



# **Installation Guide Oracle Sun x86 Servers**

**24 July 2024**

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# Introduction

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## Introduction

The LoadMaster load balancing solution is specifically optimized for the Oracle Sun x86 Servers, enabling customers to deploy full-feature, high-performance load balancers. This can reduce network design complexity as well as increased performance. The Oracle Sun x86 Servers are versatile servers for clustered computing and virtualization, packing the optimal balance of computing power, memory capacity and I/O capability. The Progress 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 LoadMaster software on an Oracle Sun x86 Server.

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**Note:** PXE and USB booting options are also supported by the LoadMaster installation ISO file.

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### Related Links

- [Prerequisites](#)

## Prerequisites

### Prerequisites

The following prerequisites are needed:

- An Oracle Sun x86 Server
- An ISO image with the LoadMaster software.

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**Note:** The ISO image can be downloaded from [www.kemptechnologies.com/baremetal-trial](http://www.kemptechnologies.com/baremetal-trial).

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- For a standalone LoadMaster, one IP-address on an untagged LAN is required. Three IP-addresses are required for a High Availability (HA) pair.
- The boot order on the server should be configured as follows:

1. HDD
2. CDROM

## Installing LoadMaster on the Oracle Sun x86 Server

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### Installing LoadMaster on the Oracle Sun x86 Server

The following steps must be completed in order to install the LoadMaster software on the Oracle Sun x86 Server. These steps must be completed on the jump host, where the LoadMaster installation ISO image is located.

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**Note:** These instructions were written based on the Oracle X4-2.

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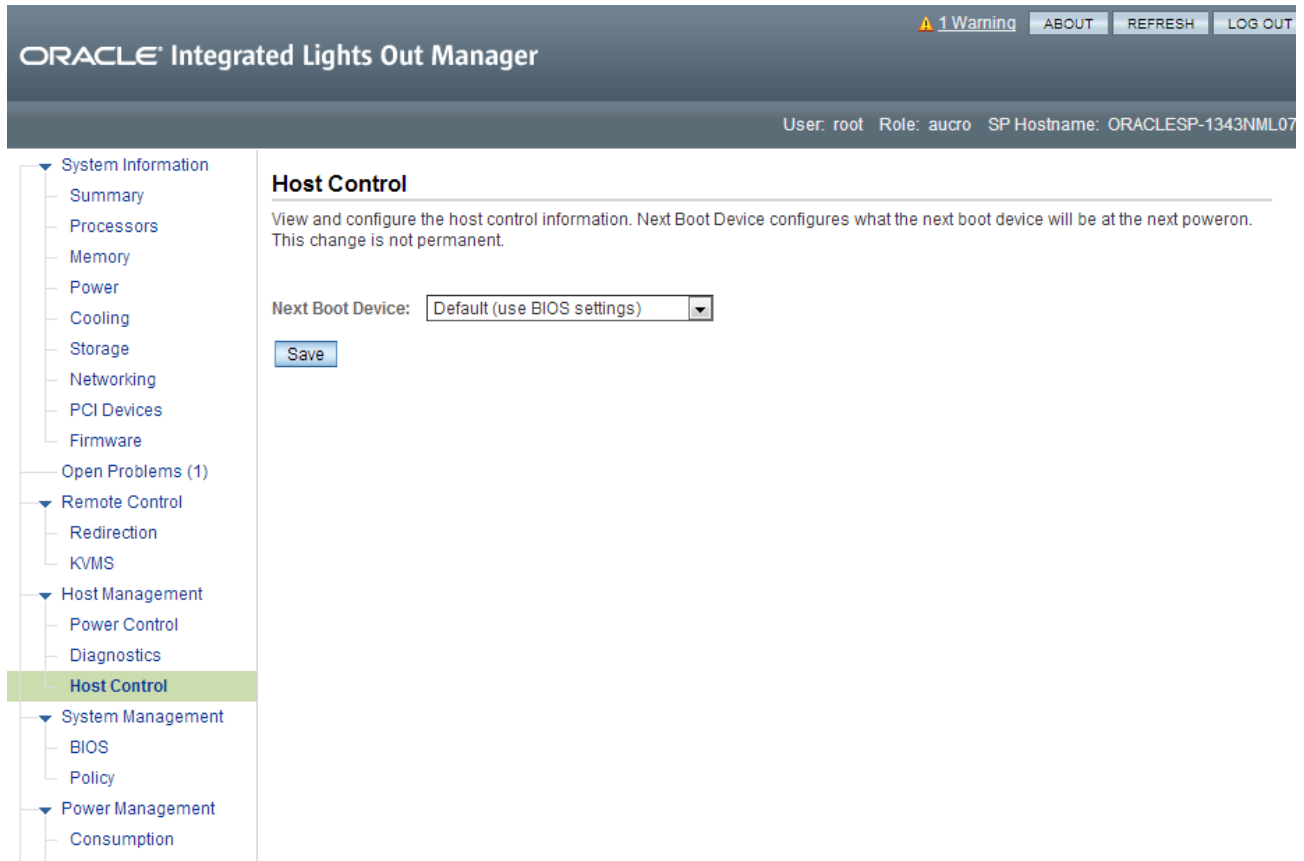
#### Related Links

- [Install the LoadMaster](#)
- [Boot the Installed LoadMaster](#)
- [License and Configure the LoadMaster](#)

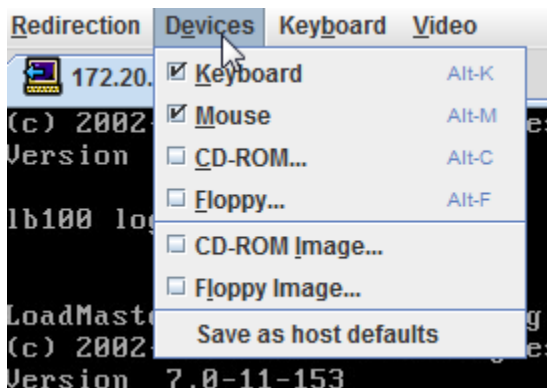
## Install the LoadMaster

### Install the LoadMaster

To install the LoadMaster, follow the steps below in the Oracle Integrated Lights Out Manager:



1. Select **Host Management**.
2. Select **Host Control**.
3. Select **CD-ROM** in the **Next Boot Device** drop-down list.
4. Click **Save**.
5. Launch the remote console.



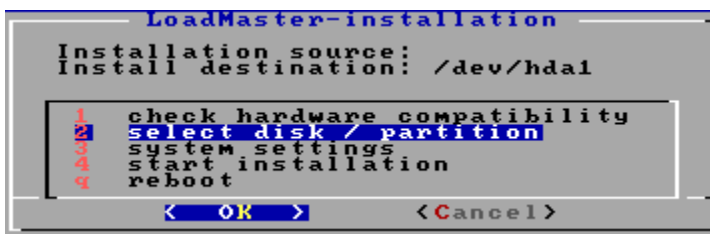
6. Click **Devices**.
7. Select **CD-ROM Image**.
8. Browse to and select the ISO file.

- Power cycle the unit.

```
LoadMaster Installion:
Boot Menu:
<install> to start installation with no boot parameters
<acpinoirq> to boot with acpi=noirq
<acpino> to boot with acpi=no
<pcibiosirq> to boot with pci=biosirq
boot: _
```

**Note:** It may take approximately 10 minutes to boot the unit.

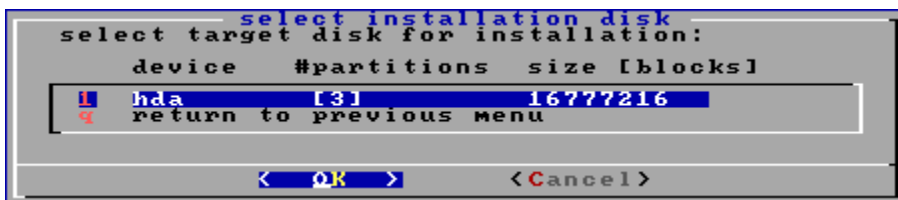
- Once the server boots from the virtual CD, the LoadMaster installation begins automatically with no parameters if no boot parameters are entered.



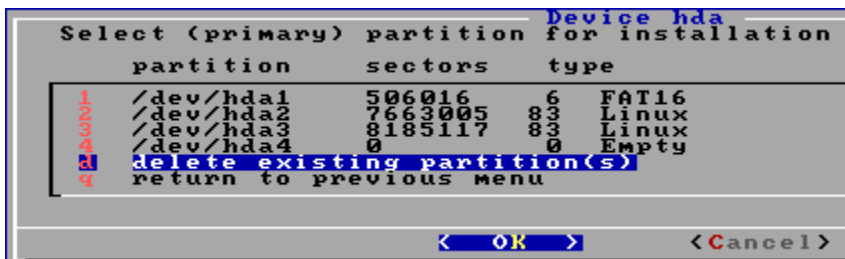
**Note:** For further information on the different boot options that are available, refer to the [Bare Metal Boot Options, Technical Note](#).

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

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

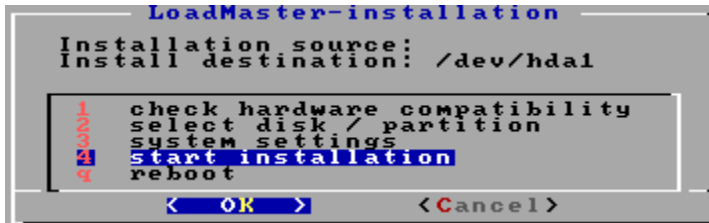


- Select the target disk for installation and press **OK**.



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

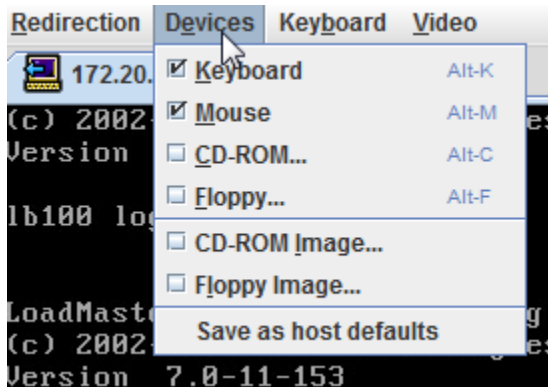




14. Select start installation and press **OK**.
15. Press **OK**. The installation should complete successfully.

## Boot the Installed LoadMaster

### Boot the Installed LoadMaster



Before rebooting the server, unmount the installation media by selecting **Devices** and **CD-ROM**.



Click **Yes** to stop CD ROM redirection.

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 **Keyboard** drop-down menu.

The server should 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.

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 via 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:** bal
- **password:** 1fourall

## License and Configure the LoadMaster

### 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.

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

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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.

## License Required To Continue

Please select License Method to proceed: Online Licensing ▾

Please enter your Kemp ID and password below to license this LoadMaster.

If you do not have a Kemp ID, please create one by visiting:

<https://kemptechnologies.com/kemp-id-registration>

Kemp ID:

Password:

**License Now**

Order ID# (optional):

HTTP(S) Proxy (optional):

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

**Note:** 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 Progress Kemp **Order ID#** if this was provided to you.

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

**Note:** For detailed instructions on how to register for a Kemp ID and license the LoadMaster, refer to the **Licensing, Feature Description** on the [Documentation Page](#).

Please select license type

**Reload**

### License Types

#### Trial Licenses

☒ VLM-5000 ESP GEO with Evaluation + WAF - 1 available

**Buy More...**

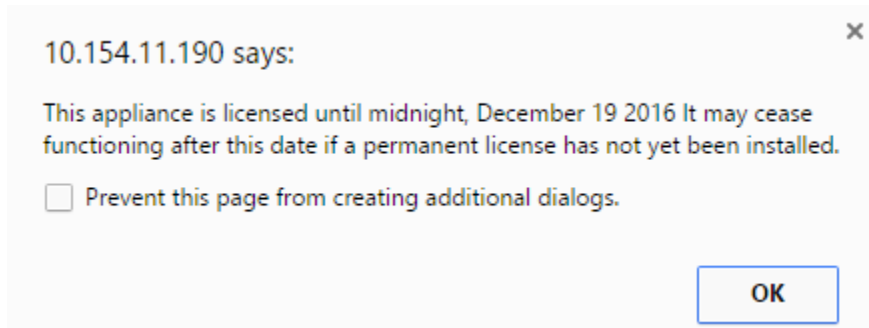


**Continue**

- 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.

**Note:** If the license type you want is not displayed, please contact your Progress 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.



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.

## Network Interface 0

|   |                                   |                                      |
|---|-----------------------------------|--------------------------------------|
| Interface Address (address[/prefix])    | <input type="text"/>              | <b>Set Address</b>                   |
| Link Status                             | Speed: 10000Mb/s, Full Duplex     | <b>Automatic</b> ▾ <b>Force Link</b> |
| MTU:                                    | <input type="text" value="1500"/> | <b>Set MTU</b>                       |
| Additional addresses (address[/prefix]) | <input type="text"/>              | <b>Add Address</b>                   |

**VLAN Configuration**
**Interface Bonding**

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 Configuration** menu option.

## Set Hostname

Hostname  **Set Hostname**

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.

### DNS Servers

| DNS NameServer (IP Address) | Operation     |
|-----------------------------|---------------|
| 10.154.75.25                | <b>Delete</b> |

### Add Nameserver

IP Address  **Add**

### Add Search Domain

Domain  **Add**

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.

## The IPv4 default gateway must be on the 10.154.0.0/16 network

IPv4 Default Gateway Address  **Set IPv4 Default Gateway**

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 <https://docs.progress.com/> page.

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# Configuring the LoadMaster Using the Console

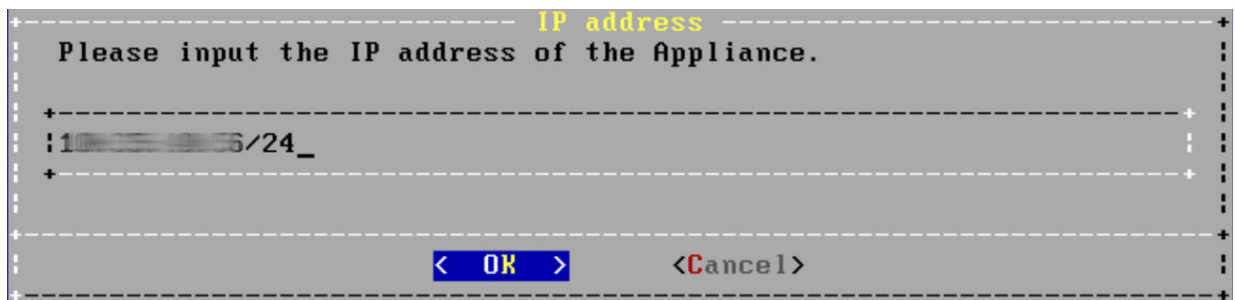
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## Configuring the LoadMaster Using the Console

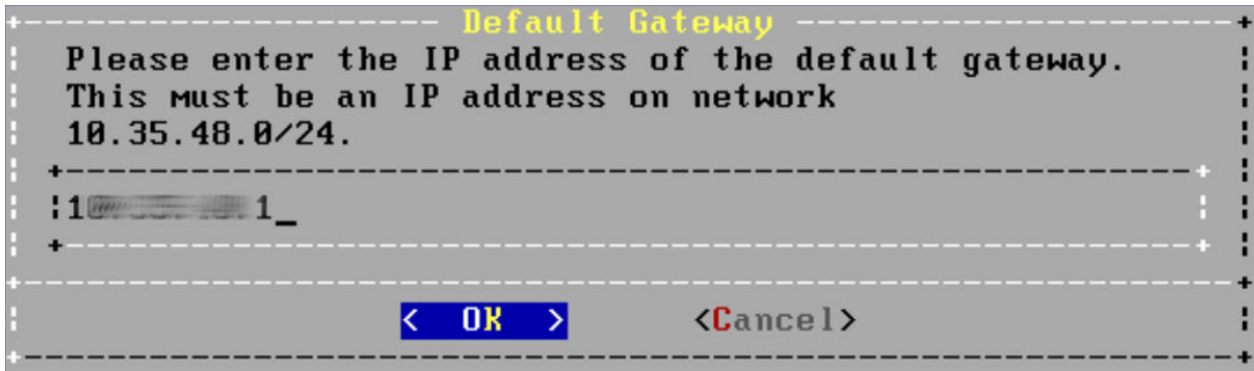
If the LoadMaster does not automatically obtain an IP address using DHCP, or if you would prefer to configure the LoadMaster using the console, then the following configuration steps must be completed before starting the LoadMaster.

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

- **lb100 login:** bal
- **Password:** 1fourall

A screenshot of a terminal window showing an 'IP address' configuration dialog. The dialog has a title bar with the text 'IP address'. Inside, it says 'Please input the IP address of the Appliance.' Below this is a text input field containing '10.10.10.1/24\_'. At the bottom of the dialog are two buttons: '< OK >' and '< Cancel >'. The dialog is enclosed in a dashed border.

2. Enter the IP address of the eth0 interface, the network facing interface of the LoadMaster, in the input field within the **IP address** dialog box.
3. Press **OK**.



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.

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

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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://docs.progress.com/>.



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# Best Practices for Backups

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## Best Practices for Backups

Hypervisor snapshots cannot be used to restore a LoadMaster to a working state. The best way to back up your LoadMaster settings is by using the native backup and restore facility in the LoadMaster WUI or API.

To back up your LoadMaster configuration, follow these steps:

1. In the main menu, go to **System Configuration > System Administration > Backup/Restore**.
2. Click **Create Backup File**.

You can create a remote host for automated backups using SCP to save backups to a remote server.

For further details on backing up and restoring the LoadMaster configuration, including certificates and cipher sets, refer to the following links:

- [Backup and Restore Technical Note](#)
- [How to Create and Restore a LoadMaster Configuration or Certificate Backup](#)

# References

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## References

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

**Licensing, Feature Description**

**Bare Metal Boot Options, Technical Note**