Oracle® Database Appliance
Licensing Information User Manual

Release 12.2.1.3.0 for Linux x86-64

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Oracle Database Appliance Licensing Information User Manual, Release 12.2.1.3.0 for Linux x86-64

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Contents

4   Third-Party Product Licenses

Index

Preface

This document, which is part of the Program Documentation under the terms of your Oracle licensing agreement, is intended to help you understand the features, functionality, and options available for Oracle Programs.

If you have a question about your licensing needs, then contact your Oracle sales representative or the License Management Services representative at http://www.oracle.com/us/corporate/license-management-services/index.html. You can also refer to the resources listed in "Related Documents" for more information.

- Audience (page v)
- Documentation Accessibility (page v)
- Related Documents (page v)
- Conventions (page vi)

Audience

This book is intended for all purchasers of Oracle Database Appliance.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

The following documents are published in the Oracle Database Appliance online documentation library, which is available at `http://www.oracle.com/goto/oda/docs`:

- *Oracle Database Appliance Release Notes* for information about what's new, known issues, and patches available for Oracle Database Appliance.

- *Oracle Database Appliance X7-2 Deployment and User's Guide* for information about deploying and managing Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA.

- *Oracle Database Appliance X6-2-HA Deployment and User's Guide* for information about deploying and managing Oracle Database Appliance X6-2-HA.

- *Oracle Database Appliance X6-2S, X6-2M, X6-2L Deployment and User's Guide* for information about deploying and managing Oracle Database Appliance X6-2S, X6-2M, and X6-2L.

- *Oracle Database Appliance Getting Started Guide* for information about deploying Oracle Database Appliance X5-2, X4-2, X3-2, and V1.

- *Oracle Database Appliance Administration and Reference Guide* for information about managing Oracle Database Appliance X5-2-HA, X4-2, X3-2, and V1.

- *Oracle Database Appliance Security Guide* for information about best practices for securing the Oracle Database Appliance environment.

- *Oracle Database Appliance Licensing Information User Manual*

- *Oracle Database Appliance Accessibility Guide*

- The *Oracle Software Investment Guide*, which is available at the following URL:

  http://www.oracle.com/us/corporate/pricing/software-investment-guide/index.html

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1
Introduction

This Licensing Information document is a part of the product or program documentation under the terms of your Oracle license agreement and is intended to help you understand the program editions, entitlements, restrictions, prerequisites, special license rights, and/or separately licensed third party technology terms associated with the Oracle software program(s) covered by this document (the "Program(s)").

Entitled or restricted use products or components identified in this document that are not provided with the particular Program may be obtained from the Oracle Software Delivery Cloud website (https://edelivery.oracle.com) or from media Oracle may provide. If you have a question about your license rights and obligations, please contact your Oracle sales representative, review the information provided in Oracle's Software Investment Guide (http://www.oracle.com/us/corporate/pricing/software-investment-guide/index.html), and/or contact the applicable Oracle License Management Services representative listed on http://www.oracle.com/us/corporate/license-management-services/index.html.

2

Oracle Database Appliance Licensing Overview

This chapter provides an overview of the licensing process for each hardware platform.

Topics:

- About Licensing (page 2-1)
  Oracle Database Appliance provides capacity-on-demand licensing.

- CPUs and Core Count (page 2-2)
  Review this section for information about core license options for your Oracle Database Appliance hardware.

2.1 About Licensing

Oracle Database Appliance provides capacity-on-demand licensing.

Capacity-on-demand (CoD) refers to an Oracle Database Appliance server that has a subset of its cores turned off so that the Oracle Database Enterprise Edition software license cost can be reduced. The reduction of cores can be turned off before or after the deployment. The number of active cores can be increased at a later time, when more capacity is needed. Oracle Database is licensed separately. Refer to *Database Licensing Information User Manual* for additional information.

When you add your hardware Support Identifier (SI) for Oracle Database Appliance to your My Oracle Support account, you establish a license for all the cores on your system. Oracle Database Appliance Models X7-2-HA, X6-2-HA, X5-2, X4-2, X3-2, and V1 can be deployed as a bare metal or virtualization platform. Both platform types offer capacity-on-demand licensing.

With bare-metal installations, you disable cores that you do not intend Oracle Database to use:

- For Oracle Database Appliance X7-2S, X7-2M, X7-2-HA, X6-2S, X6-2M, and X6-2L: Issue the command `odacli update-cpucore` to set the low water mark and to increase the cores.

- For Oracle Database Appliance X6-2-HA: Issue the command `oakcli update-cpucore` to set the low water mark and to increase the cores.

- For Oracle Database Appliance X5-2, X4-2, X3-2, and V1: add your hardware Support Identifier (SI) for Oracle Database Appliance to your My Oracle Support account and create a key.

If you deploy Oracle Database Appliance Virtualized Platform, then all the cores are enabled. However, capacity-on-demand licensing is established by assigning specific cores to the virtual machine where you run Oracle Database and related software (ODA_BASE).

- Chapter two explains how to obtain a licensing key and record your initial license requirements with My Oracle Support. It also explains how to change the licensed core count, if necessary, later.

  Chapter two is only appropriate for bare metal installations where your license covers the cores that you are using for Oracle Database.

- Chapter three contains information about the third-party products that are included with Oracle Database Appliance.

2.2 CPUs and Core Count

Review this section for information about core license options for your Oracle Database Appliance hardware.

- Oracle Database Appliance X7-2-HA has 2 servers, each with 2 CPUs of 18 cores each. When you deploy Oracle Database Appliance X7-2-HA, all 72 cores (36 cores in each server) are active with hyper-threading enabled by default.

- Oracle Database Appliance X7-2M contains 2 CPUs with 18 cores for a total of 36 cores. When you deploy Oracle Database Appliance X7-2M, all 36 cores are active with hyper-threading enabled by default.

- Oracle Database Appliance X7-2S contains 1 CPU with 10 cores. When you deploy Oracle Database Appliance X7-2S, all 10 cores are active with hyper-threading enabled by default.

- Oracle Database Appliance X6-2-HA contains 2 CPU with 10 cores. When you deploy Oracle Database Appliance X6-2-HA, all 40 cores (20 cores in each server) are active with hyper-threading enabled by default.

- Oracle Database Appliance X6-2M and X6-2L each contain 2 CPU with 10 cores. When you deploy Oracle Database Appliance X6-2M or X6-2L, all 20 cores are active with hyper-threading enabled by default.

- Oracle Database Appliance X6-2S contains 1 CPU with 10 cores. When you deploy Oracle Database Appliance X6-2S, all 10 cores are active with hyper-threading enabled by default.

- Oracle Database Appliance X5-2 nodes each contain 2 CPUs and each CPU has 18 cores. When you deploy Oracle Database Appliance X5-2, all 72 cores (36 cores in each server) are active with hyper-threading enabled by default.

- Oracle Database Appliance X4-2 nodes each contain 2 CPUs and each CPU has 12 cores. When you deploy Oracle Database Appliance X4-2, all 48 cores (24 cores in each server) are active with hyper-threading enabled by default.

- Oracle Database Appliance X3-2 nodes each contain two CPUs and each CPU has eight cores. When you deploy Oracle Database Appliance X3-2, all 32 cores (16 cores in each server) are active with hyper-threading enabled by default.

- Oracle Database Appliance V1 nodes each contain two CPUs, and each CPU has six cores. When you deploy Oracle Database Appliance, all 24 cores (12 cores in each server) are active with hyper-threading enabled by default.

Oracle Database Appliance bare metal licensing is determined by the number of enabled cores that you have on your system. The capacity-on-demand licensing feature enables you to change the enabled core count as your system resource needs change.

Initially set the number of licensed cores to the level currently required by your applications. Each server node has the same number of active cores. Later, increase the licensed core count as your applications require more capacity. Change the number of licensed cores by obtaining and applying a core key to configure your appliance, using the tables for your Oracle Database Appliance platform.

Oracle Database Appliance X7-2-HA Licensed Core Licensing Options

The table provides an example of how the licensed cores for each node of an Oracle Database Appliance X7-2-HA relate to active cores for Oracle RAC and Oracle Enterprise Edition and active cores for Oracle RAC One Node. The table stops at 20 licensed cores, extrapolate based on the example to determine the bare metal license options for cores 22 through 36.

Table 2-1   Example of Bare Metal License Options for Oracle Database Appliance X7-2-HA Systems

Licensed Cores for Each Node (X7-2-HA Only)	Active Cores for Oracle RAC and Oracle Enterprise Edition (X7-2-HA Only)	Active Cores for Oracle RAC One Node (X7-2-HA Only)
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10
12	24	12
14	28	14
16	32	16
18	36	18
20	40	20

Oracle Database Appliance X7-2 Licensed Core Licensing Options

Table 2-2   Bare Metal License Options for all Oracle Database Appliance X7-2 Systems

Licensed Cores for Single Node (X7-2S)	Licensed Cores for Single Node (X7-2M)
2	2
4	4
6	6
8	8
10	10
Not applicable	12
Not applicable	14
Not applicable	16
Not applicable	18
Not applicable	20

Table 2-2   (Cont.) Bare Metal License Options for all Oracle Database Appliance X7-2 Systems

Licensed Cores for Single Node (X7-2S)	Licensed Cores for Single Node (X7-2M)
Not applicable	22
Not applicable	24
Not applicable	26
Not applicable	28
Not applicable	30
Not applicable	32
Not applicable	34
Not applicable	36

Oracle Database Appliance X6-2 Licensed Core Licensing Options

Table 2-3   Bare Metal License Options for all Oracle Database Appliance X6-2 Systems

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition (X7-2-HA Only)	Active Cores for Oracle RAC One Node
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10
12	24	12
14	28	14
16	32	16
18	36	18
20	40	20

Oracle Database Appliance X5-2 Licensed Core Licensing Options

Table 2-4   Bare Metal License Options for Oracle Database Appliance X5-2

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition	Active Cores for Oracle RAC One Node
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10

Table 2-4   (Cont.) Bare Metal License Options for Oracle Database Appliance X5-2

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition	Active Cores for Oracle RAC One Node
12	24	12
14	28	14
16	32	16
18	36	18
20	40	20
22	44	22
24	48	24
26	52	26
28	56	28
30	60	30
32	64	32
34	68	34
36	72	36

Oracle Database Appliance X4-2 Licensed Core Licensing Options

Table 2-5   Bare Metal License Options for Oracle Database Appliance X4-2

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition	Active Cores for Oracle RAC One Node
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10
12	24	12
14	28	14
16	32	16
18	36	18
20	40	20
22	44	22
24	48	24

Oracle Database Appliance X3-2 Licensed Core Licensing Options

The information presented in the following table applies when you are running Oracle Appliance Manager release 2.10 or later. Otherwise, you can only allocate each server with a granularity of 4 cores.

Table 2-6   Bare Metal License Options for Oracle Database Appliance X3-2

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition	Active Cores for Oracle RAC One Node
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10
12	24	12
14	28	14
16	32	16

Oracle Database Appliance V1 Licensed Core Licensing Options

Table 1-4 Bare Metal License Options for Oracle Database Appliance

Table 2-7   Bare Metal License Options for Oracle Database Appliance V1

Licensed Cores for Each Node	Active Cores for Oracle RAC and Oracle Enterprise Edition	Active Cores for Oracle RAC One Node
2	4	2
4	8	4
6	12	6
8	16	8
10	20	10
12	24	12

> **Note:**
>
> Find details about managing capacity-on-demand licensing for Oracle Database Appliance Virtualized Platform in "How to Resize ODA_BASE" in Chapter 3 in the *Oracle Database Appliance Administration and Reference Guide*, Chapter 9 in the *Oracle Database Appliance X6-2-HA Deployment and User's Guide*, or Chapter 12 in the *Oracle Database Appliance X7-2 Deployment and User's Guide*.

3

Capacity-On-Demand Licensing Information

This chapter provides capacity-on-demand licensing information for Oracle Database Appliance bare metal installations. It contains a separate section for each of the Oracle Database Appliance Models.

Topics:

- Oracle Database Appliance Capacity-on-Demand Licensing (page 3-1)
  Capacity-on-Demand software licensing enables you to deploy as few or as many processors in Oracle Database Appliance as your workload requires.

- Oracle Database Appliance X7-2 (page 3-2)
  Capacity-on-Demand for Oracle Database Appliance X7-2 models.

- Oracle Database Appliance X6-2 (page 3-4)
  Capacity-on-Demand for Oracle Database Appliance X6-2 models.

- Oracle Database Appliance X5-2 (page 3-7)
  Capacity-on-Demand for Oracle Database Appliance X5-2.

- Oracle Database Appliance X4-2 (page 3-9)
  Capacity-on-Demand for Oracle Database Appliance X4-2.

- Oracle Database Appliance X3-2 (page 3-11)
  Capacity-on-Demand for Oracle Database Appliance X3-2.

- Oracle Database Appliance V1 (page 3-13)
  Capacity-on-Demand for Oracle Database Appliance V1.

3.1 Oracle Database Appliance Capacity-on-Demand Licensing

Capacity-on-Demand software licensing enables you to deploy as few or as many processors in Oracle Database Appliance as your workload requires.

Oracle Database Appliance's Capacity-on-Demand feature enables you to add more processor cores to scale up to increased system demands as you need to, without incurring the excessive costs and downtime usually associated with hardware upgrades. Additional cores are increased in 2-core increments.

Oracle Database Appliance Scaling Capabilities

The following table lists the scaling capacities for Oracle Database Appliance bare metal and virtualized platform deployments. The decision to use bare-metal or Oracle Database Appliance Virtualized Platform depends on your company policies and the benefits that each implementation offers your company.

Table 3-1   Oracle Database Appliance Scaling Capacities

Oracle Database Appliance Platform	Minimum Number Processor Cores	Maximum Number Processor Cores
X7-2S	2	10
X7-2M	2	36
X7-2-HA	2	72
X6-2S	2	10
X6-2M	2	20
X6-2L	2	20
X6-2-HA	2	40
X5-2	2	72
X4-2	2	48
X3-2	4	32
Version 1	2	24

Applications Deployed on Oracle Database Appliance and Capacity-on-Demand

All Oracle products that are deployed on Oracle Database Appliance can take advantage of Capacity-on-Demand licensing.

3.2 Oracle Database Appliance X7-2

Capacity-on-Demand for Oracle Database Appliance X7-2 models.

Topics:

- Capacity-On-Demand Licensing for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA (page 3-2)
  Review capacity-on-demand licensing for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA.

- Setting the CPU Core Count on Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA (page 3-3)
  Learn how to set the CPU core count on Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA systems.

3.2.1 Capacity-On-Demand Licensing for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA

Review capacity-on-demand licensing for Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA.

The following list describes the number of cores for each Oracle Database Appliance X7-2 model:

- Oracle Database Appliance X7-2S is a single server consisting of 10 cores.

- Oracle Database Appliance X7-2M is a single server consisting of 36 cores.

- Oracle Database Appliance X7-2-HA consists of two servers. Each server has 36 cores, for a total of 72 cores.

By default, Oracle Database Appliance ships with all cores enabled. You can reduce the number of active cores before or after deployment. You can increase the number of active cores when additional capacity is needed. This is known as **capacity-on-demand**. Additional cores are increased in 2-core increments.

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to a value that is a multiple of two between 2 and the maximum number of cores for the hardware model. For example, for X7-2-HA, between 2 and 36 cores for each server for a maximum of 72 cores.
- If you change the CPU core count, then you can subsequently only increase the CPU core count.
- You should only change the CPU core count if you need less than the maximum number of cores.

  For example, if you change the CPU core count to 8, then you can subsequently increase the CPU core count to a higher number (in increments of 2 cores), but you cannot decrease the CPU core count.
- If you want the maximum number of cores for each server (36 cores per server for X7-2M and X7-2-HA), then use the default configuration. There is no need to set the CPU core count.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to the maximum, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support.

3.2.2 Setting the CPU Core Count on Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA

Learn how to set the CPU core count on Oracle Database Appliance X7-2S, X7-2M, and X7-2-HA systems.

You must always assign cores in multiples of two, with a minimum of two cores. If you change the CPU core count, then you can subsequently only increase the CPU core count.

> **Note:**
>
> You can update the CPU cores only on bare metal deployments. The option is not available on an Oracle Database Appliance Virtualized Platform.

1. Log in as `root` to the Oracle Database Appliance server.

2. Run the following command to configure the number of CPU cores: `odacli update-cpucore -c` *number of cores*

For example, run the following command to set the number of cores to 10:

```
# odacli update-cpucore -c 10

{
"jobId" : "2807f6ae-3ba5-48a5-8941-b8b365d89d24",
"status" : "Created",
"message" : null,
"reports" : [ ],
"createTimestamp" : 1506631632,
"description" : "CPU cores service update",
"updatedTime" : 1506631632
}
```

3.3 Oracle Database Appliance X6-2

Capacity-on-Demand for Oracle Database Appliance X6-2 models.

Topics:

3.3.1 Capacity-On-Demand Licensing for Oracle Database Appliance X6-2-HA

Review capacity-on-demand licensing for Oracle Database Appliance X6-2-HA.

Oracle Database Appliance X6-2-HA consists of two servers. Each server has 20 CPU cores. By default, Oracle Database Appliance ships with all cores enabled on both servers:

- 20 CPU cores enabled on each of the two servers

- 40 enabled CPU cores

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X6-2-HA

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to a value that is a multiple of two between 2 and 20 for each server.

- If you change the CPU core count, then you can subsequently only increase the CPU core count.

  For example, if you change the CPU core count to 12, then you can subsequently change the CPU core count to 16, or 20. If you later change the CPU core count to 16, then you can subsequently change the CPU core count to 20.

- If you want 20 CPU cores for each server, then use the default configuration. There is no need to set the CPU core count to 40.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 40, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support.

3.3.2 Setting the CPU Core Count on Oracle Database Appliance X6-2-HA

Learn how to set the CPU core count on Oracle Database Appliance X6-2-HA bare metal deployments.

Complete the following procedure to set the CPU core count:

1. Log in as `root` to one of the Oracle Database Appliance servers.

2. Run the `oakcli update-cpucore -cores` command to update the number of cores per server:

   For example, use the following command to enable 16 cores:

   `/opt/oracle/oak/bin/opt/oracle/oak/bin/ update-cpucore -cores 16`

   Both servers run with the specified CPU core count. You must always assign cores on Oracle Database Appliance bare-metal deployments in multiples of two, with a minimum of two cores.

3. Run the `oakcli describe-cpucore` to view the cores that are enabled.

   `# oakcli describe-cpucore`

3.3.3 Capacity-On-Demand Licensing for Oracle Database Appliance X6-2M and X6-2L

Review capacity-on-demand licensing for Oracle Database Appliance X6-2M and X6-2L.

Oracle Database Appliance X6-2M and X6-2L are each a single server consisting of 20 cores. By default, Oracle Database Appliance ships with all cores enabled. Capacity-on-demand is only applicable to Oracle Database Enterprise Edition software.

The number of active cores can be reduced before or after deployment. The number of active cores can be increased when additional capacity is needed. This is known as **capacity-on-demand**. Additional cores are increased in 2-core increments.

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X6-2M and X6-2L Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to a value that is a multiple of two between 2 and 20.

- If you change the CPU core count, then you can subsequently only increase the CPU core count.

- You should only change the CPU core count if you need less than 20 cores.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 20, thereby preventing you from subsequently increasing your CPU core count, then contact Oracle Support.

Related Topics

- Setting the CPU Core Count on Oracle Database Appliance X6-2S, X6-2M, and X6-2L (page 3-7)
  Learn how to set the CPU core count on Oracle Database Appliance X6-2S, X6-2M, and X6-2L systems.

3.3.4 Capacity-On-Demand Licensing for Oracle Database Appliance X6-2S

Review capacity-on-demand licensing for Oracle Database Appliance X6-2S.

Oracle Database Appliance X6-2S is a single server consisting of 10 cores. By default, Oracle Database Appliance ships with all cores enabled. Capacity-on-demand is only applicable to Oracle Database Enterprise Edition software.

The number of active cores can be reduced before or after deployment. The number of active cores can be increased when additional capacity is needed. This is known as **capacity-on-demand**. Additional cores are increased in 2-core increments.

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X6-2S Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to a value that is a multiple of two between 2 and 10.

- If you change the CPU core count, then you can subsequently only increase the CPU core count.

- You should only change the CPU core count if you need less than 10 cores.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 10, thereby preventing you from subsequently increasing your CPU core count, then contact Oracle Support.

To change the CPU core count, see Setting the CPU Core Count on Oracle Database Appliance X6-2S, X6-2M, and X6-2L (page 3-7).

3.3.5 Setting the CPU Core Count on Oracle Database Appliance X6-2S, X6-2M, and X6-2L

Learn how to set the CPU core count on Oracle Database Appliance X6-2S, X6-2M, and X6-2L systems.

You must always assign cores in multiples of two, with a minimum of two cores. If you change the CPU core count, then you can subsequently only increase the CPU core count.

1. Log in as `root` to the Oracle Database Appliance servers.

2. Run the following command to configure the number of CPU cores: `odacli update-cpucore –c` *number of cores*

   For example, run the following command to set the number of cores to 8:

   ```
   # odacli update-cpucore -c 8

   {
   "jobId" : "2807f6ae-3ba5-48a5-8941-b8b365d89d24",
   "status" : "Created",
   "message" : null,
   "reports" : [ ],
   "createTimestamp" : 1469410799194,
   "description" : "CPU cores service update",
   "updatedTime" : 1469410799194
   }
   ```

3.4 Oracle Database Appliance X5-2

Capacity-on-Demand for Oracle Database Appliance X5-2.

Topics:

- Capacity-On-Demand Licensing for Oracle Database Appliance X5-2 (page 3-8)
  Review capacity-on-demand licensing for Oracle Database Appliance X5-2.

- Setting the CPU Core Count on Oracle Database Appliance X5-2 Bare Metal Deployments (page 3-8)
  Learn how to set the CPU core count on Oracle Database Appliance X5-2 bare metal deployments.

3.4.1 Capacity-On-Demand Licensing for Oracle Database Appliance X5-2

Review capacity-on-demand licensing for Oracle Database Appliance X5-2.

Oracle Database Appliance X5-2 consists of two servers. Each server has 36 CPU cores. By default, Oracle Database Appliance ships with all cores enabled on both servers:

- 36 CPU cores enabled on each of the two servers
- 72 enabled CPU cores

You can use the default CPU core count of 2 for each server, or you can change the CPU core count by following the procedure in "Setting the CPU Core Count on Oracle Database Appliance X5-2 Bare Metal Deployments". For example, if you change the CPU core count to 18 for each server, then:

- 18 CPU cores are enabled on each of the two servers
- You have a total of 36 enabled CPU cores

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X5-2 Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to a value that is a multiple of two between 2 and 36 for each server.
- If you change the CPU core count, then you can subsequently only increase the CPU core count.

  For example, if you change the CPU core count to 28, then you can subsequently change the CPU core count to 30, 32, 34, or 36. If you later change the CPU core count to 34, then you can subsequently change the CPU core count to 36.

- If your desired CPU core count is 36 for each server, then use the default configuration. There is no need to follow the procedure in "Setting the CPU Core Count on Oracle Database Appliance X5-2 Bare Metal Deployments" to set the CPU core count to 36.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 36, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support.

3.4.2 Setting the CPU Core Count on Oracle Database Appliance X5-2 Bare Metal Deployments

Learn how to set the CPU core count on Oracle Database Appliance X5-2 bare metal deployments.

Complete the following procedure to set the CPU core count:

1. Log in to My Oracle Support:

   https://myoraclesupport.com

2. Click the **Settings** tab, and select **Assets** from the submenu.

3. Search for the serial number of the appliance in the asset list. If you cannot locate the serial number, then contact Oracle Support.

4. Select the serial number of the appliance.

5. Select **Manage Key** from the available actions.

6. In the Manage Cores Configuration Key dialog, you can view the serial number of the appliance. If there is a previously generated key, then you can view the current configuration.

7. In the **Cores Per Server** menu, select the number of enabled CPU cores that you want to configure for each server. The value that you select applies to both servers on the appliance. . Initially, you can select 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, or 36. After your initial key generation, you can only select a number that is greater than the current number.

8. Click **Generate Key** to generate the key.

9. Click **Copy Key to Clipboard** to copy the key to the clipboard.

10. Paste the key into an empty text file, and save the file to a location on Oracle Database Appliance.

11. Log in as `root` to one of the Oracle Database Appliance servers.

12. Run the following command to restart the server to complete the reconfiguration, where `key_file_location` is the full path name of the text file that you created in Step 7:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key key_file_location
    ```

    For example:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key /home/myfile.txt
    ```

    After the system restarts, Oracle Database Appliance is reconfigured. Both servers run with the specified CPU core count. You must always assign cores on Oracle Database Appliance X5-2 bare-metal deployments in multiples of two, with a minimum of two cores.

3.5 Oracle Database Appliance X4-2

Capacity-on-Demand for Oracle Database Appliance X4-2.

Topics:

- Capacity-On-Demand Licensing for Oracle Database Appliance X4-2 (page 3-10)
  Review capacity-on-demand licensing for Oracle Database Appliance X4–2.

- Setting the CPU Core Count on Oracle Database Appliance X4-2 Bare Metal Deployments (page 3-11)
  This section describes how to set the CPU core count on Oracle Database Appliance X4-2 bare metal deployments.

3.5.1 Capacity-On-Demand Licensing for Oracle Database Appliance X4-2

Review capacity-on-demand licensing for Oracle Database Appliance X4–2.

Oracle Database Appliance X4-2 consists of two servers. Each server has 24 CPU cores. By default, Oracle Database Appliance is shipped with all cores enabled on both servers:

- 24 CPU cores enabled on each of the two servers
- 48 enabled CPU cores

You can use the default CPU core count of 24 for each server, or you can change the CPU core count by following the procedure in "Setting the CPU Core Count on Oracle Database Appliance X4-2 Bare Metal Deployments." For example, if you change the CPU core count to 16 for each server, then your server is configured as follows:

- 16 CPU cores enabled on each of the two servers
- 32 enabled CPU cores

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X4-2 Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count: .

- You can change the CPU core count to a value that is a multiple of two between 2 and 24 for each server.
- If you change the CPU core count, then you can subsequently only increase the CPU core count.

  For example, if you change the CPU core count to 16, then you can subsequently change the CPU core count to 18, 20, 22, or 24. If you later change the CPU core count to 22, then you can subsequently change the CPU core count to 24.

- If your desired CPU core count is 24 for each server, then use the default configuration. Do not follow the procedure in "Setting the CPU Core Count on Oracle Database Appliance X4-2 Bare Metal Deployments" to set the CPU core count to 24. Using the default configuration enables you to change the CPU core count to a number that is less than 16.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 24, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support.

3.5.2 Setting the CPU Core Count on Oracle Database Appliance X4-2 Bare Metal Deployments

This section describes how to set the CPU core count on Oracle Database Appliance X4-2 bare metal deployments.

Complete the following procedure to set the CPU core count:

1. Log in to My Oracle Support:

   https://myoraclesupport.com

2. Click the **Settings** tab, and select **Assets** from the submenu.

3. Search for the serial number of the appliance in the asset list. If you cannot locate the serial number, then contact Oracle Support.

4. Select the serial number of the appliance.

5. Select **Manage Key** from the available actions.

6. In the Manage Cores Configuration Key dialog, you can view the serial number of the appliance. If there is a previously generated key, then you can view the current configuration.

7. In the **Cores Per Server** list, select the number of enabled CPU cores that you want to configure for each server. The value you select applies to both servers on the appliance. Initially, you can select 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, or 24. After your initial key generation, you can only select a number that is greater than the current number.

8. Click **Generate Key** to generate the key.

9. Click **Copy Key to Clipboard** to copy the key to the clipboard.

10. Paste the key into an empty text file, and save the file to a location on the Oracle Database Appliance.

11. Log in as `root` to one of the servers on Oracle Database Appliance.

12. Run the following command to restart the server to complete the reconfiguration, where `key_file_location` is the full path name of the text file that you created in Step 7.:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key key_file_location
    ```

    For Example:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key /home/myfile.txt
    ```

After the system restarts, Oracle Database Appliance is reconfigured. Both servers run with the specified CPU core count. You must always assign cores on Oracle Database Appliance X4-2 bare metal deployments in multiples of two, with a minimum of two cores.

3.6 Oracle Database Appliance X3-2

Capacity-on-Demand for Oracle Database Appliance X3-2.

Topics:

3.6.1 Capacity-On-Demand Licensing for Oracle Database Appliance X3-2

Review capacity-on-demand licensing for Oracle Database Appliance X3-2.

Oracle Database Appliance X3-2 consists of two servers. Each server has 16 CPU cores. By default, Oracle Database Appliance ships with all cores enabled on both servers:

- 16 CPU cores enabled on each of the two servers
- 32 enabled CPU cores

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance X3-2 Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- If you are running Oracle Appliance Manager 2.8 or lower, then you can change the CPU core count to 4, 8, 12, or 16 for each server.
- You can change the CPU core count to 2, 4, 6, 8, 10, 12, 14,or 16 for each server if you are running Oracle Appliance Manager 2.10 or higher.
- If you change the CPU core count, then you can subsequently only increase the CPU core count.

  For example, if you change the CPU core count to 8, then you can subsequently change the CPU core count to 12 or 16. If you later change the CPU core count to 12, then you can subsequently change the CPU core count to 16.

- If your desired CPU core count is 16 for each server, then use the default configuration. Do not follow the procedure described in "Setting the CPU Core Count on Oracle Database Appliance X3-2 Bare Metal Deployments" to set the CPU core count to 16. Using the default configuration enables you to change the CPU core count at a later time to a number less than 16.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 16, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support to remedy the situation.

3.6.2 Setting the CPU Core Count on Oracle Database Appliance X3-2 Bare Metal Deployments

This section describes how to set the CPU core count on Oracle Database Appliance X3-2 bare metal deployments.

Complete the following procedure to set the CPU core count:

1. Log in to My Oracle Support.

    https://myoraclesupport.com

2. Click the **Settings** tab, and select **Assets** from the submenu.

3. Search for the serial number of the appliance in the asset list. If you cannot locate the serial number, then contact Oracle Support.

4. Select the serial number of the appliance.

5. Select **Manage Key** from the available actions.

6. In the Manage Cores Configuration Key dialog, you can view the serial number of the appliance. If there is a previously generated key, then you can view the current configuration.

7. In the **Cores Per Server** list, select the number of enabled CPU cores that you want to configure for each server. The value you select will apply to both servers on the appliance. Initially, you can select 4, 8, 12, or 16. Subsequently, you can only select a number that is greater than the current number.

8. Click **Generate Key** to generate the key.

9. Click **Copy Key to Clipboard** to copy the key to the clipboard.

10. Paste the key into an empty text file, and save the file to a location on Oracle Database Appliance.

11. Log in to one of the servers on Oracle Database Appliance as `root`.

12. Run the following command to restart the server to complete the reconfiguration, where `key_file_location` is the full path name of the text file that you created in Step 7:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key key_file_location
    ```

    For example:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key /home/myfile.txt
    ```

After the system restarts, Oracle Database Appliance is reconfigured, and both servers to run with the specified CPU core count. Always assign cores to Oracle Database Appliance X3-2 bare metal deployments in multiples of four, with a minimum of four cores.

3.7 Oracle Database Appliance V1

Capacity-on-Demand for Oracle Database Appliance V1.

Topics:

3.7.1 Capacity-On-Demand Licensing for Oracle Database Appliance V1

Review capacity-on-demand licensing for Oracle Database Appliance V1

Oracle Database Appliance V1 consists of two servers and each server has 12 CPU cores. By default, Oracle Database Appliance ships with all cores enabled on both servers, that is:

- 12 CPU cores are enabled on each of the two servers

- You have a total of 24 enabled CPU cores

You can use the default CPU core count of 12 for each server, or you can change the CPU core count. To change the by following the procedure in "Setting the CPU Core Count on Oracle Database Appliance Bare Metal Deployments." For example, if you change the CPU core count to 8 for each server, then

- 8 CPU cores are enabled on each of the two servers

- You have a total of 16 enabled CPU cores

Rules and Restrictions for Setting CPU Core Count on Oracle Database Appliance Bare Metal Deployments

Review the following rules and restrictions before changing the CPU core count:

- You can change the CPU core count to 2, 4, 6, 8, 10, or 12 for each server.

- If you change the CPU core count, then you can subsequently only increase the CPU core count. Use the procedure for your Oracle Database hardware (X3-2, X4-2, or X5-2).

  For example, if you change the CPU core count to 6, then you can subsequently change the CPU core count to 8, 10, or 12. If you later change the CPU core count to 8, then you can subsequently change the CPU core count to 10 or 12.

- If your desired CPU core count is 12 for each server, then use the default configuration. Do not follow the procedure in "Setting the CPU Core Count on Oracle Database Appliance Bare Metal Deployments" to set the CPU core count to 12. Using the default configuration enables you to later change the CPU core count to a number less than 12, if desired.

> **Note:**
>
> If you mistakenly followed the procedure to set your CPU core count to 12, thereby preventing you from subsequently increasing your CPU core count, and the error is caught immediately, then contact Oracle Support.

3.7.2 Setting the CPU Core Count on Oracle Database Appliance V1 Bare Metal Deployments

This topic describes how to set the CPU core count on Oracle Database Appliance V1 Bare Metal Deployments.

Complete the following procedure to set the CPU core count:

1. Log in to My Oracle Support.

   https://myoraclesupport.com

2. Click the **Settings** tab and select **Assets** from the submenu.

3. Search for the serial number of the appliance in the asset list. If you cannot locate the serial number, then contact Oracle Support.

4. Select the serial number of the appliance.

5. Select **Manage Key** from the available actions.

6. In the Manage Cores Configuration Key dialog, you can view the serial number of the appliance. If there is a previously generated key, then you can view the current configuration.

7. In the Cores Per Server list, select the number of enabled CPU cores that you want to configure for each server. The value that you select applies to both servers on the appliance. Initially, you can select 2, 4, 6, 8, 10, or 12. After your initial key generation, you can only select a number that is greater than the current number.

8. Click **Generate Key** to generate the key.

9. Click **Copy Key** to Clipboard to copy the key to the clipboard.

10. Paste the key into an empty text file, and save the file to a location on the Oracle Database Appliance.

11. Log in as `root` to one of the servers on Oracle Database Appliance.

12. Run the following command to restart the server to complete the reconfiguration, where `key_file_location` is the full path name of the text file that you created in Step 7:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key key_file_location
    ```

    For example:

    ```
    /opt/oracle/oak/bin/oakcli apply core_configuration_key /home/myfile.txt
    ```

After the system restarts, Oracle Database Appliance is reconfigured, and both servers run with the specified CPU core count. Always assign cores to Oracle Database Appliance bare-metal deployments in multiples of two, with a minimum of two cores.

4

Third-Party Product Licenses

This chapter contains the licenses for the third-party products that are included with Oracle Database Appliance.

- Oracle Database Licensing Information (page 4-1)
  Review Oracle Database Appliance licensing information.

- Other Third-Party Product Licenses (page 4-1)
  Review other third-party product licenses for Oracle Database Appliance.

4.1 Oracle Database Licensing Information

Review Oracle Database Appliance licensing information.

Oracle Database Appliance includes the third-party products that are used in Oracle Database 12*c* release 2 (12.2), Oracle Database 12*c* release 1 (12.1), and Oracle Database 11*g* release 2 (11.2). To view the licenses for these third-party products, refer to the release-specific Oracle Database Licensing Information User Manual.

Related Topics

- Licensing Information User Manual Oracle Database 12*c* Release 2
- Licensing Information User Manual Oracle Database 12*c* Release 1
- Oracle Database Licensing Information User Manual 11*g* Release 2 (11.2)

4.2 Other Third-Party Product Licenses

Review other third-party product licenses for Oracle Database Appliance.

Intel PXE Firmware License

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Oracle Integrated Lights Out Manager (ILOM)

Oracle Database Appliance includes the third-party products that are used in Oracle Integrated Lights Out Manager release 3.2. To view the licenses, refer to *Licensing Information User Manual Oracle ILOM*.

Related Topics

- Licensing Information User Manual Oracle ILOM

Index