Progress®
Kemp® LoadMaster®

Deployment Guide Microsoft Dynamics

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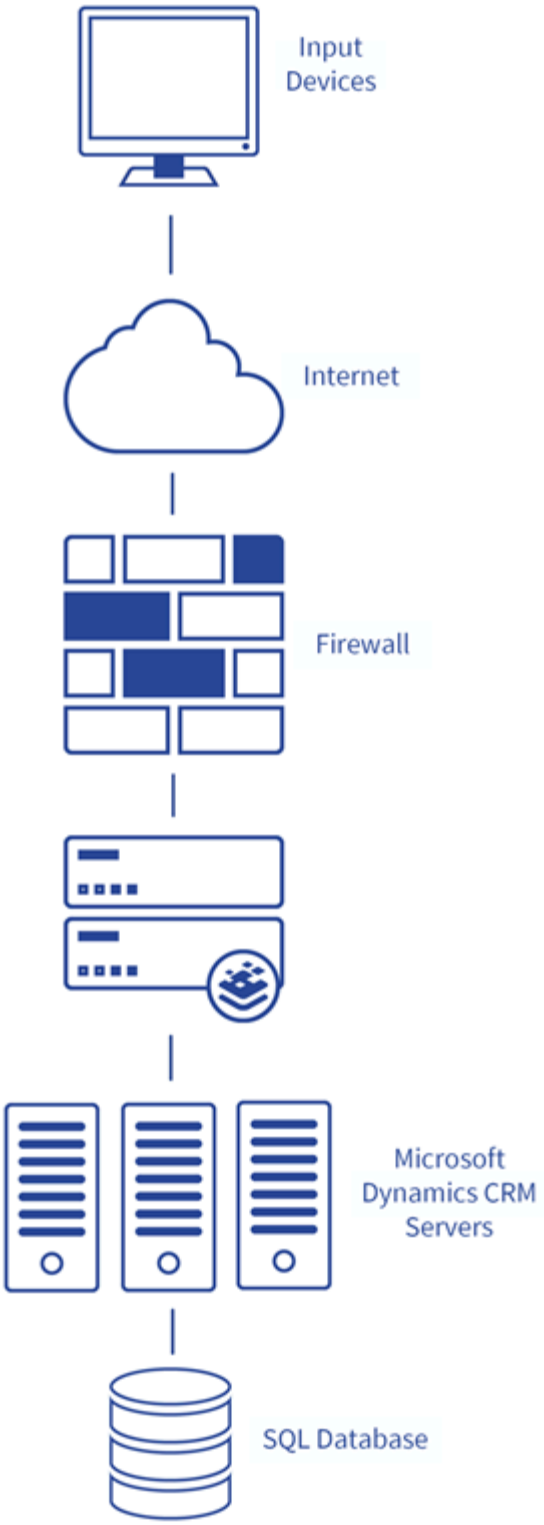
1

Introduction

Microsoft Dynamics CRM is a Customer Relationship Management (CRM) 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 LoadMaster delivers an exceptional, cost-effective and easy to use solution which, by employing Adaptive Load Balancing, balances requests across Microsoft Dynamics. Microsoft Dynamics consists of Dynamics CRM servers.

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.



Contents

- Document Purpose
- Intended Audience

Document Purpose

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

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.

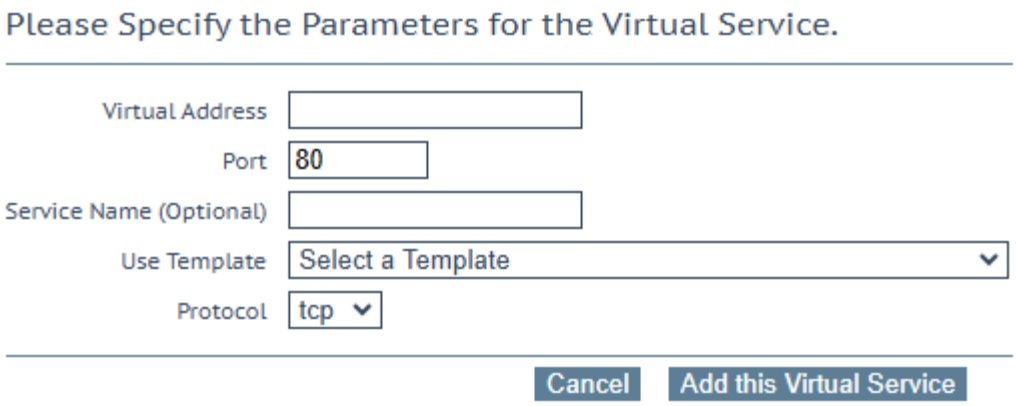
You can remove templates after use and this will not affect deployed services. If needed, you can make changes to any of the VS settings after using the template.

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

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

Configure Microsoft Dynamics Virtual Services

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

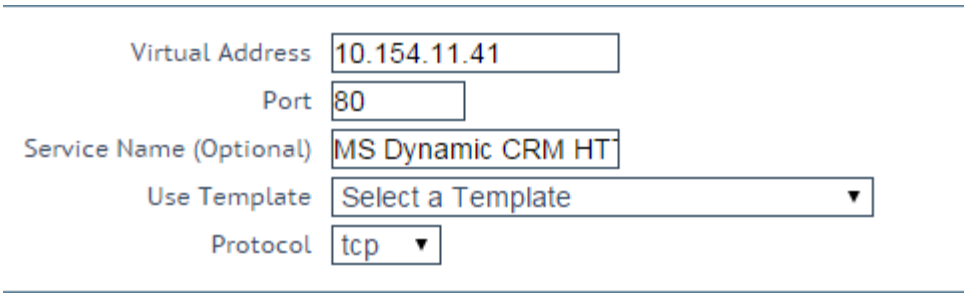
Contents

- Microsoft Dynamics CRM HTTP
- Microsoft Dynamics CRM HTTPS
- Microsoft Dynamics HTTPS Re-encrypt

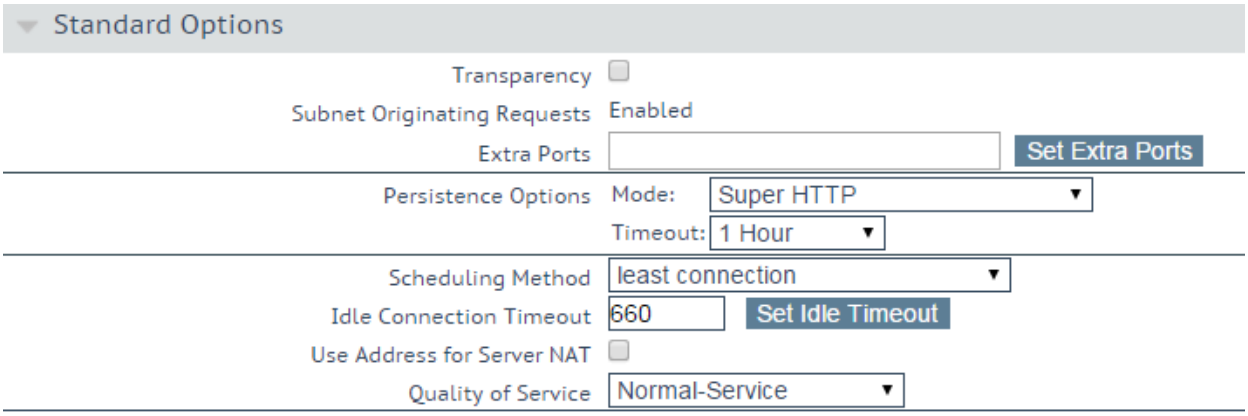
Microsoft Dynamics CRM HTTP

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

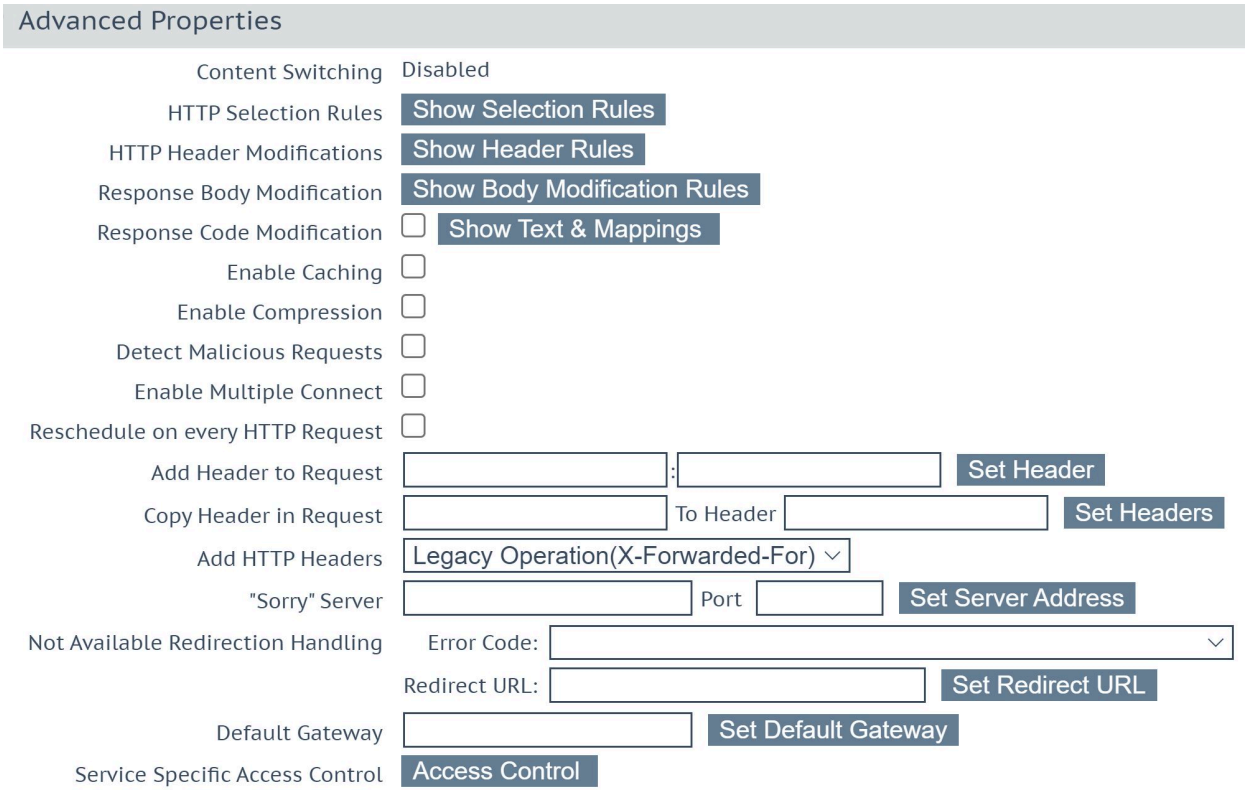
1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



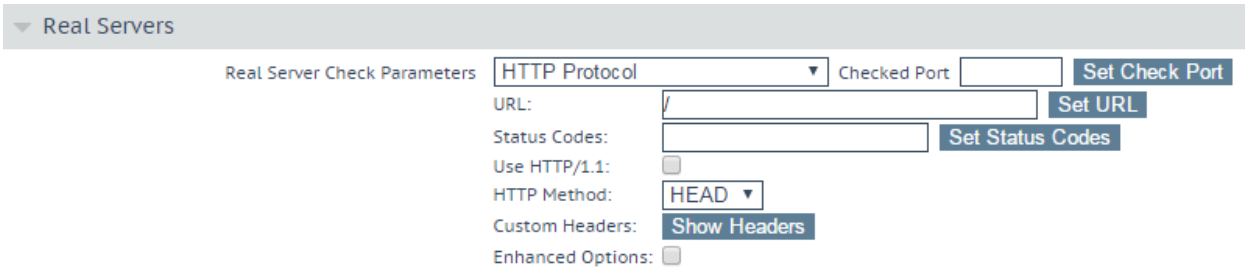
2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **80** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example MS Dynamic CRM HTTP.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Expand the **Standard Options** section.



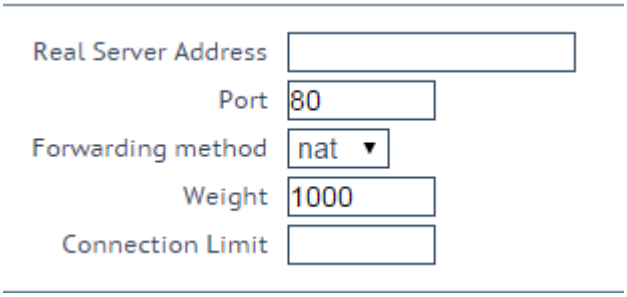
8. Deselect the **Transparency** check box.
9. Select **Super HTTP** from the **Mode** drop-down list.
10. Select **1 Hour** from the **Timeout** drop-down list.
11. Select **least connection** from the **Scheduling Method** drop-down list.
12. Set the **Idle Connection Timeout** to 660 and click the **Set Idle Timeout** button.
13. Expand the **Advanced Properties** section.



14. Select **Legacy Operation (X-Forwarded-For)** from the **Add HTTP Headers** drop-down list.
15. Expand the **Real Servers** section.



16. Select the **HTTP Protocol** from the **Real Server Check Parameters** drop-down list.
17. Enter **/** in the **URL** text box and click **Set URL**.
18. Ensure **HEAD** is selected from the **HTTP Method** drop-down list.



19. Add the Real Servers:

1. Click the **Add New** button.
2. Enter the IP address of the **CRM Server**.
3. Enter **80** as the **Port**.

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

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

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

Microsoft Dynamics CRM HTTPS

Note: We recommends that two Virtual Services are configured for Microsoft Dynamics CRM HTTPS.

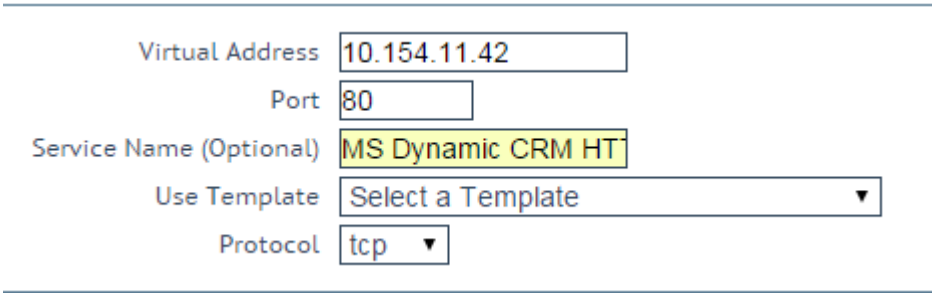
The following are the steps involved and the values required to configure the Microsoft Dynamics HTTPS Virtual Services:

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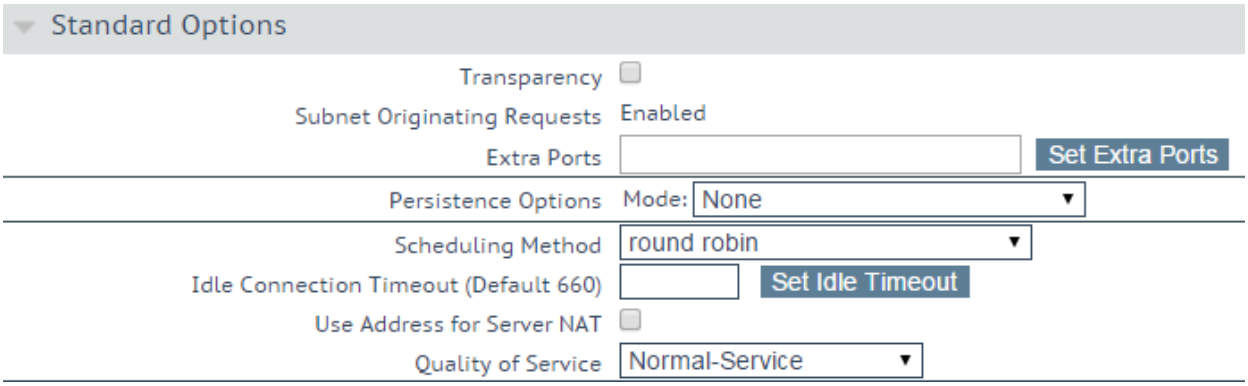
- Microsoft Dynamics HTTPS (Redirect)
- Microsoft Dynamics HTTPS (Certificate Installed on Real Server)

Microsoft Dynamics HTTPS (Redirect)

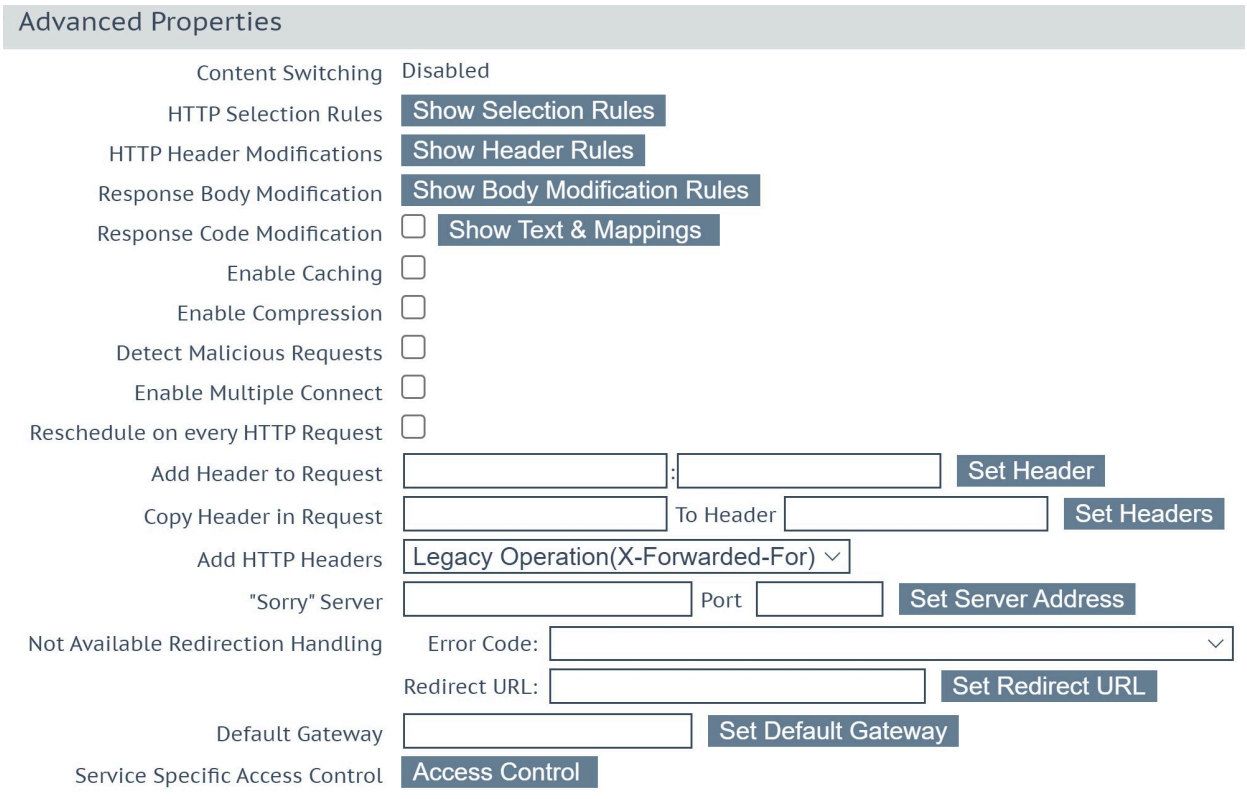
1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **80** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example MS Dynamic CRM HTTPS Redirect.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Expand the **Standard Options** section.



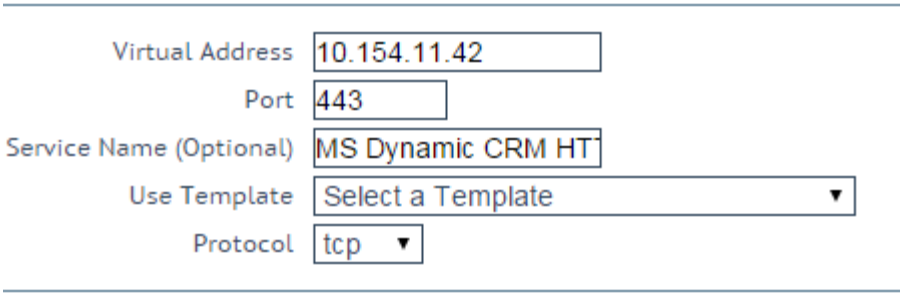
8. Deselect the **Transparency** check box.
9. Select **None** from the **Mode** drop-down list.
10. Select **round robin** from the **Scheduling Method** drop-down list.
11. Expand the **Advanced Properties** section.



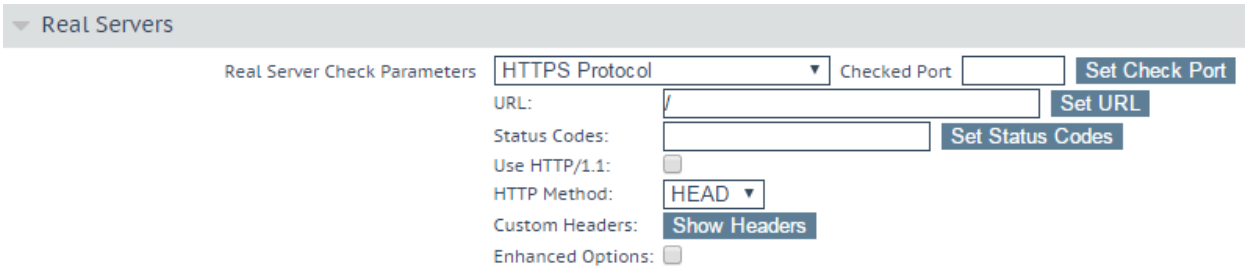
12. Select **Legacy Operation (X-Forwarded-For)** from the **Add HTTP Headers** drop-down list.
13. Select **302 Found** from the **Error Code** drop-down list.
14. Enter **https://%h%s** in the **Redirect URL** text box and click **Set Redirect URL**.

Microsoft Dynamics HTTPS (Certificate Installed on Real Server)

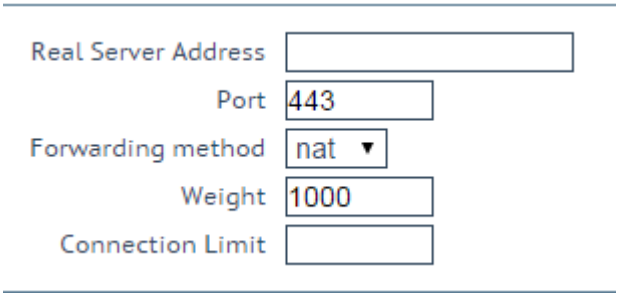
1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



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 CRM HTTPS.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Expand the **Standard Options** section.
8. Ensure the **Force L4** check box is clear.
9. Ensure the **Transparency** check box is clear.
10. Select **Source IP Address** from the **Mode** drop-down list.
11. Select **1 Hour** from the **Timeout** drop-down list.
12. Select **least connection** from the **Scheduling Method** drop-down list.
13. Enter **660** as the **Idle Connection Timeout** and click **Set Idle Timeout**.
14. Expand the **Real Servers** section.



15. Select **HTTPS Protocol** from the **Real Server Check Parameters** drop-down list.
16. Enter **/** in the **URL** text box and click **Set URL**.
17. Select **HEAD** from the **HTTP Method** drop-down list.



18. Add the Real Servers:
    1. Click the **Add New** button.

2. Enter the IP address of the **CRM Server**.
3. Enter **443** as the **Port**.

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

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

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

Microsoft Dynamics HTTPS Re-encrypt

Note: We recommend that two Virtual Services are configured for Microsoft Dynamics CRM HTTPS Re-encrypt.

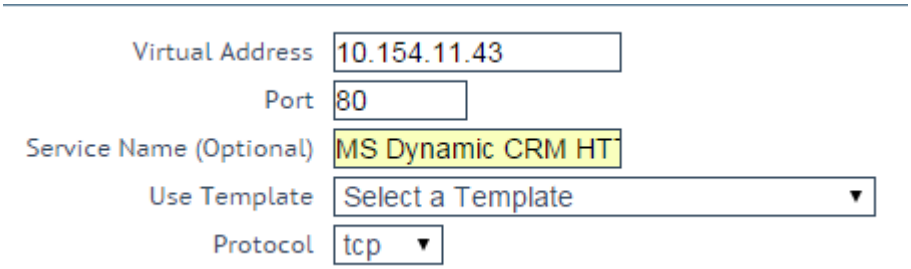
The following are the steps involved and the values required to configure the Microsoft Dynamics HTTPS Re-encrypt Virtual Services:

Contents

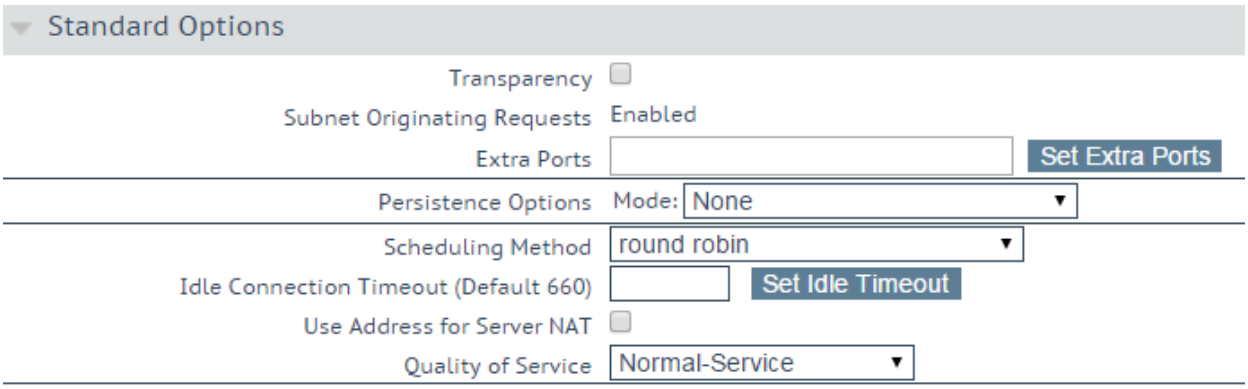
- Microsoft Dynamics CRM HTTPS Reencrypted Redirect
- Microsoft Dynamics CRM HTTPS Reencrypt

Microsoft Dynamics CRM HTTPS Reencrypted Redirect

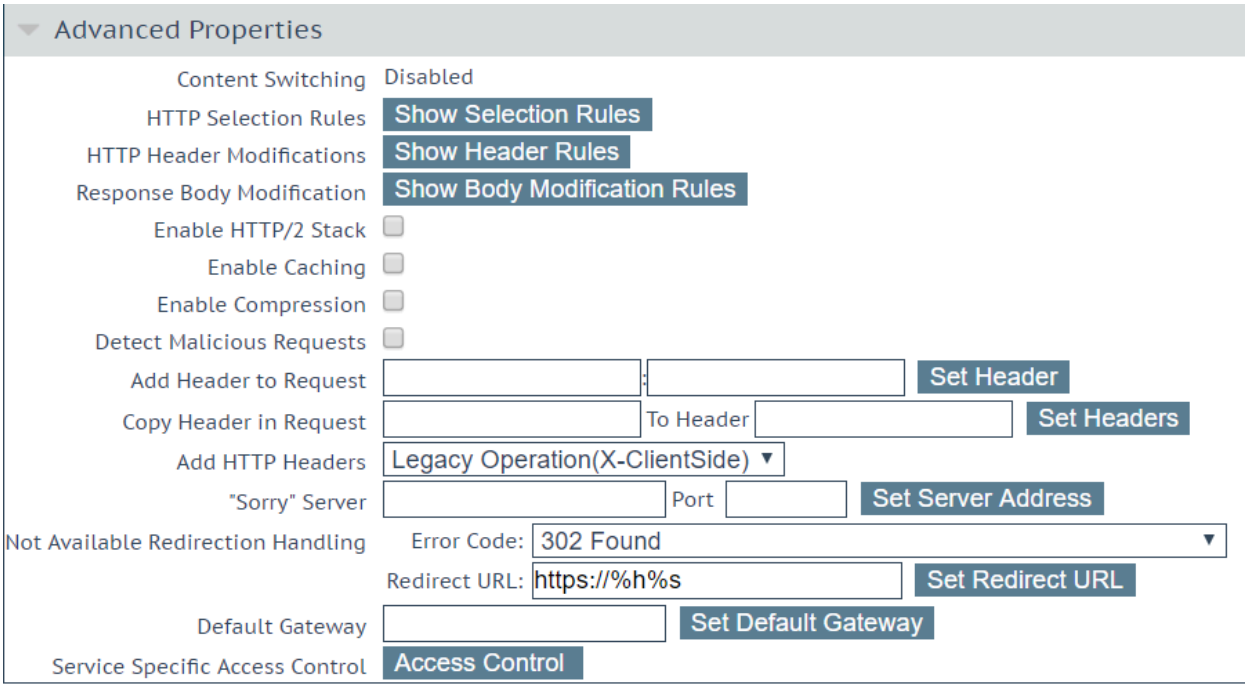
1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **80** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example MS Dynamic CRM HTTPS Reencrypted-Redirect.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Expand the **Standard Options** section.



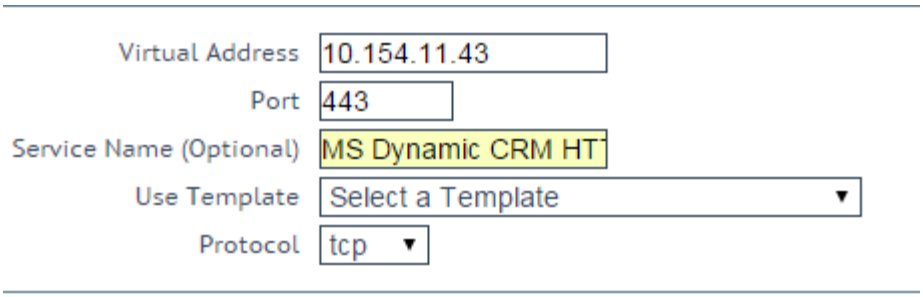
8. Deselect the **Transparency** check box.
9. Select **None** from the **Mode** drop-down list.
10. Select **round robin** from the **Scheduling Method** drop-down list.
11. Expand the **Advanced Properties** section.



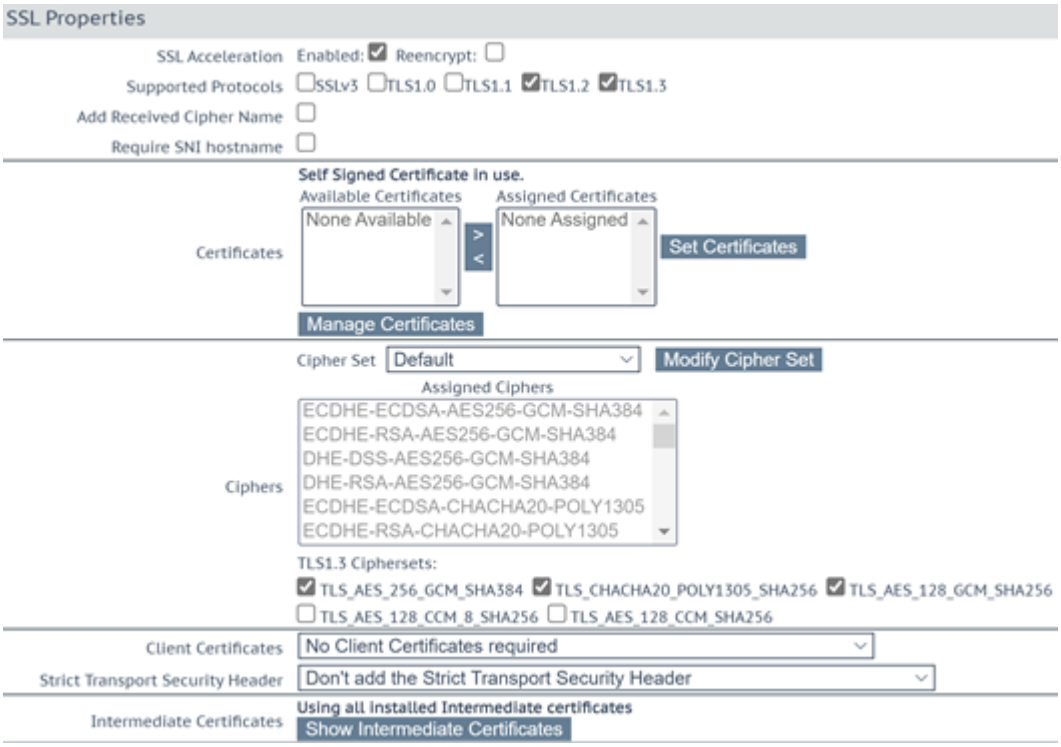
12. Select **Legacy Operation (X-ClientSide)** from the **Add HTTP Headers** drop-down list.
13. Select **302 Found** from the **Error Code** drop-down list.
14. Enter **https://%h%s** in the Redirect URL text box and click Set Redirect URL.

Microsoft Dynamics CRM HTTPS Reencrypt

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



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 CRM HTTPS Re-encrypt**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Expand the **SSL Properties** section.

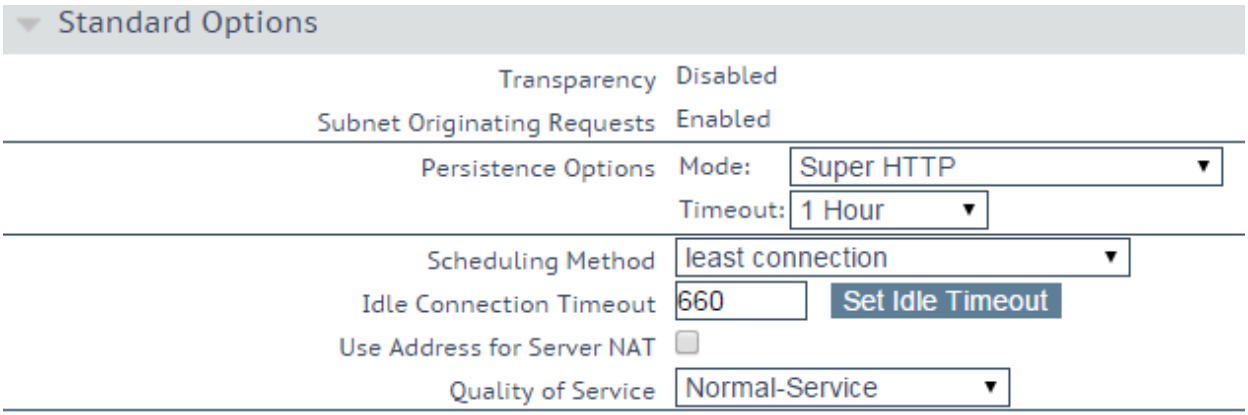


8. Select the **Enabled** and **Reencrypt** check boxes for **SSL Acceleration**.
9. Select the four **TLS** check boxes for **Supported Protocols**.

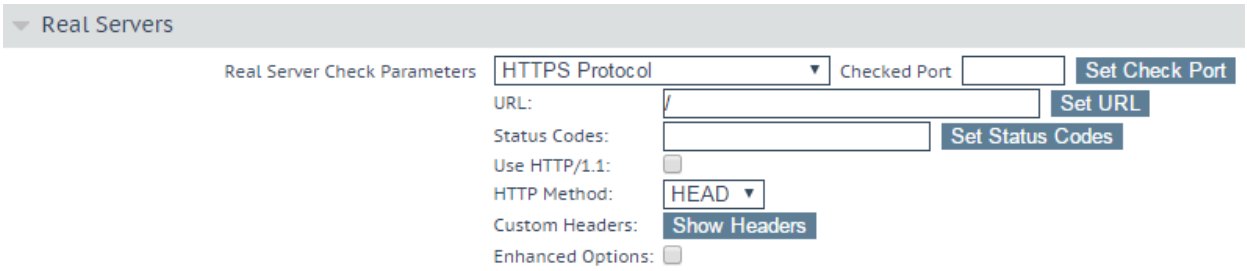
Note: While the **Cipher Set** automatically selects **Default** from the drop-down list, users may select **BestPractices** to ensure all security scans are passed without issue.

While this workload may not support TLS1.3 yet, we recommend enabling it for future proofing.

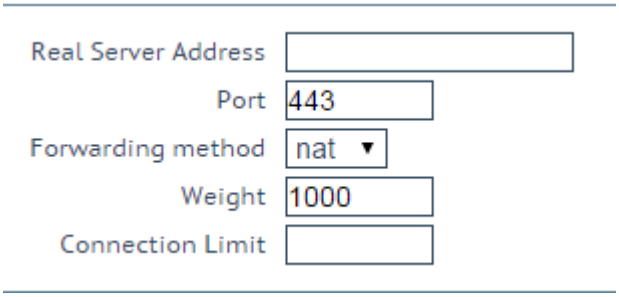
10. Expand the **Standard Options** section.



11. Ensure **Transparency** is Disabled.
12. Select **Super HTTP** from the **Mode** drop-down list.
13. Select **1 Hour** from the **Timeout** drop-down list.
14. Select **least connection** from the **Scheduling Method** drop-down list.
15. Expand the **Real Servers** section.



16. Select **HTTPS Protocol** from the **Real Server Check Parameters** drop-down list.
17. Enter **/** in the **URL** text box and click **Set URL**.
18. Select **HEAD** from the **HTTP Method** drop-down list.



19. Add the Real Servers:
    1. Click the **Add New** button.
    2. Enter the IP address of the **CRM Server**.
    3. Enter **443** as the **Port**.

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

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

these.

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

5

References

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

Virtual Services and Templates, Feature Description.

High Availability (HA), Feature Description