf` in the **Modified URL** text box.
6. Select **[Unset]** from the **Perform If Flag Set** drop-down list.
7. Click the **Create Rule** button.

## 3.3 Configure the Virtual Service

### 3.3.1 Configure the Virtual Service without SSL Offloading for Oracle JD Edwards

This example configuration assumes that one Virtual Service and one Real Server are being set up. In a real situation, users may need to configure more.

To add and configure the Oracle JD Edwards without SSL Offloading Virtual Service, follow the steps below in the LoadMaster Web User Interface (WUI):

1. Add a Virtual Service:

Please Specify the Parameters for the Virtual Service.

Virtual Address	<input type="text" value="10.154.11.21"/>
Port	<input type="text" value="80"/>
Service Name (Optional)	<input type="text" value="Oracle JD Edwards Ente"/>
Use Template	<input type="text" value="Select a Template"/>
Protocol	<input type="text" value="tcp"/>

2. In the main menu, go to **Virtual Services > Add New**.
3. Enter a valid IP address in the **Virtual Address** text box.
4. Enter **80** as the **Port**.
5. Enter a recognizable **Service Name**, such as **Oracle JD Edwards EnterpriseOne HTTP**.
6. Ensure **tcp** is selected as the **Protocol**.
7. Click **Add this Virtual Service**.

## 3 Configure the LoadMaster

8. Add the **Content Rule** to the Virtual Service.
9. Expand the **Advanced Properties** section.
10. Click the **Show Header Rules** button.
11. From the drop-down list in the **Request Rules** section of the **HTTP header modification Rule Management** screen, select the rule you created, and click the **Add** button.
12. Click the **Back** button.
13. Configure the settings as shown in the following table:

Section	Option	Value	Comments
<b>Standard Options</b>	Transparency	Disabled	
	Persistence Mode	Active Cookie	
	Persistence Timeout	1 Hour	
	Cookie name	EnterpriseOne-Cookie	Click <b>Set Cookie</b> .
	Scheduling Method	least connection	
	Idle Connection Timeout	1800	Click <b>Set Idle Timeout</b> .
<b>Real Servers</b>	Real Server Check Method	HTTP Protocol	
	URL	/jde/index.jsp	Click <b>Set URL</b> .
	HTTP Method	GET	
	Reply 200 Pattern	<html>	Click <b>Set Pattern</b> .

14. Add a Real Server.
  - a) Click the **Add New** button.
  - b) Enter the **Real Server Address**.
  - c) Enter the correct **Port**.
  - d) Click the **Add This Real Server** button.

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Steps b) and c) use the IP Address and Port of the backend server.

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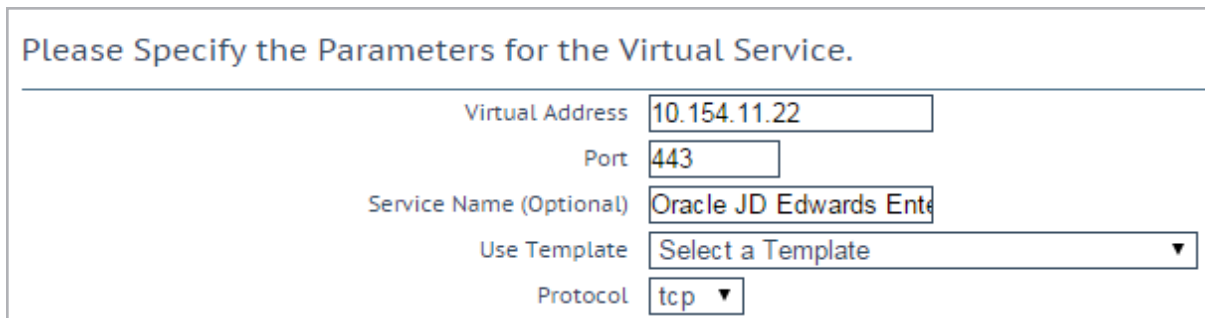
The **Forwarding method** and the **Weight** values are set, by default. If required these settings may be altered.

### 3.3.2 Configure the Virtual Service with SSL Offloading for Oracle JD Edwards

This example configuration assumes that one Virtual Service and one Real Server are being set up. In a real situation, users may need to configure more.

To add and configure the Oracle JD Edwards with SSL Offloading Virtual Service, follow the steps below in the LoadMaster Web User Interface (WUI):

1. Add a Virtual Service.



Please Specify the Parameters for the Virtual Service.

Virtual Address	<input type="text" value="10.154.11.22"/>
Port	<input type="text" value="443"/>
Service Name (Optional)	<input type="text" value="Oracle JD Edwards Ente"/>
Use Template	<input type="text" value="Select a Template"/>
Protocol	<input type="text" value="tcp"/>

2. In the main menu, go to **Virtual Services > Add New**.
3. Enter a valid IP address in the **Virtual Address** text box.
4. Enter **443** as the **Port**.
5. Enter a recognizable **Service Name**, such as **Oracle JD Edwards EnterpriseOne HTTPS**.
6. Ensure **tcp** is selected as the **Protocol**.
7. Click **Add this Virtual Service**.
8. Add the Content Rule to the Virtual Service.
9. Expand the **Advanced Properties** section.
10. Click the **Show Header Rules** button.
11. From the drop-down list in the **Request Rules** section of the **HTTP header modification Rule Management** screen, select the rule you created then click the **Add** button.
12. Click the **Back** button.

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

Section	Option	Value	Comments
<b>Standard Options</b>	Transparency	Disabled	
	Persistence Mode	Active Cookie	
	Persistence Timeout	1 Hour	
	Cookie name	EnterpriseOne-Cookie	Click <b>Set Cookie</b> .
	Scheduling Method	least connection	
	Idle Connection Timeout	1800	Click <b>Set Idle Timeout</b> .
	Quality of Service	Normal-Service	
<b>SSL Properties</b>	SSL Acceleration	Enabled	
	Supported Protocols	TLS1.0;TLS1.1;TLS1.2;TLS1.3	While this workload may not support TLS1.3 yet, Kemp recommend enabling it for future proofing.
	Client Certificates	No Client Certificates required	
<b>Real Servers</b>	Real Server Check Method	HTTP Protocol	
	URL	/jde/index.jsp	Click <b>Set URL</b> .
	HTTP Method	GET	
	Reply 200 Pattern	<html>	Click <b>Set Pattern</b> .

14. Add a Real Server.

- Click the **Add New** button.
- Enter the **Real Server Address**.
- Enter the correct **Port**.
- Click the **Add This Real Server** button.

---

Steps b) and c) use the IP Address and Port of the backend server.

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The **Forwarding method** and the **Weight** values are set, by default. If required these settings may be altered.

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# References

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

## **Virtual Services and Templates, Feature Description**

# Last Updated Date

This document was last updated on 27 July 2023.