

Cisco UCS C-Series

Installation Guide

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1 Introduction

The Kemp LoadMaster load balancing solution is specifically optimized for the UCS C-Series Rack Servers, enabling customers to deploy full-feature, high-performance load balancers. This can reduce network design complexity as well as increased performance. Cisco UCS C-Series Rack Servers deliver unified computing in an industry-standard form factor to reduce total cost of ownership and increase agility. The Kemp solution is designed to handle load balancing for application-to-application connections for external/internet based connections to web services.

This document describes the steps required to install the Kemp LoadMaster software on a Cisco UCS C-Series Rack Server.

> PXE and USB booting options are also supported by the LoadMaster installation ISO file.

1.1 Pre-requisites

The following pre-requisites are required:

- A Cisco UCS C-Series Rack Server.
- An ISO image with the LoadMaster software.

  > The ISO image can be downloaded from www.kemptechnologies.com/baremetal-trial.

- For a standalone LoadMaster one IP-address on an untagged LAN is required. Three IP-addresses are required for a HA pair.
- The boot order on the C-Series Blade Server should be configured as follows:

  1. HDD
  2. CDROM

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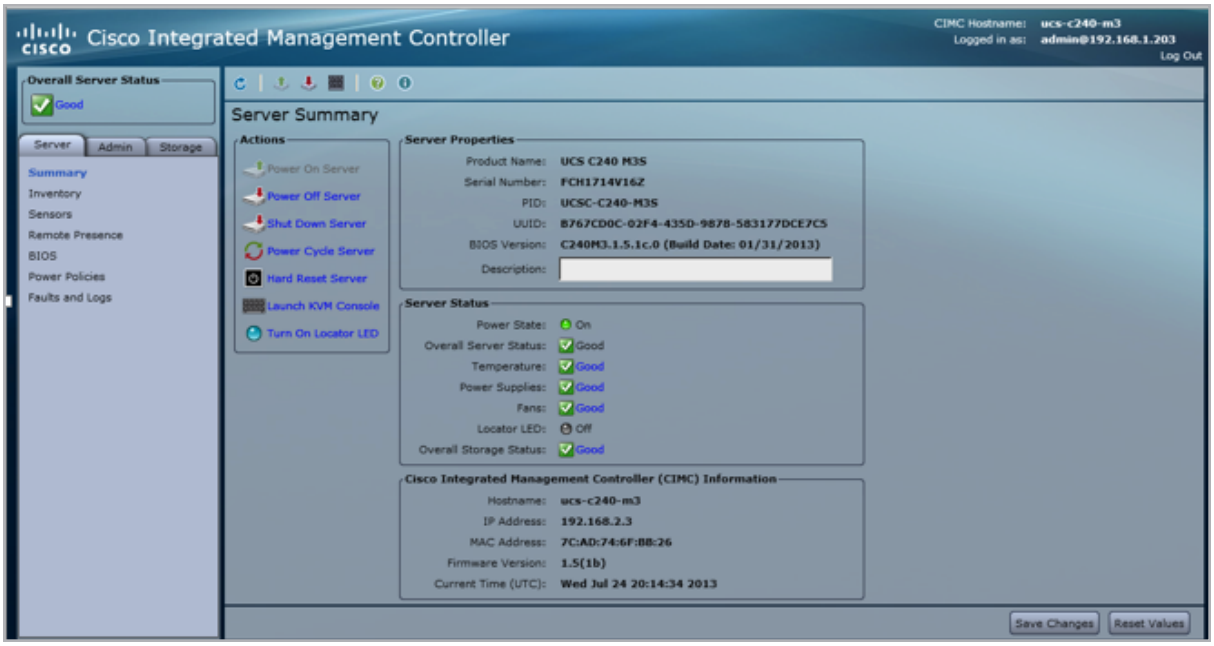
2 Installing LoadMaster on the Cisco UCS C-Series Server

The following steps must be completed to install the LoadMaster software on the Cisco C-Series Server. These steps must be completed on the jump host, where the LoadMaster installation ISO image is located.

2.1 Configure the Boot Options and Open the KVM Console

First, open the KVM console for the C-Series server by following the steps below:



1. In a web browser, log in to the Cisco Integrated Management Controller (CIMC).
2. Select the **Server** tab on the left.
3. Select **BIOS**.
4. In the **Actions** area, click **Configure Boot Order**.

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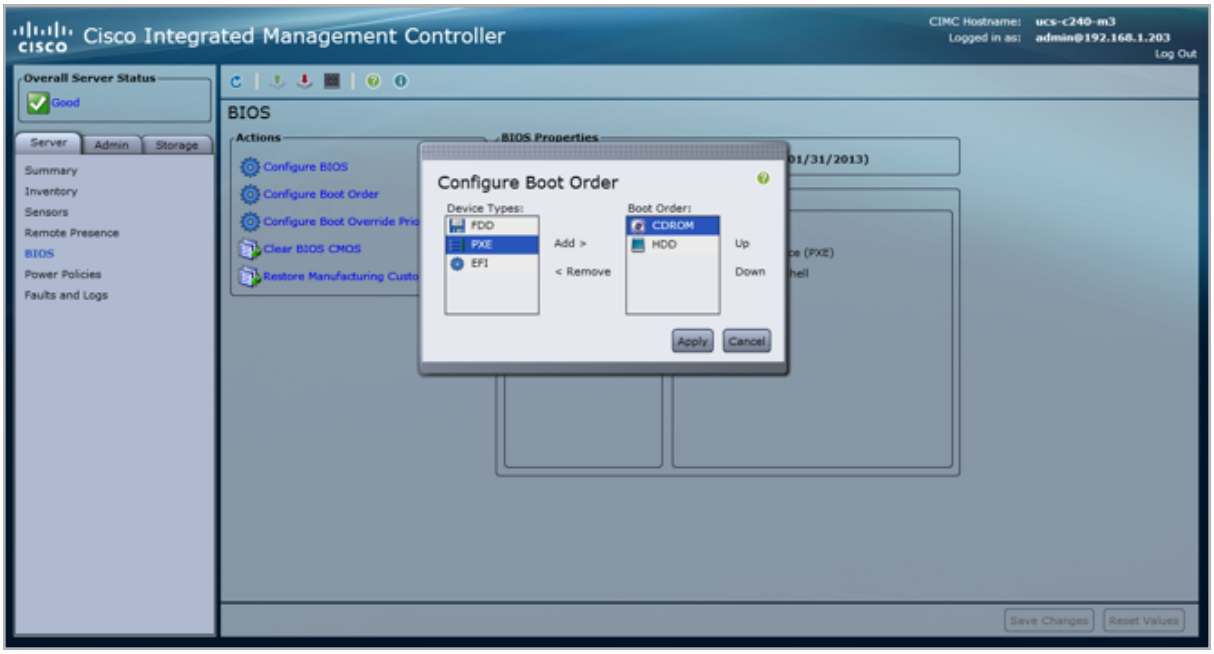

5. Set the **Boot Order** to **HDD**, then **CDROM**.
6. Click **Apply**.
7. In the **Server** tab, select **Summary**.
8. In the **Actions** area, click **Launch KVM Console**. The KVM will open in a new window.

2.2 Create a Virtual CD-ROM with Installation Media

1. Select the **Virtual Media** tab.

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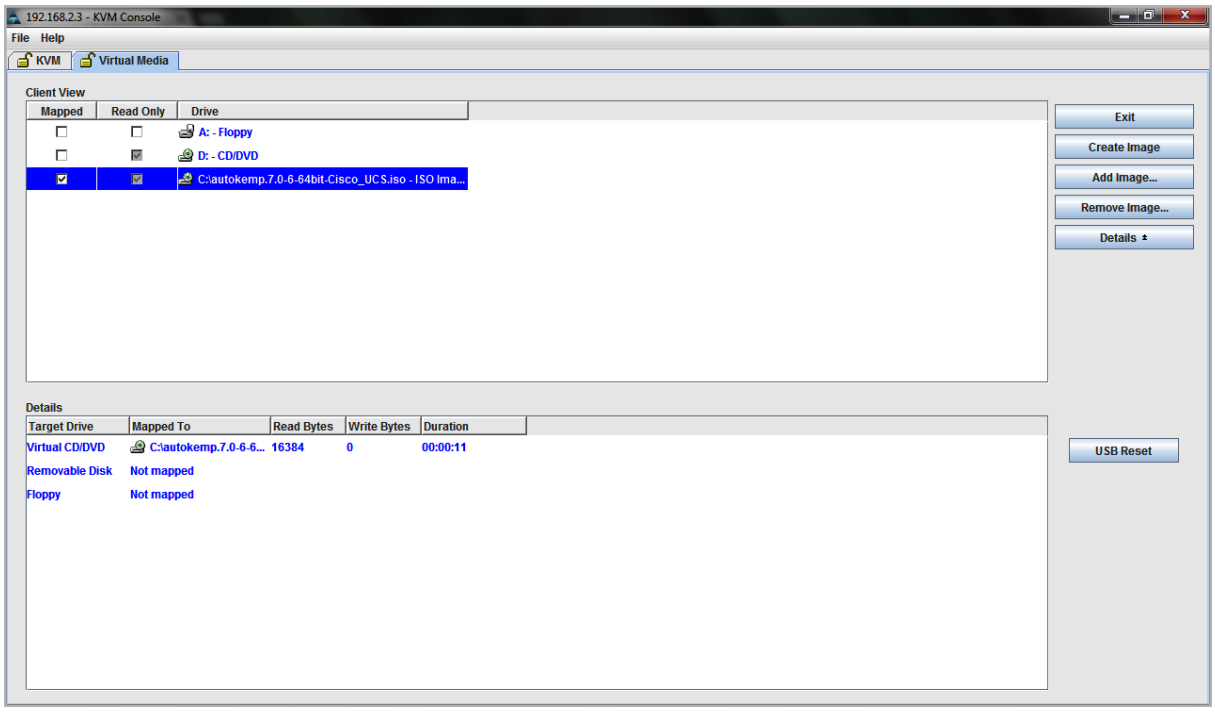

2. Click the **Add Image...** button.
3. Navigate to and select the Operating System (OS) installation disk image (ISO).
4. Click **Open** to mount the disk image.
5. Select the **Mapped** checkbox for the mounted disk image.

2.3 Boot the Server

The server is now ready to be booted to complete the installation procedure.

1. Click the **Boot Server** option on the KVM console. The server is booted from the previously mapped virtual CD.

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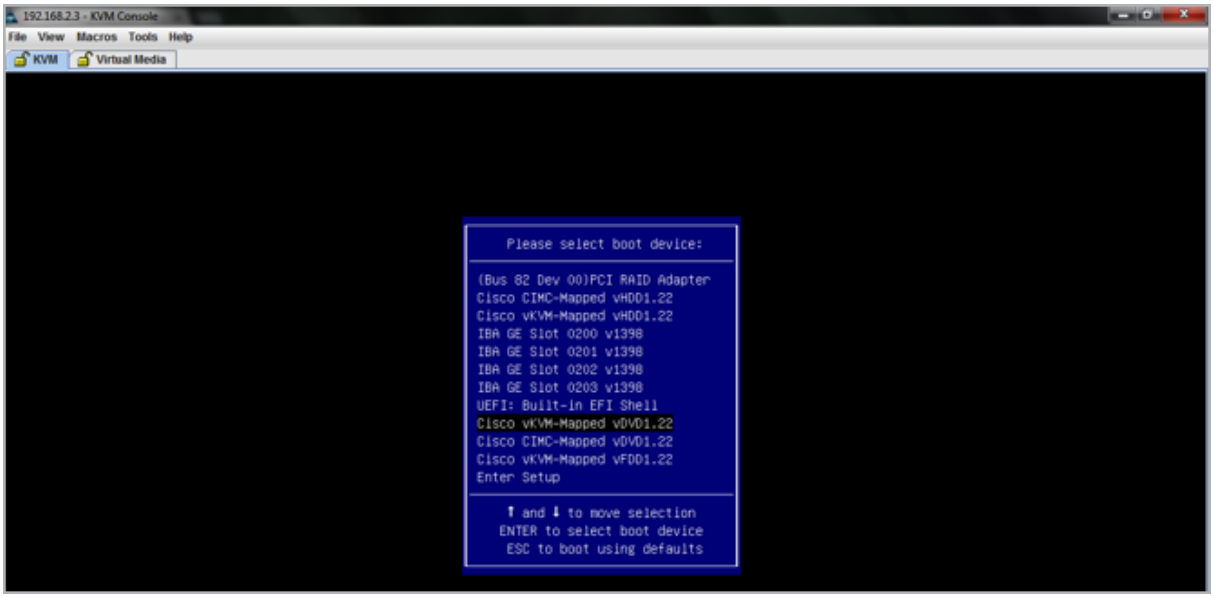


2. Press **F6** on your keyboard when prompted and select the virtual CD/DVD drive as the boot device in the KVM console.

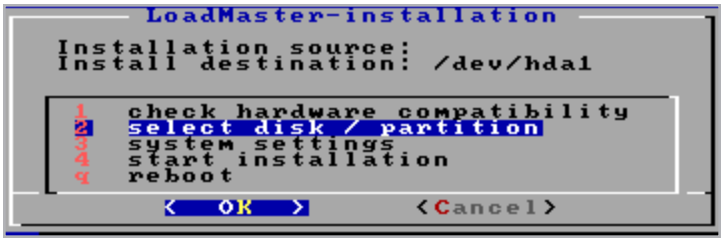
The server should boot from the virtual CD.

2.4 Install the LoadMaster

Once the server boots from the virtual CD, as described in **the Boot the Server** section, the LoadMaster installation process automatically begins.

> For further information on the different boot options that are available, refer to the Bare Metal Boot Options, Technical Note.

> The serial number should be automatically pulled from the LoadMaster. If it is not, please enter it when prompted.



1. Select select disk/partition and press **OK**.

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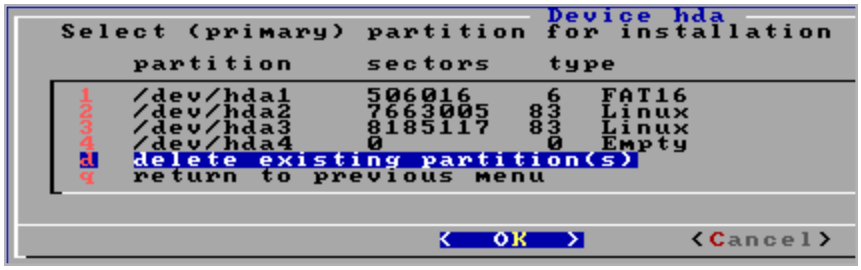
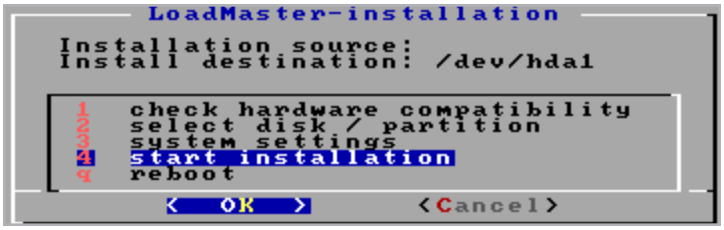
2. Select the target disk for installation and press **OK**.



3. Select delete existing partition(s) and press **OK**.



4. Select start installation and press **OK**.

5. Press **OK**. The installation should complete successfully.

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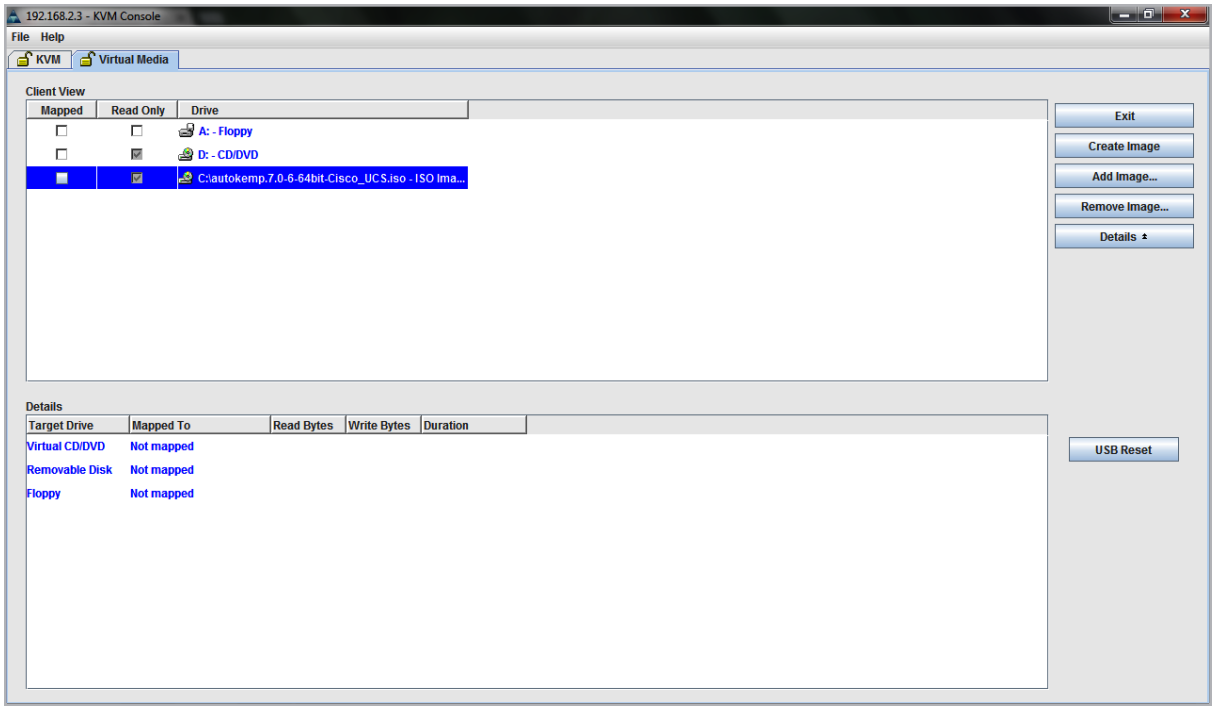
2.5 Boot the Installed LoadMaster



Before rebooting the server, unmount the installation media by deselecting the **Mapped** checkbox in the **Virtual Media** tab.

The server is now ready to be rebooted with the LoadMaster software installed on the local disk. Within the KVM console, select the **Ctrl-Alt-Del** option from the **Macros** drop-down menu.

The server should now begin to boot from the local disk.

```
########################################################################
#
# Your LoadMaster has finished booting.
# UUID: 31159ab6-5da4-4b92-8ee2-b8922cc08dfe
# Serial Number: 446312
# IP address of LoadMaster is 10.154.11.180
#
# Point your browser at https://10.154.11.180 to configure your LoadMaster.
#
########################################################################
```

On initial deployment, DHCPv4 and DHCPv6 both run to attempt to obtain an IP address. If the LoadMaster obtains an IP address using DHCP, take note of it because this is how you will access the LoadMaster.

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If the LoadMaster does not obtain an IP address using DHCP the static IP address of **192.168.1.101** is assigned and the LoadMaster must be manually configured using the console.

Refer to the **Configuring the LoadMaster Using the Console** section for further information regarding manually configuring the LoadMaster.

After a successful boot, a login prompt will appear. Log in using the LoadMaster user credentials. The default login details are as follows:

- lb100 login: root
- password: 1fourall

2.6 License and Configure the LoadMaster

The LoadMaster must now be configured to operate within the network configuration.

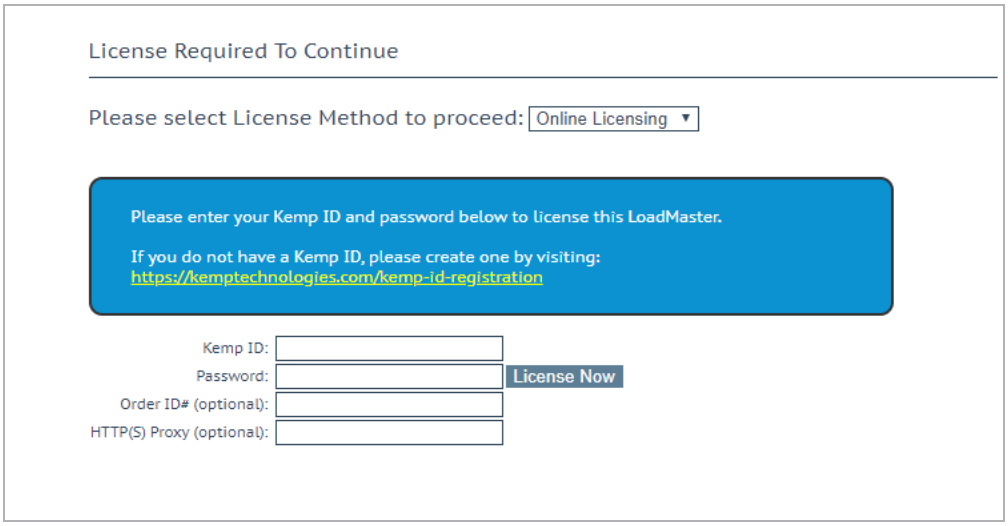
1. In an internet browser, enter the IP address that was previously noted.

   Ensure to enter **https://** before the IP address.

2. A warning may appear regarding website security certificates. Please click the continue/ignore option.

3. The LoadMaster End User License Agreement screen appears.

Please read the license agreement and, if you are willing to accept the conditions therein, click on the **Agree** button to proceed.



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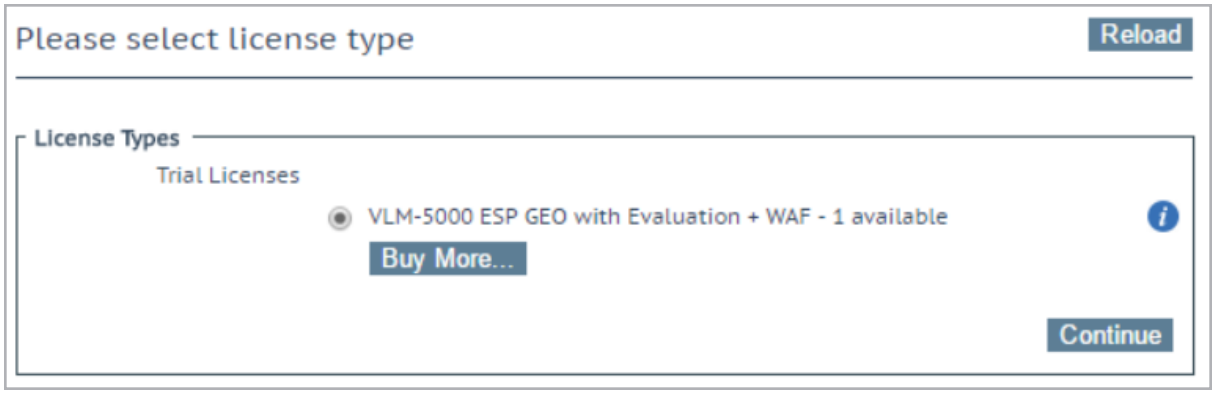
4. If using the **Online** licensing method, fill out the fields and click **License Now**.

> If you are starting with a trial license, there is no need to enter an Order ID. If you are starting with a permanent license, enter the Kemp **Order ID#** if this was provided to you.

> If using the **Offline Licensing** method, select **Offline Licensing**, obtain the license text, paste it into the **License** field and click **Apply License**.

> For detailed instructions on how to register for a Kemp ID and license the LoadMaster, refer to the **Licensing, Feature Description** on the Kemp Documentation Page.



5. If you entered an **Order ID**, a screen appears that provides a list of available licenses for that order ID, in addition to any licenses registered for the Kemp ID based on the LoadMaster platform type. Select the license type you want to apply to this LoadMaster.

> If the license type you want is not displayed, please contact your Kemp representative.

6. Click **Continue**.

7. The login screen appears, enter the **bal** user name and the password.

8. In the screen informing you that the password has changed, press the **Continue** button.

9. If your machine has shipped with a temporary license you should get a warning informing you that a temporary license has been installed on your machine and for how long the license is valid.

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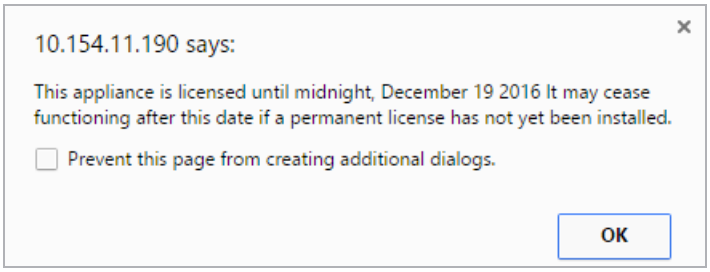
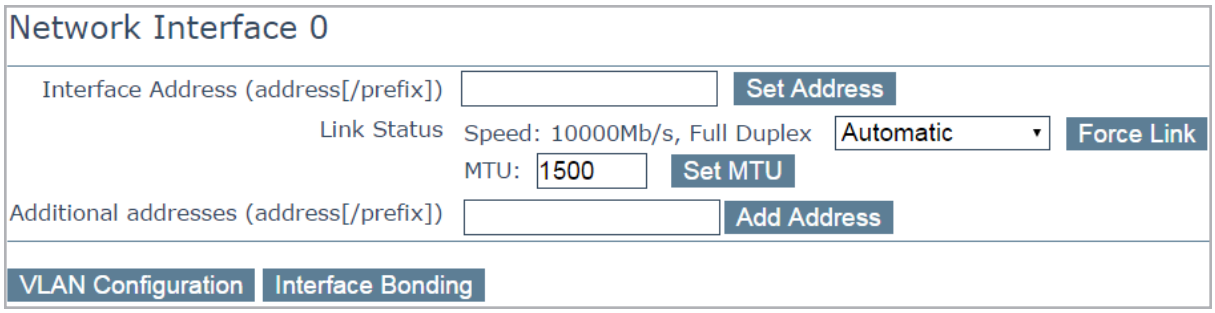


10. Click **OK** .

11. You should now connect to the **Home** screen of the LoadMaster.

12. Go to **System Configuration > Network Setup** in the main menu.

13. Click the **eth0** menu option within the **Interfaces** section.



14. In the **Network Interface 0** screen, enter the IP address of the eth0 interface, the network facing interface of the LoadMaster, in the **Interface Address** input field.

15. Click the **Set Address** button.

16. Click the **eth1** menu option within the **Interfaces** section.

17. In the **Network Interface 1** screen, enter the IP address of the eth1 interface, the farm-side interface of the LoadMaster, in the **Interface Address** input field.

18. Click on the **Set Address** button.

This interface is optional, depending on the network configuration.

19. Click on the **Local DNS Configuration > Hostname Con**figuration menu option.

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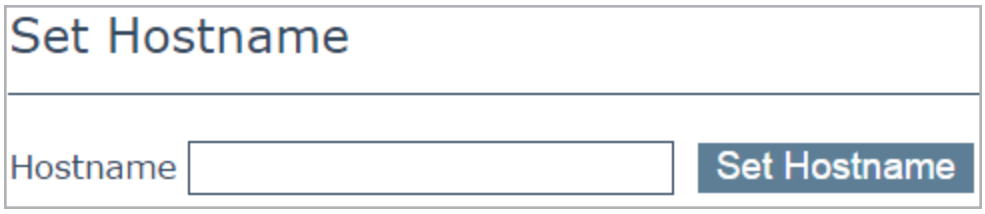
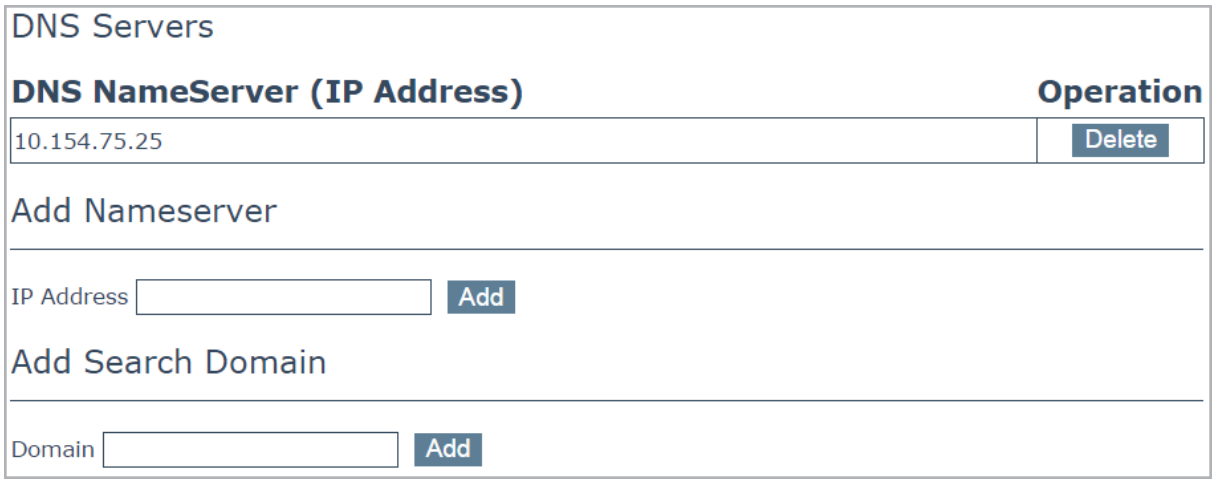


20. In the **Hostname configuration** screen, enter the hostname into the **Current Hostname** input field.

21. Click the **Set Hostname** button.

22. Click the **Local DNS Configuration > DNS Configuration** menu option.



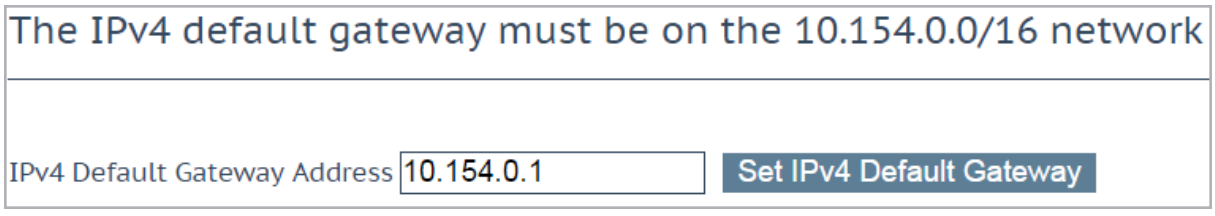
23. In the **DNS configuration** screen, enter the IP address(es) of the DNS Server(s) which is used to resolve names locally on the LoadMaster into the **DNS NameServer** input field.

24. Click the **Add** button.

25. Enter the domain name that is to be prepended to requests to the DNS nameserver into the **DNS NameServer** input field.

26. Click the **Add** button.

27. Click the **System Configuration > Network Setup > Default Gateway** menu option.



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28. In the **DNS configuration** screen, enter the IP address of the default gateway into the **IPv4 Default Gateway Address** input field.

    If you have an IPv6 Default Gateway, please enter the value in the **IPv6 Default Gateway Address** input field.

29. Click the **Set IPv4 Default Gateway** button.

The LoadMaster is now fully installed and ready to be used. For further information on how to configure and implement the Virtual LoadMaster, please refer to the LoadMaster documentation which can be downloaded from the http://kemptechnologies.com/documentation page.

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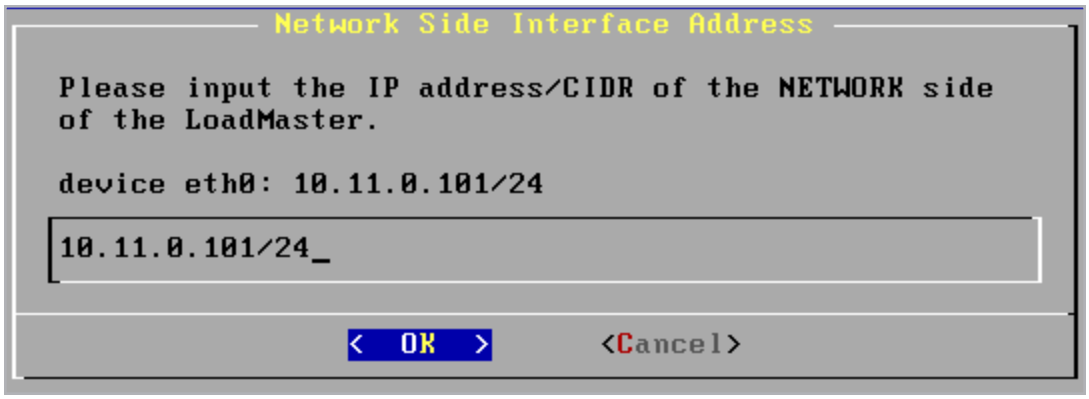
3 Configuring the LoadMaster Using the Console

If the LoadMaster does not automatically obtain an IP address using DHCP, or if you would prefer to configure the LoadMaster using the console, then the following configuration steps must be completed before starting the LoadMaster.

1. Login into the LoadMaster using the console with the following settings:

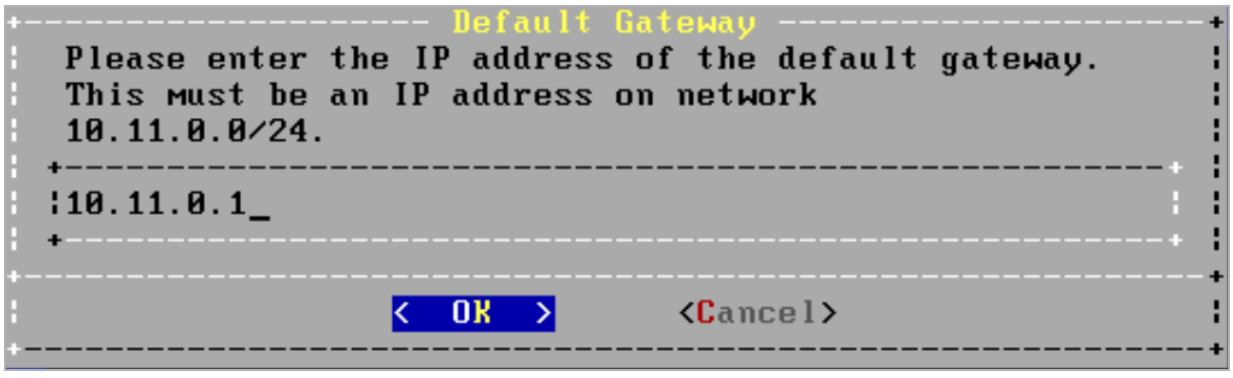
    - lb100 login: bal

    - Password: 1fourall



2. Enter the IP address of the eth0 interface, the network facing interface of the LoadMaster, in the input field within the **Network Side Interface Address** dialog box.

3. Press **OK**.



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4. Enter the IP address of the default gateway in the input field of the **Default Gateway** dialog box.

5. Press **OK**.

6. Once these are set, a prompt will appear asking to connect to the web interface at the newly configured IP address. In an internet browser enter the IP address of the eth0 entered in Step 2.

> Ensure to enter **https://** before the IP address.

7. A warning may appear regarding website security certificates. Please click the continue/ignore option.

8. The LoadMaster End User License Agreement screen appears.

9. Please read the license agreement and, if willing to accept the conditions therein, click on the **Agree** button to proceed.

10. If the machine has shipped with a temporary license, a warning will appear informing that a temporary license has been installed on the machine and for how long the license is valid.

11. Click **OK**.

12. The home screen of the LoadMaster should appear.

The LoadMaster is now fully installed and ready to be used. For further information on how to configure and implement the Virtual LoadMaster, please refer to the LoadMaster documentation which can be found here: https://kemptechnologies.com/documentation.

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References

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Licensing, Feature Description

Bare Metal Boot Options, Technical Note

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