



Microsoft Dynamics AX

Deployment Guide

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1 Introduction

Microsoft Dynamics AX is an Enterprise Resource Planning (ERP) software package developed for businesses. It aims to drive sales, productivity and marketing effectiveness through social insights, business intelligence and campaign management in the cloud, on-premises or with a hybrid combination of both.

Such a powerful tool requires reliable and powerful support. The Kemp LoadMaster delivers an exceptional, cost-effective and easy to use solution which, by employing Adaptive Load Balancing, balances requests across Microsoft Dynamics.

When deployed as a pair, two LoadMasters give the security of High Availability (HA). HA allows two physical or virtual machines to become one logical device. Only one of these units is ever handling traffic at any particular moment. One unit is active and the other is a hot standby (passive). This provides redundancy and resiliency, meaning if one LoadMaster goes down for any reason, the hot standby can become active, therefore avoiding any downtime. For more information on HA please refer to: [High Availability \(HA\), Feature Description](#).

1.1 Document Purpose

This document is intended to provide guidance on how to deploy Microsoft Dynamics AX with a Kemp LoadMaster. 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 used by anyone deploying Microsoft Dynamics AX with a Kemp LoadMaster.

2 Microsoft Dynamics Template

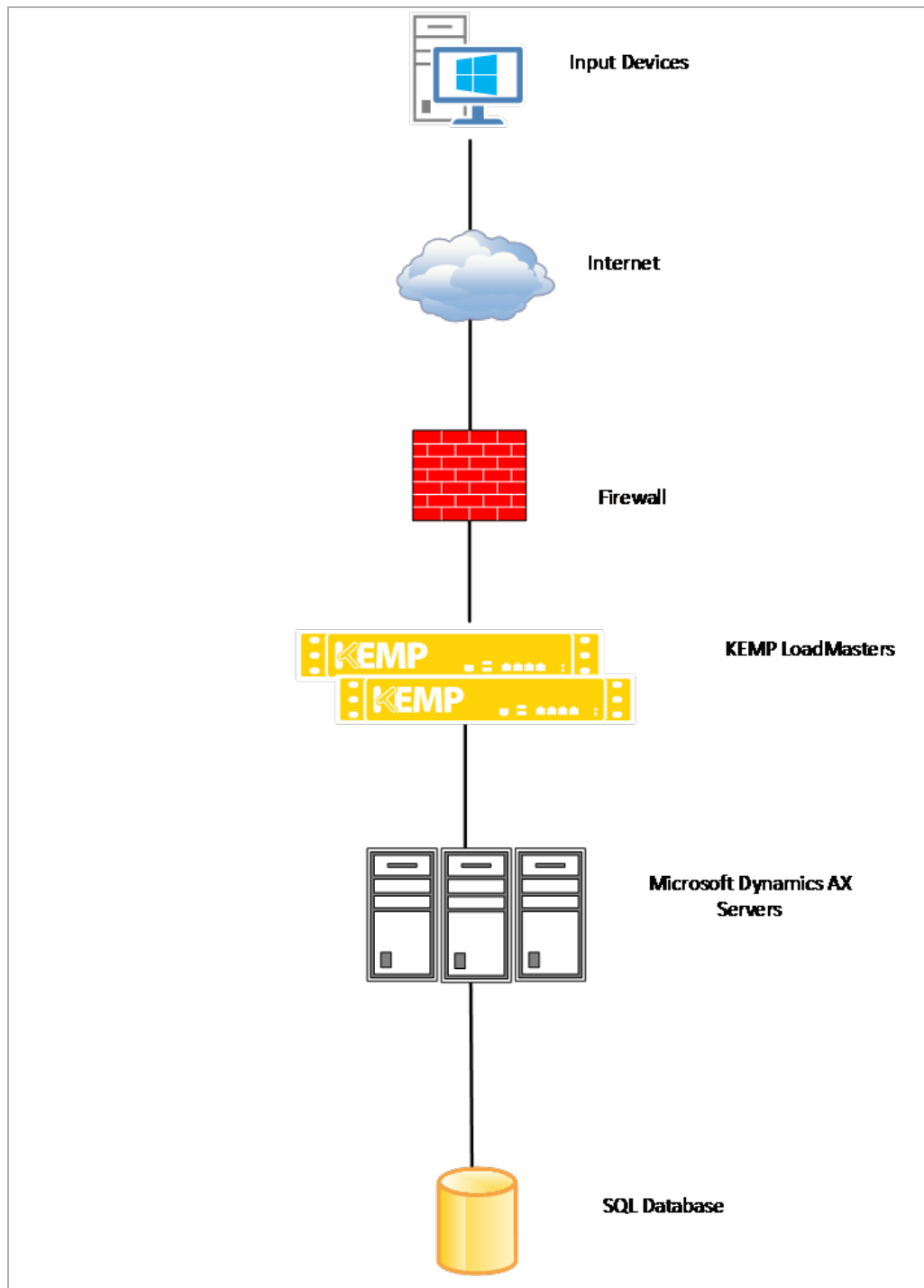
Kemp has developed a template containing our recommended settings for Microsoft Dynamics AX. This template can be installed on the LoadMaster and used when creating Virtual Services. Using a template automatically populates the settings in the Virtual Services. This is quicker and easier than manually configuring each Virtual Service. If needed, changes can be made to any of the Virtual Service 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](#).

For steps on how to manually add and configure each of the Virtual Services, refer to the **Configure Microsoft Dynamics Virtual Services** section of this document.

3 Architecture



4 Configure Microsoft Dynamics Virtual Services

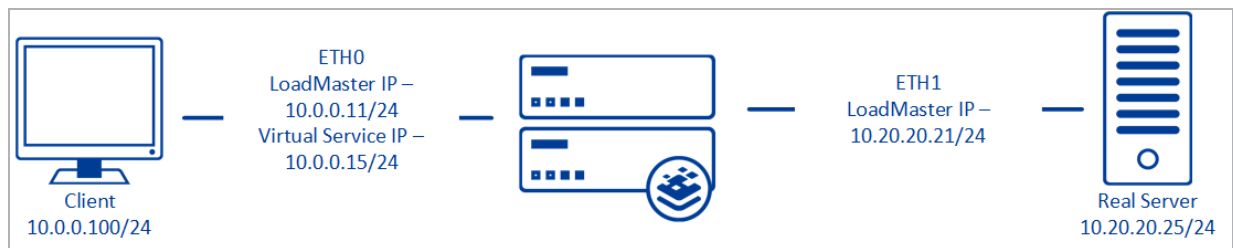
The environment in which Microsoft Dynamics AX is deployed determines which of the following set-ups should be used.

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 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.

4.2 Microsoft Dynamics AX ERP Portal Virtual Service

The following are the steps involved and the recommended settings to configure the Microsoft Dynamics HTTPS Virtual Service:

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

Please Specify the Parameters for the Virtual Service.

Virtual Address

Port

Service Name (Optional)

Protocol

tcp ▼

2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **443** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example **MS Dynamic AX**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Enter the details shown in the following table:

| Section | Option | Value | Comment |
|------------------|---------------------|-------------------|---------|
| Standard Options | Transparency | Disabled | |
| | Persistence Mode | Source IP Address | |
| | Persistence Timeout | 30 Minutes | |
| | Scheduling Method | least connection | |

4 Configure Microsoft Dynamics Virtual Services

| Section | Option | Value | Comment |
|---------------------|--------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Idle Connection Timeout | 660 | |
| SSL Properties | SSL Acceleration | Enabled Reencrypt | A wildcard certificate allows secure connections to be established with a request URL in the format of *.example.com. With this approach, a single certificate secures traffic for all clients in a multi-tenant environment. |
| | | TLS1.0 | |
| | Supported Protocols | TLS1.1 | While this workload may not support TLS1.3 yet, Kemp recommend enabling it for future proofing. |
| | | TLS1.2 | |
| | | TLS1.3 | |
| | Cipher Set | Best Practices | For further information on cipher sets, please refer to the SSL Accelerated Services, Feature Description . |
| Advanced Properties | Content Switching | Disabled | |
| | Add HTTP Headers | Legacy Operation (X-ClientSide) | |
| | Redirection URL | https://%h%s | Click Add HTTP Redirector . This option will only appear if port 80 is free. |
| Real Servers | Real Server Check Method | HTTPS Protocol | |
| | Checked Port | 443 | |
| | Use HTTP/1.1 | Selected | |
| | HTTP/1.1 Host | ax.example.com | |
| | HTTP Method | GET | |

Users should note that clicking the **Add HTTP Redirector** button, automatically creates a redirect Virtual Service on Port **80**. This option will only appear if a port HTTP redirect does not already exist:

8. Add the Real Servers:

- a) Click the **Add New** button.
- b) Enter the IP address of the **AX Server**.
- c) Enter **443** as the **Port**.

The Real Server **Port** should match the Virtual Service **Port**.

The **Forwarding method** and **Weight** values are set by default.
An administrator can change these.

- d) Click **Add this Real Server**. Click **OK** to the pop-up message.
- e) Repeat the steps above to add more Real Servers as needed, based on the environment.

4.3 Microsoft Dynamics AX HTTP (Redirect) Virtual Service

This Virtual Service is automatically created when users click the **Add HTTP Redirector** button while configuring the **Microsoft Dynamics AX ERP Portal** Virtual Service in the **Microsoft Dynamics AX ERP Portal Virtual Service** section.

4.4 Microsoft Dynamics AX AOS Virtual Service

The following are the steps involved and the values required to configure the Microsoft Dynamics AX AOS Virtual Service:

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

Please Specify the Parameters for the Virtual Service.

| | |
|-------------------------|--------------------------------------------------|
| Virtual Address | <input type="text" value="10.154.190.152"/> |
| Port | <input type="text" value="2712"/> |
| Service Name (Optional) | <input type="text" value="MS Dynamics AX AOS"/> |
| Use Template | <input type="text" value="Select a Template ▼"/> |
| Protocol | <input type="text" value="tcp ▼"/> |

4 Configure Microsoft Dynamics Virtual Services

2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **2712** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example **MS Dynamic AX AOS**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Enter the details shown in the following table:

| Section | Option | Value | Comment |
|------------------|--------------------------|-------------------------------|-----------------------|
| Standard Options | Transparency | Deselected | |
| | Extra Ports | 1433,1812,1814,8101,8201,8202 | Click Set Extra Ports |
| | Persistence Mode | Source IP Address | |
| | Persistence Timeout | 30 Minutes | |
| | Scheduling Method | least connection | |
| | Idle Connection Timeout | 660 | |
| Real Servers | Real Server Check Method | TCP Connection Only | |
| | Checked Port | 2712 | |

8. Add the Real Servers:

- a) Click the **Add New** button.
- b) Enter the IP address of the **AX Server**.
- c) Enter **2712** as the **Port**.

The Real Server **Port** should match the Virtual Service **Port**.

The **Forwarding method** and **Weight** values are set by default. An administrator can change these.

- d) Click **Add this Real Server**. Click **OK** to the pop-up message.

e) Repeat the steps above to add more Real Servers as needed, based on the environment.

References

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

Virtual Services and Templates, Feature Description.

High Availability (HA), Feature Description

SSL Accelerated Services, Feature Description

Last Updated Date

This document was last updated on 28 July 2023.