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Hitachi Compute Blade Installation Guide for Oracle Linux

OS Installation Guide

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Hitachi Data Systems

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Preface

This document describes how to install and setup Oracle Linux on Compute Blade.

This preface includes the following information:

- Intended Audience
- Release Notes
- Document Conventions
- Convention for storage capacity values
- Getting Help
- Comments

Notice: The use of Hitachi Compute Blade servers and all other Hitachi Data Systems products is governed by the terms of your agreement(s) with Hitachi Data Systems.

Intended Audience

This document is intended for anyone who needs to install and setup Oracle Linux on Compute Blade.

Release Notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

Document Conventions

This document uses the following typographic conventions:

Convention	Description
Regular text bold	In text: keyboard key, parameter name, property name, hardware labels, hardware button, hardware switch. In a procedure: user interface item
Italic	Variable, emphasis, reference to document title, called-out term
`Screen text`	Command name and option, drive name, file name, folder name, directory name, code, file content, system and application output, user input
< > (angled brackets)	Variable (used when italic is not enough to identify variable).
[ ] (square bracket)	Optional values
{ } braces	Required or expected value
| vertical bar	Choice between two or more options or arguments
_(underline)	Default value, for example, [a | b]

This document uses the following icons to draw attention to information:

Icon	Meaning	Description
	WARNING	This indicates the presence of a potential risk that might cause death or severe injury.
	CAUTION	This indicates the presence of a potential risk that might cause relatively mild or moderate injury.
NOTICE	NOTICE	This indicates the presence of a potential risk that might cause severe damage to the equipment and/or damage to surrounding properties.
	Note	This indicates notes not directly related to injury or severe damage to equipment.
	Tip	This indicates advice on how to make the best use of the equipment.

Convention for storage capacity values

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1,000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1,000^3$ bytes
1 terabyte (TB)	1,000 GB or $1,000^4$ bytes
1 petabyte (PB)	1,000 TB or $1,000^5$ bytes
1 exabyte (EB)	1,000 PB or $1,000^6$ bytes

Logical storage capacity values (for example, logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1,024^2$ bytes
1 GB	1,024 MB or $1,024^3$ bytes
1 TB	1,024 GB or $1,024^4$ bytes
1 PB	1,024 TB or $1,024^5$ bytes
1 EB	1,024 PB or $1,024^6$ bytes

Getting Help

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: https://portal.hds.com

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title and number including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Data Systems Corporation.

Thank you!

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Scope

This chapter describes the scope and the limitations when installing Operating Systems described in this document on Hitachi Compute Blade servers.

Supported Operating Systems

The following chapters provide the information how to install and configure the Operating Systems listed below.

- Oracle Linux 5.6/5.8/5.9/5.10
- Oracle Linux 6.1/6.2/6.3/6.4/6.5
- Oracle Linux 7.0

Limitations

Hitachi is only responsible for the server hardware when installing and the use of Operating Systems, (hereinafter referred to as OS) listed in the section, **Supported Operating Systems.**

- Hitachi Proprietary features such as HSCM, Hitachi Server Conductor, LPAR manager and Hitachi HBA, and N+M cold standby, IOEU and 2-blades or 4-blades SMP configuration on high-performance server blade are only supported on the Hitachi servers with Windows, Red Hat Enterprise Linux, and VMware.

HCSM:	Hitachi Compute Systems Manager
LPAR manager:	logical partitioning manager
IOEU:	I/O Slot Expansion Unit

- Hitachi Compute Blade servers are certified for each OS version by Operating System distributor. Any inquiries related to OS or the outbox drivers provided from I/O device vendor should be sent to OS distributor or the I/O device vendor based on the customer’s Support Agreement with them

- Some I/O options may not be supported in combination with servers and OS. Please check Hardware Compatibility List on I/O options provided by OS distributors, and contact sales representative or contracted support representative for the supported I/O options on Compute Blade servers.

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Oracle Linux Installation and Setup

This chapter describes how to install and setup **Oracle Linux** on Hitachi Compute Blade.

General Information

Related documentation

The 'Resources' section of the following web site provides the documents how to install, configure and operate **Oracle Linux**.

Please see the document before installation.

Oracle Linux Support
http://www.oracle.com/us/technologies/linux/support/resources

Hardware Compatibility

Hitachi Compute Blade servers are certified for each OS version by **Oracle**. For detailed information about Server hardware compatibility of Hitachi Compute Blade servers, please see the following web site.

Oracle Linux Certified Hardware
http://linux.oracle.com/hardware.html

Prerequisites

Boot from SAN

If you install **Oracle Linux** to boot from SAN, you have to follow the configuration rules and select the appropriate settings to the Server chassis, the Fibre Channel adapters, the SAN storage systems and Fibre Channel switches.

Please consult the reseller from which you purchased the product for details about updates for the SAN environment configuration.

Installation Media

Please obtain an appropriate installation media from OS distributor.

Installing

Installing

When installing **Oracle Linux**, you can use CD/DVD or specify ISO image directly when connecting a server using Remote Console.

For installation procedure of **Oracle Linux**, please see the following web site provided by **Red Hat**.

Red Hat Customer Portal
https://access.redhat.com/knowledge/docs/Red_Hat_Enterprise_Linux/

Management LAN Port on Compute Blade 2000

On all Compute Blade 2000 servers, Intel® 82567LF-2 Gigabit Network Connection is a management LAN port. Do not use this network adapter on the Operating System.

The network adapter is identified as eth<number> on **Oracle Linux** and Intel® 82567LF-2 Gigabit Network Connection is assigned as the largest number.

Settings after installation

Installing the Unbreakable Enterprise Kernel

For installation procedure of Oracle Unbreakable Enterprise Kernel, please see the following web site.

Oracle Unbreakable Linux Network
http://linux.oracle.com

OS patches

Please apply patches, fixes and updates as needed. You can download the latest binaries from the **Oracle** download site.

Drivers and utilities

Please update drivers of adapters as needed.

Acronyms and Abbreviations

BSMI	Bureau of Standards, Metrology and Inspection
CD	Compact Disk
CPU	Central Processing Unit
CRU	Customer Replaceable Units
DBS	Deep Brain Stimulation
DCB	Direct Copper Bonding
DIMM	Dual Inline Memory Module
DVD	Digital Versatile/Video Disk
EFI	Extensible Firmware Interface
EIA	Environmental Impact Assessment
FC	Fibre Channel
FCC	Federal Communications Commission
FD	Floppy Disk
FTP	File Transfer Protocol
HDD	Hard Disk Drive
ID	Identity Document
IO	Input/Output
IP	Internet protocol
iSCSI	Internet Small Computer System Interface
KVM	Keyboard, Video and Mouse
LAN	Local Area Network
LED	Light Emitting Diode
OS	Operating System
PC	Personal computer
PCI	Peripheral Component Interconnect
SAN	Storage Area Network
SAS	Serial Attached SCSI
SNMP	Simple Network Management Protocol
SSD	Solid State Drive
SVP	SerVice Processor
USB	Universal Serial Bus
VLAN	Virtual LAN

WEEE	Waste Electrical and Electronic Equipment
WWN	World Wide Name

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