Oracle® SuperCluster M8 and SuperCluster M7 Configuration Worksheets



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Change Log

Use the table in this section to record changes that have occurred over time with this installation.

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Changed Item | New Item | Notes |
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Using This Documentation

This guide provides the configuration worksheets that must be completed before receiving Oracle SuperCluster M8 or SuperCluster M7. There are two intended audiences for this document:

* Customers who purchased SuperCluster M8 or SuperCluster M7 and will have the system installed at their site. Customers should use this document to provide customer-specific networking information that is necessary for a successful installation of the system.
* Oracle installers who will be configuring the system at the customer site. Oracle installers should refer to the networking information that was provided by the customer in this document and input that information into the appropriate configuration utility.

Product Documentation Library

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Chapter

1

Understanding the Configuration Worksheets

This document helps define SuperCluster M8 or SuperCluster M7 configuration settings for your environment.

Working with the network and database administrators, evaluate the current environmental settings, such as current IP address use and network configuration. Next, define the settings for SuperCluster M8 or SuperCluster M7, such as network configuration and backup method.

This document includes the configuration worksheets for SuperCluster M8 or SuperCluster M7. The Oracle SuperCluster M8 and SuperCluster M7 Overview Guide and Oracle SuperCluster M8 and SuperCluster M7 Installation Guide contain additional information, such as site requirements.

The information is used to create the SuperCluster M8 or SuperCluster M7 Installation Template. You must complete the worksheets and provide them to your Oracle representative prior to installation.

All information is required unless otherwise indicated. Oracle installers use the Installation Template to complete installation and configuration of your system. Site-specific adjustments to the Installation Template must be made in consultation with your Oracle representative.

**Note** - Complete the configuration worksheets early in the process, and prior to receiving your SuperCluster M8 or SuperCluster M7, so that site-specific adjustments to the Installation Template do not delay installation.

**Note** - If you have purchased more than one SuperCluster M8 or SuperCluster M7 and you do not plan to cable them together, then you must complete one set of worksheets for each system.

Configuration Process

Prior to the delivery of your SuperCluster M8 or SuperCluster M7, you are asked to determine the number of logical domains and the types of domains on each compute server. Depending on these logical domain types, certain components and domains will need to have a unique IP address and host name assigned to them. The number of components and logical domains used by your SuperCluster M8 or SuperCluster M7 varies depending on the type of domain configuration you choose for each compute server. See Configuration Worksheets Purpose on page 11.

You and your Oracle representative work together to gather site-specific IP address and host name information by going through the following process:

1. You use the worksheets in this document to provide your Oracle representative with site-specific information, including the following:

* Starting IP addresses for the management and client access networks
* Number of IP addresses you need for the networks, depending on the configurations you chose for each compute server in your system

**Note** – You are also asked to confirm that the default IP addresses used for the private IB network do not conflict with other IP addresses on your network. If there are conflicts, you are asked for starting IP addresses for the IB network in addition to the management and client access networks.

* The name for your SuperCluster M8 or SuperCluster M7 and your company network domain name, which your Oracle representative uses to generate host names for the components and logical domains in your system

1. Once you complete all of the worksheets in this document, you send the completed document to your Oracle representative.
2. Your Oracle representative uses the information to create a SuperCluster M8 or SuperCluster M7 Installation Template specific to your site. This template provides several pieces of information, including IP addresses and host names for each component and logical domain in your system, depending on the configurations you chose for each compute server in your system.
3. Your Oracle representative then sends your completed site-specific Installation Template back to you to verify that there are no conflicts with the IP addresses assigned to your system. If necessary, your Oracle representative works with you to resolve any conflicts with the IP addresses.
4. Once the Installation Template is complete and all IP address conflicts have been resolved, you use the information in the Installation Template to register the IP addresses and host names in DNS. All IP addresses and host names for your system must be registered in DNS before your SuperCluster M8 or SuperCluster M7 can be installed at your site.

**Note** - All IP addresses must be statically-assigned IP addresses, not dynamically-assigned (DHCP) addresses.

Configuration Worksheets Purpose

When you order SuperCluster M8 or SuperCluster M7, you are asked to make the following configuration choices:

* Number of compute servers (1 or 2)
* Number of populated PDomains in each compute server
* Type of Oracle SuperCluster M7:
* Oracle SuperCluster M7-4, with SPARC M7-4 servers installed
* Oracle SuperCluster M7-8, with SPARC M7-8 servers installed
* Number of CMIOUs in each PDomain (1 to 4)

Before SuperCluster M8 or SuperCluster M7 can be shipped to your site, you must also provide to Oracle several pieces of information specific to your system, including:

* Number of logical domains on each compute server, depending on the type of SuperCluster M8 or SuperCluster M7 that you have:
* PDomains with one CMIOU: 1 logical domain (only available option)
* PDomains with two CMIOUs: 1 to 2 logical domains
* PDomains with three CMIOUs: 1 to 3 logical domains
* PDomains with four CMIOUs: 1 to 4 logical domains
* PDomains with eight CMIOUs: 1 domain (only available option)
* Type of logical domains on each compute server:
* Application Domain running the Oracle Solaris 11 OS (dedicated domain)[[1]](#footnote-1)
* Database Domain (dedicated domain)
* Root Domain

**Note** – The Database Domain (dedicated domain) can also be in two states, with zones or without zones.

* Number of client access networks, VLAN tags and network recipes for the logical domains
* For Database Domains and database zones, the number of Oracle RAC instances
* Amount of CPU and memory resources allocated to each logical domain on each compute server
* Starting IP addresses and number of IP addresses available for these networks:
* Management network
* 10GbE client access network
* IB network
* Backup/Data Guard network, if applicable

Use the configuration worksheets in this document to provide Oracle this information.

Chapter

2

Understanding PDomain Configurations

There are several PDomain configurations to choose from, depending on the following factors:

* The number of compute servers in SuperCluster M8 or SuperCluster M7
* The number of PDomains in each compute server
* The number of CMIOUs in each PDomain

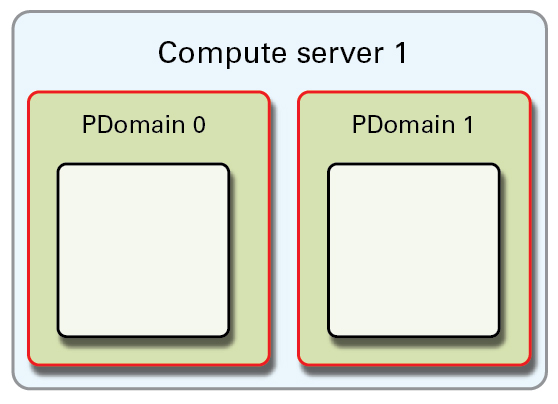
The number of PDomains that you have in your Oracle SuperCluster M7 is based on the type of Oracle SuperCluster M7 that you ordered:

* Oracle SuperCluster M7-4: Each SPARC M7-4 server in the Oracle SuperCluster M7-4 is split into two partitions (two PDomains), where the top four CMIOU slots are part of the first partition, and the bottom four CMIOU slots are part of the second partition.
* Oracle SuperCluster M7-8: Each SPARC M7-8 server in the Oracle SuperCluster M7-8 has all eight CMIOU slots as a single partition (one PDomain).

This chapter provides information on the PDomain configurations available:

* Single Compute Server Configurations (R1 PDomain Configurations) on page 12
* Dual Compute Server Configurations (R2 PDomain Configurations) on page 13

Single Compute Server Configurations (R1 PDomain Configurations)



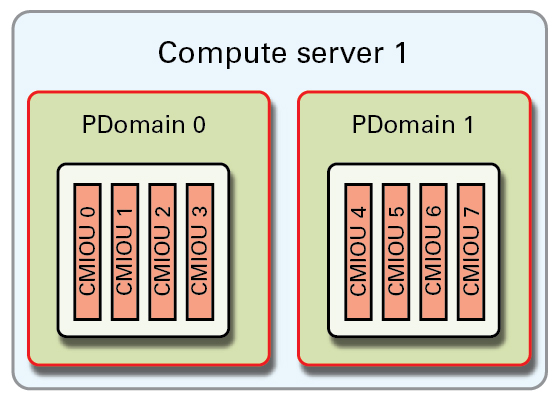
The R1-1 PDomain configuration is the only available configuration for the R1 PDomain configuration.

CMIOUs in Both PDomains in One Compute Server (R1-1 PDomain Configuration)

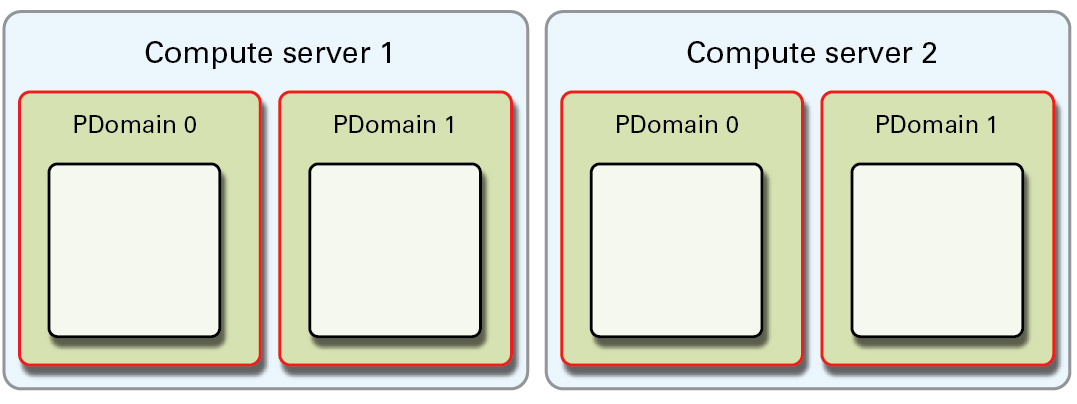
The R1-1 PDomain configuration has these characteristics:

* Two populated PDomains in a single compute server
* One to four CMIOUs in each PDomain

This figure shows the CMIOU slots on each PDomain in this configuration.



Dual Compute Server Configurations (R2 PDomain Configurations)



The R2 configurations are available for a SuperCluster M8 or SuperCluster M7 with two compute servers.

These choices are available for the R2 PDomain configuration, depending on which PDomains are populated with CMIOUs:

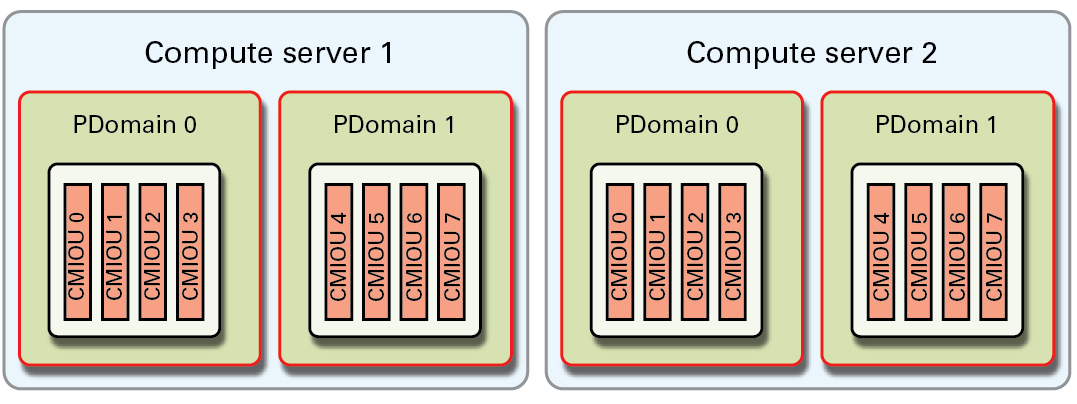
* CMIOUs in Both PDomains in Both Compute Servers (R2-1 PDomain Configuration) on page 13
* CMIOUs in PDomain 0 in Both Compute Servers (R2-2 PDomain Configuration) on page 14
* CMIOUs in PDomain 0 in Compute Server 1, and in PDomains 0 and 1 in Compute Server 2 (R2-3 PDomain Configuration) on page 14
* CMIOUs in PDomain 0 and 1 in Compute Server 1, and in PDomain 0 in Compute Server 2 (R2-4 PDomain Configuration) on page 15

CMIOUs in Both PDomains in Both Compute Servers (R2-1 PDomain Configuration)

The R2-1 PDomain configuration has these characteristics:

* Four populated PDomains across two compute servers
* One to four CMIOUs in each populated PDomain

This figure shows the CMIOU slots on each PDomain in this configuration.

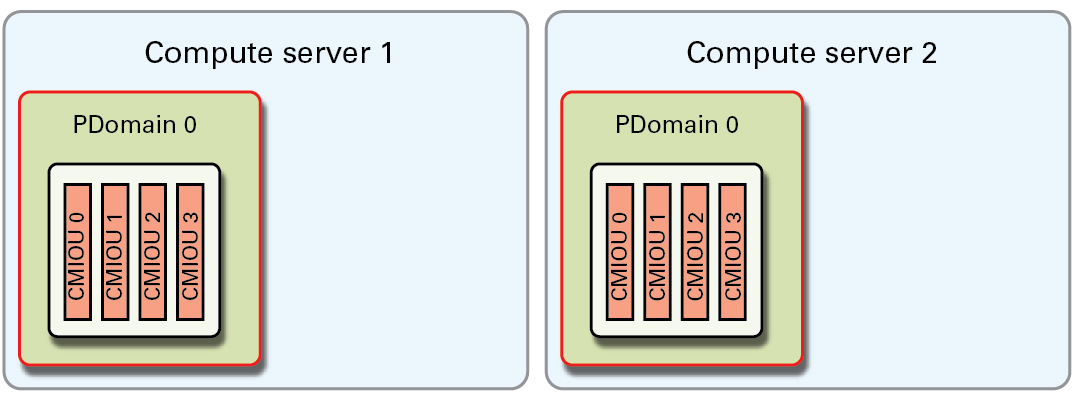


CMIOUs in PDomain 0 in Both Compute Servers (R2-2 PDomain Configuration)

The R2-2 PDomain configuration has these characteristics:

* Two populated PDomains across two compute servers
* One to four CMIOUs in each populated PDomain

This figure shows the CMIOU slots on each PDomain in this configuration.

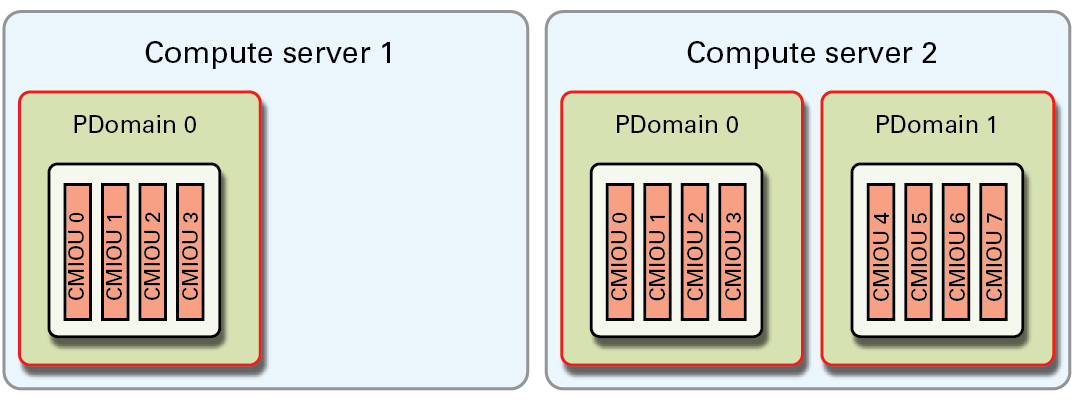


CMIOUs in PDomain 0 in Compute Server 1, and in PDomains 0 and 1 in Compute Server 2 (R2-3 PDomain Configuration)

The R2-3 PDomain configuration has these characteristics

* Populated PDomain 0 in compute server 1, and populated PDomains 0 and 1 in compute server 2
* One to four CMIOUs in each populated PDomain

This figure shows the CMIOU slots on each PDomain in this configuration.

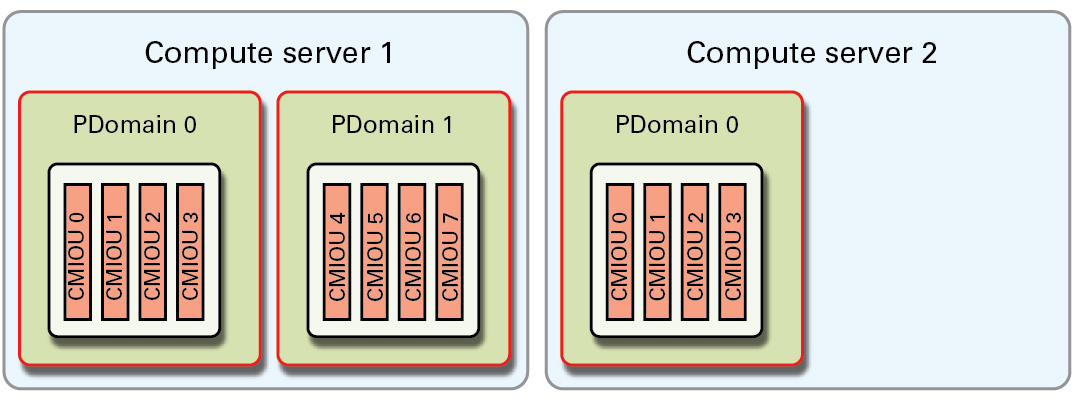


CMIOUs in PDomain 0 and 1 in Compute Server 1, and in PDomain 0 in Compute Server 2 (R2-4 PDomain Configuration)

The R2-4 PDomain configuration has these characteristics:

* Populated PDomains 0 and 1 in compute server 1, and populated PDomain 0 in compute server 2
* One to four CMIOUs in each populated PDomain

This figure shows the CMIOU slots on each PDomain in this configuration.



**What’s Next**

Go to PDomain Configuration Worksheets on page 16 to complete the worksheets for the PDomain configuration.

Chapter

3

PDomain Configuration Worksheets

Complete the worksheets in this chapter to provide overall PDomain configuration information. Refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide* for more information on the PDomain configurations.

* System-Level PDomain Configurations on page 16
* Compute Server-Level PDomain Configurations on page 17

System-Level PDomain Configurations

Provide the system-level PDomain configuration information in this table.

Table 1 -- System-Level PDomain Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Upper level PDomain configuration |  | Upper level PDomain configuration that you will have for your SuperCluster M8 or SuperCluster M7.  Options: R1 or R2. |
| Second level PDomain configuration |  | Second level PDomain configuration that you will have for your SuperCluster M8 or SuperCluster M7.  Options:   * R1-1 * R2-1 * R2-2 * R2-3 * R2-4 |

Compute Server-Level PDomain Configurations

Provide the compute server-level PDomain configuration information in these sections.

* Number of CMIOUs in PDomains in Compute Server 1 on page 17
* Number of CMIOUs in PDomains in Compute Server 2 on page 17

Number of CMIOUs in PDomains in Compute Server 1

Provide information on the number of CMIOUs that you will have in each PDomain in compute server 1.

Table 2 -- Compute Server 1 PDomain Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Number of CMIOUs in PDomain 0 |  | The number of CMIOUs that you will have in PDomain 0 in compute server 1.  Options: 1, 2, 3 or 4. |
| Number of CMIOUs in PDomain 1 |  | The number of CMIOUs that you will have in PDomain 1 in compute server 1.  Options: 0, 1, 2, 3 or 4. |

Number of CMIOUs in PDomains in Compute Server 2

Provide information on the number of CMIOUs that you will have in each PDomain in compute server 2.

Table 3 -- Compute Server 2 PDomain Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Number of CMIOUs in PDomain 0 |  | The number of CMIOUs that you will have in PDomain 0 in compute server 2.  Options: 1, 2, 3 or 4. |
| Number of CMIOUs in PDomain 1 |  | The number of CMIOUs that you will have in PDomain 1 in compute server 2.  Options: 0, 1, 2, 3 or 4. |

**What’s Next**

Go to Understanding LDom Configuration on page 18.

Chapter

4

Understanding LDom Configurations

The number of PDomains that you have in your Oracle SuperCluster M7 is based on the type of Oracle SuperCluster M7 that you ordered:

* Oracle SuperCluster M7-4: Each SPARC M7-4 server in the Oracle SuperCluster M7-4 is split into two partitions (two PDomains), where the top four CMIOU slots are part of the first partition, and the bottom four CMIOU slots are part of the second partition.
* Oracle SuperCluster M7-8: Each SPARC M7-8 server in the Oracle SuperCluster M7-8 has all eight CMIOU slots as a single partition (one PDomain).

You must also decide on the number of CMIOUs that you want set up in each PDomain in each compute server in your SuperCluster M8 or SuperCluster M7 before you can decide on the LDom configurations for each PDomain.

This chapter provides information on the LDom configurations available, depending on the number of CMIOUs set up in each PDomain.

* Oracle Setup of Database Zones and I/O Domains Overview on page 18
* General LDom Configuration Guidelines on page 18
* LDom Configurations For PDomains With One CMIOU on page 20
* LDom Configurations For PDomains With Two CMIOUs on page 20
* LDom Configurations For PDomains With Three CMIOUs on page 22
* LDom Configurations For PDomains With Four CMIOUs on page 24

Oracle Setup of Database Zones and I/O Domains Overview

As part of a typical initial installation of your SuperCluster, the Oracle installer sets up any dedicated domains (Database Domains or Application Domains) and any Root Domains that will be part of your SuperCluster configuration.

Additionally, your Oracle installer can configure a combination of up to eight of these items:

* Database zones (zones hosted on Database Domains that are dedicated domains)
* I/O Domains (either Application I/O Domains or Database I/O Domains)

For example, as part of the initial installation of your Oracle SuperCluster, you could have your Oracle installer set up four database zones and four I/O Domains, or two database zones and six I/O Domains.

General LDom Configuration Guidelines

Following are the general configuration guidelines for SuperCluster M8 and SuperCluster M7:

* When deciding which logical domains will be a Root Domain, the last domain must always be the first Root Domain.
* Only Database Domains that are dedicated domains can host database zones. If you want database zones on your Database Domains, you must select the Database Domain (dedicated domain) in order to have database zones.
* A logical domain cannot be a Root Domain if it has more than two IB HCAs associated with it. In a SuperCluster M8 or SuperCluster M7, each CMIOU installed in a chassis has one IB HCA installed in PCIe slot 3.
* For PDomains with three CMIOUs, the U3-1 LDom configuration has only one LDom, which spans across all three CMIOUs. Therefore, that logical domain cannot be a Root Domain.
* For PDomains with four CMIOUs, the U4-1 LDom configuration has only one LDom, which spans across all four CMIOUs. Therefore, that logical domain cannot be a Root Domain.

All other logical domains in all other LDom configurations can be Root Domains because all other logical domains have only one or two CMIOUs associated with them.

PDomains with eight CMIOUs cannot be a Root Domain

**Note** - Even though a logical domain with two IB HCAs is valid for a Root Domain, logical domains with only one IB HCA should be used as Root Domains. When a Root Domain has a single IB HCA, fewer I/O Domains will have dependencies on the I/O devices provided by that Root Domain. Flexibility around high availability also increases with Root Domains with one IB HCA.

* If you have a mixture of dedicated domains and Root Domains, the following rules apply when reallocating CPU and memory resources after the initial installation and after I/O Domains have been created:
  + You can reallocate CPU and memory resources between dedicated domains.
  + You can park CPU and memory resources that were allocated to dedicated domains. Those parked core and memory resources are now available for future I/O Domains that you create through the SuperCluster Virtual Assistant.
  + Once you have parked CPU and memory resources from dedicated domains, you cannot unpark them and reallocate them back to the dedicated domains once you begin creating I/O Domains. Once you begin creating I/O Domains, any parked CPU and memory resources are now used exclusively for I/O Domains and are no longer available for dedicated domains.
  + You cannot reallocate CPU and memory resources for Root Domains after the initial installation.

See Understanding CPU Resource Allocation on page 26 and Understanding Memory Resource Allocation on page 36 for more information.

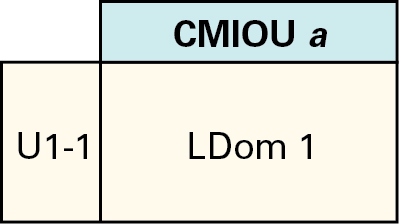
* You provide configuration information in this document telling your Oracle installer whether you want Root Domains or dedicated domains at the time of the initial installation. After the initial installation, you will be able to create I/O Domains that access the Root Domains using the SuperCluster Virtual Assistant.

While you do not provide information on the I/O Domains in this document, you should consider the size of the I/O Domains that you will be creating before deciding on Root Domains or dedicated domains. You should not create I/O Domains that are larger than one socket, so if you were planning to create I/O Domains that are that large, you should not choose a Root Domain and you should choose a dedicated domain instead.

**Error! Reference source not found.** on page **Error! Bookmark not defined.**

LDom Configurations For PDomains With One CMIOU

A single LDom is the only valid LDom configuration for PDomains with one CMIOU.



This LDom can be any of the following domain types:

* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[2]](#footnote-2)
* Root Domain, with some I/O Domains set up at the initial installation2

Example

For this PDomain, assume you want a Database Domain that contains zones (DB-Z), with the Oracle installer setting up four database zones. For this configuration, you would fill out the configuration information for that server in this way:

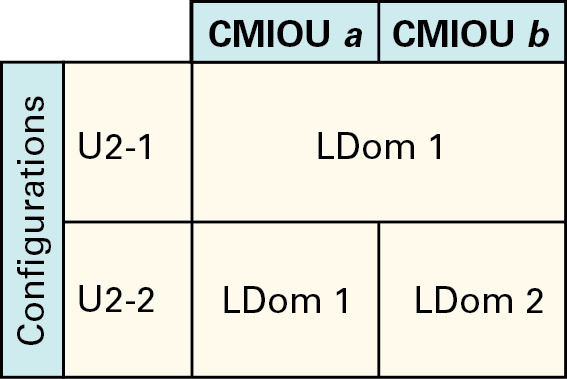
|  |
| --- |
| Type of Domain on Compute Server 1 |
| DB-Z: 4 zones |

LDom Configurations For PDomains With Two CMIOUs

These configurations are available for PDomains with two CMIOUs:

* Config U2-1: One domain
* Config U2-2: Two domains

The following figure shows these available configurations for the PDomains with two CMIOUs.



These LDoms can be any of the following domain types:

* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[3]](#footnote-3)
* Root Domain, with some I/O Domains set up at the time of the initial installation3

Example

Assume you want this configuration for a PDomain:

* Config U2-2: Two domains
* These types of domains:
* First domain: Database Domain, containing zones (DB-Z), with the Oracle installer setting up four database zones
* Second domain: Root Domain, with the Oracle installer setting up four I/O Domains

For this configuration, you would fill out the configuration information for that PDomain in this way:

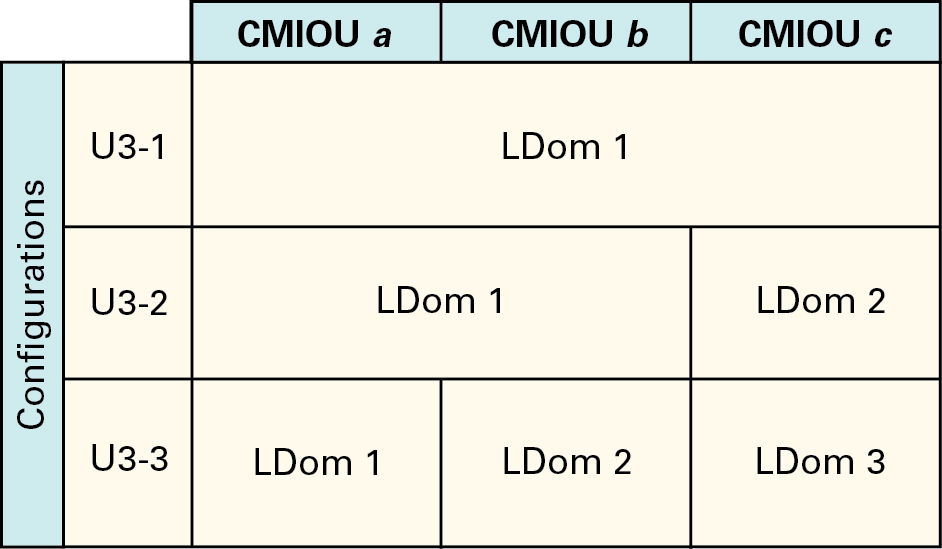
|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 | |
| Check One Box | Config | One | Two |
|  | U2-1 |  | |
| X | U2-2 | DB-Z: 4 zones | ROOT: 4 I/O Domains |

LDom Configurations For PDomains With Three CMIOUs

These configurations are available for PDomains with three CMIOUs:

* Config U3-1: One domain
* Config U3-2: Two domains
* Config U3-3: Three domains

This figure shows these available configurations for the PDomains with three CMIOUs.



Keeping in mind the domain configuration rules outlined in General LDom Configuration on page 18, the domain in the U3-1 LDom configuration cannot be a Root Domain. All other domains can be any of these domain types:

* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[4]](#footnote-4)
* Root Domain, with some I/O Domains set up at the initial installation5

Example

Assume you want this configuration for a PDomain:

* Config U3-3: Three domains
* These types of domains:
* First domain: Database Domain, containing zones (DB-Z), with the Oracle installer setting up four zones
* Second domain: Database Domain, where the Database Domain does not contain zones (DB)
* Third domain: Root Domain, with the Oracle installer setting up four I/O Domains

For this configuration, you would fill out the configuration information for that PDomain in this way:

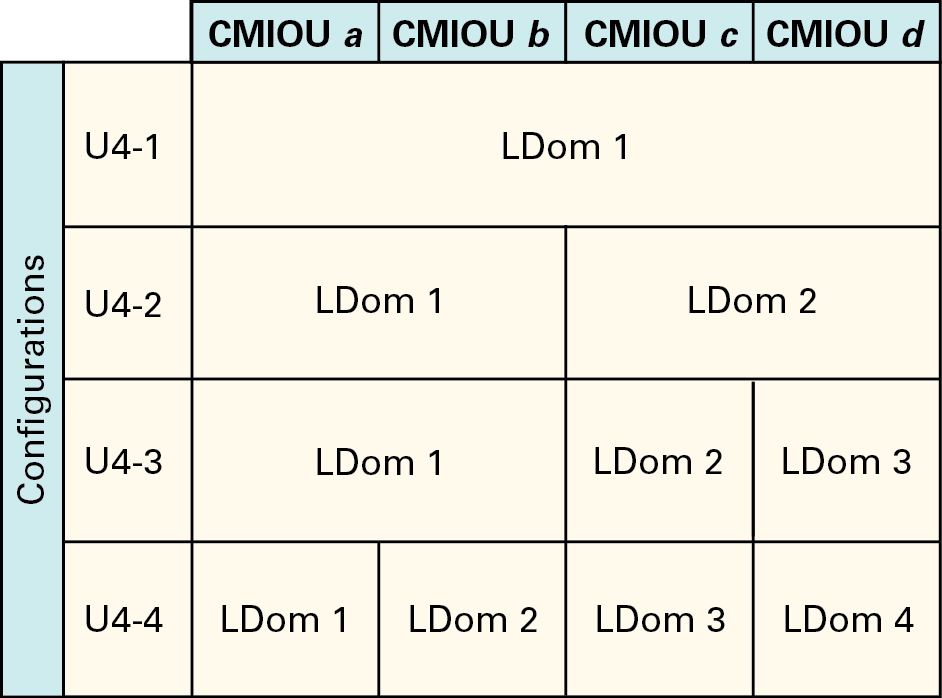
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain One in Compute Server 1 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 |  | | |
|  | U3-2 |  | |  |
| X | U3-3 | DB-Z: 4 zones | DB | ROOT: 4 I/O Domains |

LDom Configurations For PDomains With Four CMIOUs

These configurations are available for PDomains with four CMIOUs:

* Config U4-1: One domain
* Config U4-2: Two domains
* Config U4-3: Three domains
* Config U4-4: Four domains

This figure shows these available configurations for the PDomains with four CMIOUs.



Keeping in mind the domain configuration rules outlined in General LDom Configuration on page 18, the domain in the U4-1 LDom configuration cannot be a Root Domain. All other domains can be any of these domain types:

* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[5]](#footnote-5)
* Root Domain, with some I/O Domains set up at the initial installation5

Example

Assume you want this configuration for a PDomain:

* Config U4-3: Three domains
* These types of domains:
* First domain: Database Domain, containing zones (DB-Z), with the Oracle installer setting up four zones
* Second domain: Database Domain, where the Database Domain does not contain zones (DB)
* Third domain: Root Domain, with the Oracle installer setting up four I/O Domains

For this configuration, you would fill out the configuration information for that PDomain in this way:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain One in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 |  | | | |
|  | U4-2 |  | |  | |
| X | U4-3 | DB-Z: 4 zones | | DB | ROOT: 4 I/O Domains |
|  | U4-4 |  |  |  |  |

**What’s Next**

Go to Understanding CPU Resource Allocation on page 26.

A single LDom is the only valid LDom configuration for PDomains with eight CMIOUs.

The following figure shows this configuration for PDomains with eight CMIOUs.

8_CMIOU_PDomain

Keeping in mind the domain configuration rules outlined in General LDom Configuration on page 18, following are the only valid LDom types for this configuration:

* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain)

The following table shows the only valid options for this LDom configuration:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Number and Type of Domains on Compute Server 1 | | | | | | | |
| Config | One | Two | Three | Four | Five | Six | Seven | Eight |
| F1 | APP-S11  DB  DB-Z | | | | | | | |

Example

For each PDomain, assume you want a Database Domain, where the Database Domain contains 4 zones (DB-Z). For this configuration, you would fill out the configuration information for that server in this way:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on Compute Server 1 | | | | | | | |
| Check One Box | Config | One | Two | Three | Four | Five | Six | Seven | Eight |
|  | F1 | DB-Z: 4 zones | | | | | | | |

Chapter

5

Understanding CPU Resource Allocation

This chapter provides information on allocating CPU resources for the LDoms:

* CPU Resources Overview on page 26
* CPU Cores Available for Database Zones and I/O Domains on page 27
* CPU Resource Allocation For PDomains With One CMIOU on page 29
* CPU Resource Allocation For PDomains With Two CMIOUs on page 30
* CPU Resource Allocation For PDomains With Three CMIOUs on page 31
* CPU Resource Allocation For PDomains With Four CMIOUs on page 33

CPU Resources Overview

The amount of CPU resources available for the LDoms varies, depending on the following factors:

* The number of CMIOUs in each server
* The number of CMIOUs in each PDomain
* The type of PDomain configuration that you want on each compute server
* The type of LDom configuration that you want on each PDomain

As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate CPU resources only with the dedicated domains. You cannot reallocate CPU resources for Root Domains after the initial installation.

Because resources allocated to Root Domains at the initial installation cannot be used by dedicated domains, carefully consider the amount of CPU resources that you want to have allocated to Root Domains at the time of the initial installation. In addition, once you have parked CPU resources from the dedicated domains, you cannot unpark them and reallocate them back to the dedicated domains after the initial installation.

CPU Cores Available for Database Zones and I/O Domains

**Note** – See Oracle Setup of Database Zones and I/O Domains Overview on page 18 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer.

Every CMIOU has 32 cores of CPU resources. The amount of CPU resources available for each domain varies, depending on the number of CMIOUs that are associated with that domain.

These sections provide more information on the CPU cores available for database zones and I/O Domains:

* CPU Cores Available for Database Zones on page 27
* CPU Cores Available for I/O Domains on page 28

CPU Cores Available for Database Zones

**Note** – Database zones can only be created on Database Domains that are dedicated domains. The information in this section applies to database zones and Database Domains that are dedicated domains.

When you first install the operating system instances on a domain, that domain is automatically designated as the global zone. When creating zones on Database Domains, the Database Domain is designated as the global zone, and the zones created on that Database Domain are designated as nonglobal zones.

A certain number of cores are always set aside for the global zone (the Database Domain). The remaining cores in the Database Domain are available for the nonglobal zones (the zones in the Database Domain). The number of cores that are set aside for the global zone varies, depending on the number of CMIOUs that are associated with the domain:

* One CMIOU associated with an LDom: 2 cores are reserved for the global zone, and the remaining cores are available for the nonglobal zones.
* Two or more CMIOUs associated with an LDom: 4 cores are reserved for the global zone, and the remaining cores are available for the nonglobal zones.

When using the information above, keep in mind that the number of cores that are set aside for the global zone applies only when you are creating zones (nonglobal zones) on that Database Domain. In that case, a certain number of cores are reserved for the Database Domain (the global zone) and the remaining cores are available for the zones on that Database Domain (the nonglobal zones). If you have a Database Domain with no zones, then all the cores are available for that Database Domain.

For each zone that you create, use a **minimum** of one core per zone. However, depending on the workload that you expect on a zone, a larger number of cores per zone might be preferable, thereby reducing the total number of zones on each compute server. Carefully consider the expected workload on each zone that you create, so that you allot the appropriate number of cores to those zones.

CPU Cores Available for I/O Domains

If you want I/O Domains set up on your Oracle SuperCluster, either at the time of the initial installation or afterwards, you must have at least one Root Domain set up at the time of the initial installation. I/O Domains can then be created from these Root Domains.

A certain number of CPU cores are always reserved for each Root Domain, depending on which domain is being used as a Root Domain in the domain configuration and the number of IB HCAs and 10GbE NICs that are associated with that Root Domain:

* The last domain in a domain configuration:
* Two cores reserved for a Root Domain with one IB HCA and 10GbE NIC
* Four cores reserved for a Root Domain with two IB HCAs and 10GbE NICs
* Any other domain in a domain configuration:
* One core reserved for a Root Domain with one IB HCA and 10GbE NIC
* Two cores reserved for a Root Domain with two IB HCAs and 10GbE NICs

The remaining CPU core resources allocated with each Root Domain are parked in the CPU repository, which can then be used by I/O Domains.

**Note** – For more information on the number of IB HCAs and 10GbE NICs associated with each domain, refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide*.

The CPU repository contains resources not only from the Root Domains, but also any parked resources from the dedicated domains. Whether the CPU core resources originated from dedicated domains or from Root Domains, once those resources have been parked in the CPU repository, those resources are no longer associated with their originating domain. These resources become equally available to I/O Domains.

In addition, the CPU repository contains parked resources only from the compute server that contains the domains providing those parked resources. In other words, if you have two compute servers and both compute servers have Root Domains, there would be two sets of CPU repositories, where each compute server would have its own CPU repository with parked resources.

For example, assume you have four domains on your compute server, with three of the four domains as Root Domains. Assume each domain has the following:

* One IB HCA and one 10GbE NIC
* 32 cores

In this situation, the following CPU resources are reserved for each Root Domain, with the remaining resources available for the CPU repository:

* Two cores reserved for the last Root Domain in this configuration. 30 cores available from this Root Domain for the CPU repository.
* One core reserved for the second and third Root Domains in this configuration.
* 31 cores available from each of these Root Domains for the CPU repository.
* A total of 62 cores (31 x 2) available for the CPU repository from these two Root Domains.

A total of 92 cores (30 + 62) are therefore parked in the CPU repository and are available for the I/O Domains.

CPU Resource Allocation For PDomains With One CMIOU

For PDomains with one CMIOU, each PDomain has a total of 32 cores of CPU resources.

Because there is only one choice for the LDom configuration for PDomains with one CMIOU, your only choice for the CPU resource allocation is 100% (32 cores), unless you want some of the CPU resources parked.

However, if the domain is a Database Domain that contains zones, use the worksheets in this section to provide information on the number of zones that you want on that Database Domain and the number of cores that you want allocated for each database zone. Similarly, if the domain is a Root Domain, use the worksheets in this section to provide information on the number of I/O Domains that you want the Oracle installer to set up on that Root Domain, and the number of cores that you want allocated for each I/O Domain.

Example

Assume you want a Database Domain (dedicated domain) for the LDom in this configuration, and you want two equal-sized zones on that Database Domain. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, you would have the following cores available for that Database Domain (global zone) and the zones within that Database Domain (nonglobal zones):

* Database Domain: 2 cores set aside for global zone
* Zones within that Database Domain: 30 cores available for nonglobal zones

Because you have 30 cores available for the zones in that Database Domain, you could have 15 cores assigned to both zones in that Database Domain, or you could allocate a smaller number of available cores to each zone (for example, 5 cores to each zone, or 10 cores total) and save the remaining cores for future zones that you might want to create on that Database Domain.

In this situation, you would complete the table in this section in this manner:

|  |  |
| --- | --- |
| Type of Domain on PDomain 0 on Compute Server 1 | Total Number of Cores |
| DB-Z: 32 cores  - Global zone: 2 cores set aside  - 2 nonglobal zones: 15 cores per zone | 32 |
| Note - Total number of cores must be 32, unless some resources are parked. |  |

CPU Resource Allocation For PDomains With Two CMIOUs

For PDomains with two CMIOUs, each PDomain has a total of 64 cores of CPU resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate CPU resources only with the dedicated domains. You cannot reallocate CPU resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of CPU resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you want Configuration U2-2 for the PDomain (two LDoms). You could assign 50% of the CPU resources to each domain, or you could assign different values to each domain, such as 40% of the CPU resources to the first domain and 60% to the second domain.

In addition, assume the first domain is a Database Domain that contains zones, and you want four equal-sized zones on that Database Domain. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 50% of the CPU and memory resources to each domain, you would have 32 cores available for the first domain, and you would have the following cores available for that Database Domain (global zone) and the zones within that Database Domain (nonglobal zones):

* Database Domain: 2 cores set aside for global zone
* Zones within that Database Domain: 30 cores available for nonglobal zones

Because you have 30 cores available for the zones in that Database Domain, you could have eight cores assigned to the first two zones and seven cores assigned to the other two zones within that Database Domain, or you could allocate a smaller number of available cores to each zone (for example, five cores to each zone, or 20 cores total) and save the remaining cores for future zones that you might want to create on that Database Domain.

Similarly, assume the second domain is a Root Domain, with the Oracle installer setting up four I/O Domains at the initial installation of the system. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 50% of the CPU resources to each domain, you would have 32 cores available for the second domain, and you would have the following cores available for that Root Domain and I/O Domains:

* Root Domain: 2 cores set aside for the Root Domain
* I/O Domains: 30 cores available for the I/O Domains

**Note** – Additional cores could be available for I/O Domains if cores from other domains were parked. For the purposes of this exercise, however, we are assuming that no other cores from other domains are parked, and the remaining 30 cores from this Root Domain are the only cores available for the I/O Domains.

Because you have 30 cores available for I/O Domains, you could create I/O Domains similar to the way you created database zones, where you could have eight cores assigned to the first two I/O Domains (16 cores for both) and seven cores assigned to the other two I/O Domains (14 cores for both), for a total of 30 cores. Or you could allocate a smaller number of available cores to each I/O Domain (for example, five cores to each I/O Domain, or 20 cores total), and save the remaining cores for future I/O Domains that you might want to create on that Root Domain.

Assuming you wanted to allocate five cores to each database zone and five cores to each I/O Domain, you would complete the table in this section in this manner:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | Total Number of Cores |
| One | Two |
|  | U2-1 |  | |  |
| X | U2-2 | DB-Z: 32 cores  - Global zone: 2 cores set aside  - 4 nonglobal zones: 5 cores per zone | ROOT: 32 cores  - Root Domain: 2 cores set aside  - 4 I/O Domains: 5 cores per I/O Domain | 64 |
| **Note** - Total number of cores must be 64, unless some resources are parked. | | | |  |

CPU Resource Allocation For PDomains With Three CMIOUs

For PDomains with three CMIOUs, each PDomain has a total of 96 cores of CPU resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate CPU resources only with the dedicated domains. You cannot reallocate CPU resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of CPU resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you want Configuration U3-3 for the PDomain (three LDoms). You could assign 33% of the CPU resources to each of the three domains. Or you could assign different values to each domain, such as 50% of the CPU resources to the first domain and 25% to the second and third domains.

In addition, assume the first domain is a Database Domain that contains zones, and you want four equal-sized zones on that Database Domain. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 33% of the CPU and memory resources to the first domain (32 cores), you would have these cores available for that Database Domain (global zone) and the zones within that Database Domain (nonglobal zones):

* Database Domain: 2 cores set aside for global zone
* Zones within that Database Domain: 30 cores available for nonglobal zones

Because you have 30 cores available for the zones in that Database Domain, you could have eight cores assigned to the first two zones and seven cores assigned to the other two zones within that Database Domain, or you could allocate a smaller number of available cores to each zone (for example, five cores to each zone, or 20 cores total) and save the remaining cores for future zones that you might want to create on that Database Domain.

Similarly, assume the third (last) domain is a Root Domain, with the Oracle installer setting up four I/O Domains at the initial installation of the system. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 33% of the CPU resources to the third domain, you would have 32 cores available for the third domain, and you would have the following cores available for that Root Domain and I/O Domains:

* Root Domain: 2 cores set aside for the Root Domain
* I/O Domains: 30 cores available for the I/O Domains

**Note** – Additional cores could be available for I/O Domains if cores from other domains were parked. For the purposes of this exercise, however, we are assuming that no other cores from other domains are parked, and the remaining 30 cores from this Root Domain are the only cores available for the I/O Domains.

Because you have 30 cores available for I/O Domains, you could create I/O Domains similar to the way you created database zones, where you could have eight cores assigned to the first two I/O Domains (16 cores for both) and seven cores assigned to the other two I/O Domains (14 cores for both), for a total of 30 cores. Or you could allocate a smaller number of available cores to each I/O Domain (for example, five cores to each I/O Domain, or 20 cores total), and save the remaining cores for future I/O Domains that you might want to create on that Root Domain.

Assuming you wanted to allocate five cores to each database zone and five cores to each I/O Domain, you would complete the table in this section in this manner:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
| X | U3-3 | DB-Z: 32 cores  - Global zone: 2 cores set aside  - 4 nonglobal zones: 5 cores per zone | DB: 32 cores | ROOT: 32 cores  - Root Domain: 2 cores set aside  - 4 I/O Domains: 5 cores per I/O Domain | 96 |
| Note **- Total number of cores must be 96, unless some resources are parked.** | | | | |  |

CPU Resource Allocation For PDomains With Four CMIOUs

For PDomains with four CMIOUs, each PDomain has a total of 128 cores of CPU resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate CPU resources only with the dedicated domains. You cannot reallocate CPU resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of CPU resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you want Configuration U4-3 for the PDomain (three LDoms). You could assign 50% of the CPU resources to the first domain and 25% to the second and third domains. Or you could assign different values to each domain, such as 40% of the CPU resources to the first domain and 30% to the second and third domains.

In addition, assume the first domain is a Database Domain that contains zones, and you want four equal-sized zones on that Database Domain. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 50% of the CPU and memory resources to the first domain (64 cores), you would have these cores available for that Database Domain (global zone) and the zones within that Database Domain (nonglobal zones):

* Database Domain: 4 cores set aside for global zone
* Zones within that Database Domain: 60 cores available for nonglobal zones

Because you have 60 cores available for the zones in that Database Domain, you could have 15 cores assigned to each of the four zones within that Database Domain, or you could allocate a smaller number of available cores to each zone (for example, 10 cores to each zone, or 40 cores total) and save the remaining cores for future zones that you might want to create on that Database Domain.

Similarly, assume the third (last) domain is a Root Domain, with the Oracle installer setting up four I/O Domains at the initial installation of the system. Using the information provided in CPU Cores Available for Database Zones and I/O Domains on page 27, and assuming you assigned 25% of the CPU resources to the third domain, you would have 32 cores available for the third domain, and you would have the following cores available for that Root Domain and I/O Domains:

* Root Domain: 2 cores set aside for the Root Domain
* I/O Domains: 30 cores available for the I/O Domains

**Note** – Additional cores could be available for I/O Domains if cores from other domains were parked. For the purposes of this exercise, however, we are assuming that no other cores from other domains are parked, and the remaining 30 cores from this Root Domain are the only cores available for the I/O Domains.

Because you have 30 cores available for I/O Domains, you could create I/O Domains similar to the way you created database zones, where you could have eight cores assigned to the first two I/O Domains (16 cores for both) and seven cores assigned to the other two I/O Domains (14 cores for both), for a total of 30 cores. Or you could allocate a smaller number of available cores to each I/O Domain (for example, five cores to each I/O Domain, or 20 cores total), and save the remaining cores for future I/O Domains that you might want to create on that Root Domain.

Assuming you wanted to allocate 15 cores to each database zone and five cores to each I/O Domain, you would complete the table in this section in this manner:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Number of Cores |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
| X | U4-3 | DB-Z: 64 cores  - Global zone: 4 cores set aside  - 4 nonglobal zones: 15 cores per zone | | DB: 32 cores | ROOT: 32 cores  - Root Domain: 2 cores set aside  - 4 I/O Domains: 5 cores per I/O Domain | 128 |
|  | U4-4 |  |  |  |  |  |
| Note - Total number of cores must be 128, unless some resources are parked. | | | | | |  |

**What’s Next**

Go to Understanding Memory Resource Allocation on page 36.

Chapter

6

Understanding Memory Resource Allocation

This chapter provides information on allocating memory resources for the LDoms in your system.

* Memory Resources Overview on page 36
* Memory Available for Database Zones and I/O Domains on page 37
* Memory Resource Allocation For PDomains With One CMIOU on page 39
* Memory Resource Allocation For PDomains With Two CMIOUs on page 40
* Memory Resource Allocation For PDomains With Three CMIOUs on page 40
* Memory Resource Allocation For PDomains With Four CMIOUs on page 42

# Memory Resources Overview

The amount of memory resources that you have available for the LDoms in your system varies, depending on these factors:

* The number of CMIOUs in each server
* The number of CMIOUs in each PDomain
* The type of PDomain configuration that you want on each compute server
* The type of LDom configuration that you want on each PDomain

As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate memory resources only with the dedicated domains. You cannot reallocate memory resources for Root Domains after the initial installation.

Because resources allocated to Root Domains at the initial installation cannot be used by dedicated domains, carefully consider the amount of memory resources that you want to have allocated to Root Domains at the time of the initial installation. In addition, once you have parked memory resources from the dedicated domains, you cannot unpark them and reallocate them back to the dedicated domains after the initial installation.

Memory Available for Database Zones and I/O Domains

**Note** – See Oracle Setup of Database Zones and I/O Domains Overview on page 18 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer...

Every CMIOU has 16 memory slots.

* In SuperCluster M8, each CMIOU is fully populated with 64 GB DIMMs, for a total of 1 TB (1024 GB) of memory in each CMIOU, with 960 GB available after DIMM sparing.
* In SuperCluster M7, each CMIOU is fully populated with 32 GB DIMMs, for a total of 512 GB of memory in each CMIOU, with 480 available after DIMM sparing.

The amount of memory available for each domain varies, depending on the number of CMIOUs that are associated with that domain.

These sections provide more information on the memory resources available for database zones and I/O Domains:

* Memory Resources Available for Database Zones on page 37
* Memory Resources Available for I/O Domains on page 37

Memory Resources Available for Database Zones

**Note** – Database zones can only be created on Database Domains that are dedicated domains. The information in this section applies to database zones and Database Domains that are dedicated domains.

The amount of memory resources available for database zones depends on the amount of memory resources that you have assigned to the Database Domain, and then how you want to divide those memory resources up for the database zones within that Database Domain.

For example, assume you have a Database Domain that has two CMIOUs associated with it. By default, 960 GB of memory would be available to that Database Domain. You could therefore have four equal-sized database zones within that Database Domain, where each database zone has 200 GB of memory assigned to it, for a total of 800 GB of memory for all database zones. The remaining 160 GB of memory in this Database Domain could then be saved for future database zones that you might want to create on this Database Domain.

Memory Resources Available for I/O Domains

If you want I/O Domains set up on your Oracle SuperCluster, either at the time of the initial installation or afterwards, you must have at least one Root Domain set up at the time of the initial installation. I/O Domains can then be created from these Root Domains.

A certain amount of memory resources are always reserved for each Root Domain, depending on which domain is being used as a Root Domain in the domain configuration and the number of IB HCAs and 10GbE NICs that are associated with that Root Domain:

* The last domain in a domain configuration:
* 32 GB of memory reserved for a Root Domain with one IB HCA and 10GbE NIC
* 64 GB of memory reserved for a Root Domain with two IB HCAs and 10GbE NICs
* Any other domain in a domain configuration:
* 16 GB of memory reserved for a Root Domain with one IB HCA and 10GbE NIC
* 32 GB of memory reserved for a Root Domain with two IB HCAs and 10GbE NICs

The remaining memory resources allocated with each Root Domain are parked in the memory repository, which can then be used by I/O Domains.

Note – For more information on the number of IB HCAs and 10GbE NICs associated with each domain, refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide*.

The memory repository contains resources not only from the Root Domains, but also any parked resources from the dedicated domains. Whether memory resources originated from dedicated domains or from Root Domains, once those resources have been parked in the memory repository, those resources are no longer associated with their originating domain. These resources become equally available to I/O Domains.

In addition, the memory repository contains parked resources only from the compute server that contains the domains providing those parked resources. In other words, if you have two compute servers and both compute servers have Root Domains, there would be two sets of memory repositories, where each compute server would have its own memory repository with parked resources.

For example, assume you have four domains on your compute server, with three of the four domains as Root Domains. Assume each domain has the following:

* One IB HCA and one 10GbE NIC
* 480 GB of memory

In this situation, the following memory resources are reserved for each Root Domain, with the remaining resources available for the memory repository:

* 32 GB of memory reserved for the last Root Domain in this configuration. 448 GB of memory available from this Root Domain for the memory repository.
* 16 GB of memory reserved for the second and third Root Domains in this configuration.
* 464 GB of memory available from each of these Root Domains for the memory repository.
* A total of 928 GB of memory (464 x 2) available for the memory repository from these two Root Domains.

A total of 1376 GB of memory (448 + 928) are therefore parked in the memory repository and are available for the I/O Domains.

Memory Resource Allocation For PDomains With One CMIOU

For PDomains with one CMIOU:

* In a SuperCluster M8, each PDomain has a total of 960 GB of available memory resources.
* In a SuperCluster M7, each PDomain has a total of 480 GB of available memory resources.

Because there is only one choice for the LDom configuration for PDomains with one CMIOU, your only choice for the memory resource allocation is 100% (480 GB), unless you want some of the memory resources parked.

However, if the domain is a Database Domain that contains zones, use the worksheets in this section to provide information on the number of zones for that Database Domain and the amount of memory resources that you want allocated for each database zone. Similarly, if the domain is a Root Domain, use the worksheets in this section to provide information on the number of I/O Domains that you want the Oracle installer to set up on that Root Domain, and the amount of memory resources that you want allocated for each I/O Domain.

Example

Assume you have a SuperCluster M7 and you want a Root Domain for the LDom in this configuration, and you want four equal-sized I/O Domains on that Root Domain. Using the information provided in Memory Resources Available for I/O Domains on page 37, you would have the following amount of memory resources available for the Root Domain and the I/O Domains on that Root Domain:

* 32 GB of memory reserved for the Root Domain
* 448 GB of memory available for the I/O Domains

Because you have 448 GB of memory available for the I/O Domains, you could have 50 GB of memory assigned to each I/O Domain (200 GB of memory total) and save the remaining memory for future I/O Domains that you might want to create on that Root Domain.

In this situation, you would complete the table in this section in this manner:

|  |  |
| --- | --- |
| Type of Domain on PDomain 0 on Compute Server 1 | Total Amount of Memory |
| ROOT: 480 GB  - Root: 32 GB set aside  - 4 I/O Domains: 50 GB per I/O Domain | 480 GB |
| Note - Total amount of memory must be 960 GB (SuperCluster M8) or 480 GB (SuperCluster M7), unless some resources are parked. |  |

Memory Resource Allocation For PDomains With Two CMIOUs

For PDomains with two CMIOUs:

* In a SuperCluster M8, each PDomain has a total of 1920 GB of available memory resources.
* In a SuperCluster M7, each PDomain has a total of 960 GB of available memory resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate memory resources only with the dedicated domains. You cannot reallocate memory resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of memory resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you have a SuperCluster M7 and you want Configuration U2-2 for the PDomain (two LDoms). You could assign 480 GB of memory resources to each domain.

Because you have 480 GB of memory available for the I/O Domains, you could have 50 GB of memory assigned to each I/O Domain (200 GB of memory total) and save the remaining memory for future I/O Domains that you might want to create on that Root Domain.

You would complete the table in this section in this manner in this situation:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | Total Amount of Memory |
| One | Two |
|  | U2-1 |  | |  |
| X | U2-2 | DB-Z: 480 GB  - 4 nonglobal zones: 100 GB per zone | ROOT: 480 GB  - Root: 32 GB set aside  - 4 I/O Domains: 50 GB per I/O Domain | 960 GB |
| **Note -** Total amount of memory resources must be 1920 GB (SuperCluster M8) or 960 GB (SuperCluster M7), unless some resources are parked. | | | |  |

Memory Resource Allocation For PDomains With Three CMIOUs

For PDomains with three CMIOUs

* In a SuperCluster M8, each PDomain has a total of 2880 of available memory resources.
* In a SuperCluster M7, each PDomain has a total of 1440 GB of available memory resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate memory resources only with the dedicated domains. You cannot reallocate memory resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of memory resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you have a SuperCluster M7 and you want Configuration U3-3 for the PDomain (three LDoms). You could assign 480 GB of memory resources to each domain.

In addition, assume the first domain is a Database Domain that contains zones, and you want four equal-sized zones on that Database Domain. Using the information provided in Memory Resources Available for Database Zones on page 37, you could have 100 GB of memory resources assigned to each database zone, for a total of 400 GB of memory for all four database zones. The remaining 80 GB of memory resources could then be saved for future database zones that you might want to create on this Database Domain.

Similarly, assume the third domain is a Root Domain, with the Oracle installer setting up four I/O Domains at the initial installation of the system. Using the information provided in Memory Resources Available for I/O Domains on page 37, you would have the following memory resources available for the Root Domain and the I/O Domains:

* 32 GB of memory reserved for the Root Domain
* 448 GB of memory available for the I/O Domains

Because you have 448 GB of memory available for the I/O Domains, you could have 50 GB of memory assigned to each I/O Domain (200 GB of memory total) and save the remaining memory for future I/O Domains that you might want to create on that Root Domain.

You would complete the table in this section in this manner in this situation:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
| X | U3-3 | DB-Z: 480 GB  - 4 nonglobal zones: 100 GB per zone | DB: 460 GB | ROOT: 480 GB  - Root: 32 GB set aside  - 4 I/O Domains: 50 GB per I/O | **1440 GB** |
| Note - Total amount of memory resources must be 2880 GB (SuperCluster M8) or 1440 GB (SuperCluster M7), unless some resources are parked. | | | | |  |

Memory Resource Allocation For PDomains With Four CMIOUs

For PDomains with four CMIOUs:

* In a SuperCluster M8, each PDomain has a total of 3840 GB of available memory resources.
* In a SuperCluster M7, each PDomain has a total of 1980 GB of memory resources.

**Note** – As described in General LDom Configuration on page 18, if you have a mixture of dedicated domains and Root Domains, after the initial installation, you can reallocate memory resources only with the dedicated domains. You cannot reallocate memory resources for Root Domains after the initial installation.  
  
Because Root Domains cannot be resized or have resources reallocated (parked) after the initial installation, carefully consider the amount of memory resources that you want to have allocated to Root Domains when entering information in the following tables.

Example

Assume you have a SuperCluster M7 and you want Configuration U4-3 for the PDomain (three LDoms). You could assign 1 TB (1024 GB) of memory resources to the first domain and 478 GB of memory resources to the second and third domains.

You would complete the table in this section in this manner in this situation:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Amount of Memory |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
| X | U4-3 | DB-Z: 1 TB (1024 GB)  - 4 nonglobal zones: 200 GB per zone | | DB: 478 GB | App: 478 GB | 1980 GB |
|  | U4-4 |  |  |  |  |  |
| Note - Total amount of memory resources must be 3840 (SuperCluster M8) or 1980 GB (SuperCluster M7), unless some resources are parked. | | | | | |  |

Chapter

7

Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options

Beginning with the version 2.4 release of the SuperCluster software, the following options are now available:

* Multiple Client Access Network Overview on page 43
* Network Recipe Overview on page 43
* VLAN Tag Overview on page 44
* RAC Cluster Overview on page 45

Multiple Client Access Network Overview

You can now have up to eight different client access networks configured on your SuperCluster. Once you provide the starting IP address, gateway address and subnet mask for each client access network, you can then use different client access networks for the Oracle RAC groups, logical domains and zones in your SuperCluster.

Provide information on the client networks in the following chapters:

* Number of client networks that you want in your SuperCluster: Rack Configuration Worksheets on page 65
* Specific information for each client network: Client Access Networks Configuration Worksheets on page 68

Network Recipe Overview

You can now have up to eight network recipes configured on your SuperCluster. Each network recipe has the following unique characteristics:

* Recipe name
* Domain name
* IP addresses of the name servers, separated by spaces
* IP addresses of the time servers, separated by spaces
* Time zone

For example, assume you would like to create a network recipe specifically for the Los Angeles, California, time zone. You could create a network recipe with these unique characteristics in that case:

* Recipe name: los\_angeles
* Domain name: example.com
* Name servers: 192.0.2.1 192.0.2.2
* Time servers: 192.0.2.3 192.0.2.4
* Time zone: America/Los\_Angeles

Provide information on the network recipes in the following chapters:

* Number of network recipes that you want in your SuperCluster: Rack Configuration Worksheets on page 65
* Specific information for each network recipe: Network Recipe Configuration Worksheets on page 73

VLAN Tag Overview

VLAN tagging segregates traffic between domains so that you see only the traffic on your virtual network.

You can now have up to sixteen virtual LAN (VLAN) tags that you can use for the different Oracle RAC groups, application domains and dedicated database domains containing zones.

Provide information on the VLAN tags in the following chapters:

* Number of VLAN tags that you want in your SuperCluster: Rack Configuration Worksheets on page 65
* Specific information for each VLAN tag: VLAN Tag Configuration Worksheets on page 79

RAC Cluster Overview

Even though RAC cluster information was available in previous releases, with the version 2.4 release of the SuperCluster software, you can now apply these three new V2.4 features (multiple client access networks, network recipes and VLAN tagging) to RAC clusters.

For example, assume you took advantage of all three of the new V2.4 features, and for your SuperCluster, you created:

* Multiple client access networks (for example, four separate client access networks, labeled client access networks 1 - 4)
* Multiple network recipes (for example, four network recipes, labeled network recipes 1 - 4)
* Multiple VLAN tags (for example, four VLAN tags, labeled VLANs 101 – 104)

Now assume that you are using four RAC clusters in your SuperCluster. You could assign a different client access network, network recipe, and VLAN tag to each of these four RACs, such as the following configurations:

* RAC 1:
  + Client access network 1
  + Network recipe 1
  + VLAN tag 101
* RAC 2:
  + Client access network 2
  + Network recipe 2
  + VLAN tag 102

And so on. Note that you could also have multiple RAC clusters using the same configurations, where, for example, RACs 3 and 4 could both be on the same client access network, use the same network recipe, and have the same VLAN tags.

Provide information on the RAC clusters in the following chapters:

* Number of RAC clusters that you want in your SuperCluster: Rack Configuration Worksheets on page 65
* Specific information for each RAC cluster: RAC Cluster Configuration Worksheets on page 81

**What’s Next**

Go to Determining Network IP Addresses on page 46.

Chapter

8

Determining Network IP Addresses

Use the information in this chapter to determine the total number of IP addresses that you need for these networks on your system:

* Management network
* Client access network
* IB network

Read and understand the information on IP addresses and Oracle Enterprise Manager Ops Center 12c Release 2 (12.2.0.0.0), then complete the configuration worksheets in this chapter to provide the starting IP address and to determine the total number of IP addresses that you will need for the three networks on your system:

* Network Overview on page 47
* IP Addresses and Oracle Enterprise Manager Ops Center 12c Release 2 on page 48
* Management Network IP Addresses on page 50
* Understanding Client Access Network IP Addresses on page 51
* Understanding IB Network IP Addresses on page 53

Network Overview

The following networks are used with SuperCluster M8 and SuperCluster M7:

* Management network: A single network used for the 1GbE host management and Oracle Integrated Lights Out Manager (Oracle ILOM). The management network is used for administrative work for all components of SuperCluster M8 or SuperCluster M7. It connects the management network interface and Oracle ILOM on all the components in the rack to the Cisco Catalyst 4948 Ethernet switch. The following connections are used for the components in the rack for the management network:

|  |  |  |
| --- | --- | --- |
| Component | 1GbE Host Management | Oracle ILOM |
| Compute servers | NET 0 to NET 3 ports on 1GbE NIC | NET MGT ports on compute server |
| Exadata Storage Servers | NET 0 ports | NET MGT ports |
| ZFS storage controller 1 | NET 0 port | NET 0 port |
| ZFS storage controller 2 | NET 1 port | NET 0 port |
| IB leaf and spine switches | NET 0 ports | N/A |
| Power distribution units | NET MGT ports | N/A |

* Client access network: 10GbE network, with connections to the 10GbE NICs in the compute servers.
* IB private network: Used for communication between components installed in SuperCluster M8 or SuperCluster M7. The IB private network is a nonroutable network fully contained in SuperCluster M8 or SuperCluster M7, and does not connect to your existing network. The IB network requires three separate subnets for configuration. This network is automatically configured during installation.
* Backup/Data Guard network: Used as a backup network, if applicable.

Supported IPMP Network Features

SuperCluster network interfaces use link-based IP network multipathing (IPMP) for the IB switches, the 10GbE Client Access network, and the GbE management network. Datalink multipathing (DLMP) and probe-based IPMP (including transitive IPMP) are not supported.

IPMP ports are always configured active-standby, with the exception of IB HCA ports in the global zone of Database Dedicated Domains, where ports are configured active-active for the database pkey 0xFFFF partition (and therefore consume two IP addresses per HCA rather than one). All other IB ports are configured active-standby, including for non-global Database Zones in Database Dedicated Domains, and for both global zones and non-global zones in Database I/O domains.

VLAN tagging and trunking are supported on SuperCluster both in domains and zones.

Aggregation (LACP) is supported in Dedicated Domains (some manual configuration is required), but it is not supported in I/O Domains.

IP Addresses and Oracle Enterprise Manager Ops Center 12c Release 2

For previous versions of Oracle Enterprise Manager Ops Center, the Ops Center software was installed and run from the SuperCluster system. Beginning with the Oracle Enterprise Manager Ops Center 12c Release 2 (12.2.0.0.0) release, the Ops Center software must now run on a system (Enterprise Controller host) outside of the SuperCluster system.

The following conditions apply to Oracle engineered systems, such as SuperCluster systems.

One or more Oracle engineered systems can be discovered and managed by a single Oracle Enterprise Manager Ops Center instance based on these conditions:

* None of the Oracle engineered system instances have overlapping private networks connected through IB, that is, networks that have the same CIDR (Classless Inter-Domain Routing) or networks that are subblocks of the same CIDR. For example, 192.0.2.1/21 and 192.0.2.1/24 are overlapping.
* None of the Oracle engineered system instances or generic datacenter assets have overlapping management or client access networks connected through Ethernet, that is, networks that have the same CIDR or networks that are subblocks of the same CIDR. For example, 192.0.2.1/21 and 192.0.2.1/24 are overlapping. As an exception, you can use the same CIDR (not subblock) for multiple systems. For example, you can use 192.0.2.1/22 as a CIDR for Ethernet network on one or more engineered systems or generic datacenter assets.
* None of the Oracle engineered system instances have overlapping public networks connected through EoIB, that is, networks that have the same CIDR or networks that are subblocks of the same CIDR. For example, 192.0.2.1/21 and 192.0.2.1/24 are overlapping. As an exception, you can use the same CIDR (not subblock) for multiple systems. For example, you can use 192.2.0.0/22 as a CIDR for public EoIB network on multiple engineered systems.
* None of the networks configured in Oracle Enterprise Manager Ops Center overlaps with any network, that is, overlapping networks are not supported by Oracle Enterprise Manager Ops Center.

**Note** – To manage two or more Oracle engineered systems that have overlapping networks or any networks already present in Oracle Enterprise Manager Ops Center, reconfigure one of the conflicting systems before it is discovered and managed by the same Oracle Enterprise Manager Ops Center.

Example

The following are example SuperCluster network configurations that you can use when configuring the network to discover and manage SuperCluster systems. Status OK indicates a valid configuration, and status Fail indicates an invalid configuration.

**Example SuperCluster Network Configuration 1**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1GbE | 10GbE | IB |
| First SuperCluster System | 192.0.251.0/21 | 192.4.251.0/24 | 192.168.8.0/22 |
| Second SuperCluster System | 192.0.251.0/21 | 192.4.251.0/24 | 192.168.12.0/22 |
| Status | OK | OK | OK |

**Status:**

OK – First SuperCluster system 1GbE and second SuperCluster system 1GbE share the same network.

OK – First SuperCluster system 10GbE and second SuperCluster system 10GbE share the same network.

OK – First SuperCluster system IB does not overlap with second SuperCluster system IB.

**Example SuperCluster Network Configuration** 2

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1GbE | 10GbE | IB |
| First SuperCluster System | 192.0.251.0/21 | 192.0.250.0/24 | 192.168.8.0/22 – IB fabric connected with second SuperCluster system |
| Second SuperCluster System | 192.6.0.0/21 | 192.0.250.0/24 | 192.168.8.0/22– IB fabric connected with first SuperCluster system |
| Status | OK | OK | OK |

**Status:**

OK – First SuperCluster system 1GbE and second SuperCluster system 1GbE represent different non-overlapping networks.

OK – First SuperCluster system 10GbE and second SuperCluster system 10GbE share the same network.

OK – First SuperCluster system IB and second SuperCluster system IB represent the same network as they are interconnected.

**Example SuperCluster Network Configuration 3**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1GbE | 10GbE | IB |
| First SuperCluster System | 192.0.2.1/21 | 192.0.251.0/21 | 192.168.8.0/22 |
| Second SuperCluster System | 192.0.0.128/25 | 192.0.7.0/24 | 192.168.8.0/22 |
| Status | FAIL | OK | FAIL |

**Status:**

FAIL – First SuperCluster system 1GbE and second SuperCluster system 1GbE define overlapping networks.

OK – First SuperCluster system 10GbE and second SuperCluster system 10GbE represent different non-overlapping networks.

FAIL – First SuperCluster system 1GbE and second SuperCluster system 10GbE define overlapping networks.

FAIL – First SuperCluster system IB and second SuperCluster system IB do not define unique private networks (racks are not interconnected).

Management Network IP Addresses

You need management network IP addresses for these components in SuperCluster M8 or SuperCluster M7:

* One 1GbE host management IP address for every dedicated domain (Database Domain or Application Domain) and Root Domain in each PDomain.
* One 1GbE host management IP address for every database zone in a Database Domain that will be set up by your Oracle installer[[6]](#footnote-6).
* One 1GbE host management IP address for every I/O Domain that will be set up by your Oracle installer6.
* Two 1GbE host management IP addresses for every PDomain in your system (two for each service processor in your system)
* One 1GbE host management IP address for every SPARC M8 or SPARC M7 server in your SuperCluster (one for each floating service processor alias in each server)
* One 1GbE host management IP address for each of these components:
* Cisco Catalyst switch
* IB switches (3)
* PDUs (2)
* Storage servers
* ZFS storage controllers (2)
* ISCSI for ZFS controllers (2)
* One Oracle ILOM IP address for each of these components:
* Storage servers
* ZFS storage controllers (2)

**Note** – It is best practice to have all the IP addresses on this network in sequential order. If you cannot set aside the appropriate number of sequential IP addresses for this network, and you must break the IP addresses into nonsequential addresses, the Oracle installer can break the IP addresses on this network into nonsequential blocks. However, this makes the information in the Installation Template more complex, and requires additional communication between you and your Oracle representative to ensure that the nonsequential IP addresses are correctly assigned to the appropriate components or domains in the system.

**Note** – Even though your Oracle installer can configure up to eight database zones or I/O Domains during the initial installation of your Oracle SuperCluster, keep in mind that you can configure additional database zones and I/O Domains after the initial installation. So additional IP addresses might be needed for the management network for these future configurations you set up. Do not provide that information in this table, but keep this in mind so that you can plan accordingly for the total number of IP addresses needed for the management network for the future.

Understanding Client Access Network IP Addresses

As described in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43, beginning with the version 2.4 release of the SuperCluster software, you can now have up to eight different client access networks for dedicated domains.

**Note** – Even though your Oracle installer can configure up to eight database zones or I/O Domains during the initial installation of your Oracle SuperCluster, keep in mind that you can configure additional database zones and I/O Domains after the initial installation. So additional IP addresses might be needed for the 10GbE client access network for these future configurations. Do not provide that information in these tables, but keep this in mind so that you can plan accordingly for the total number of IP addresses needed for the 10GbE client access network for the future.

You need client access network IP addresses for these components in SuperCluster M8 or SuperCluster M7:

* One 10GbE client access IP address for certain domains:
* One 10GbE client access IP address for every dedicated domain (Database Domain or Application Domain) in each PDomain.
* For Root Domains, one 10GbE client access IP address only if the Root Domain is the first LDom in the first PDomain in your SuperCluster M8 or SuperCluster M7.

Note that no other Root Domains in your SuperCluster M8 or SuperCluster M7 need a 10GbE client access IP address.

* One 10GbE client access IP address for every database zone in a Database Domain that will be set up by your Oracle installer[[7]](#footnote-7).
* One 10GbE client access IP address for every I/O Domain that will be set up by your Oracle installer7.
* Two 10GbE client access IP addresses for the ZFS storage controllers. Note that these IP addresses are automatically pulled from the first (default) client access network.
* 10GbE client access IP addresses for Oracle RAC VIP and SCAN for every Database Domain (either dedicated domain or Database I/O Domain) and database zone that are part of a RAC:
* One Oracle RAC VIP address for each Database Domain (either dedicated domain or Database I/O Domain) that is part of a RAC
* One Oracle RAC VIP address for every database zone within a Database Domain (dedicated domain) that is part of a RAC
* Three SCAN IP addresses for each Oracle RAC in your SuperCluster M8 or SuperCluster M7

Note that these IP addresses are automatically pulled from the first (default) client access network.

Physical Connections for the Client Access Network

A 10GbE client access network infrastructure is a required part of the installation process for SuperCluster M8 or SuperCluster M7.

* SuperCluster M8 ships with these components:
  + One quad-port 10 Gb Ethernet Adapter in each CMIOU
  + Transceivers preinstalled in the 10 Gb Ethernet Adapters
  + Two 10-meter QFSP+ optical 2-way splitter cables (10m, MPO/MTP to 2 LC) for each CMIOU

For Root Domains, two 10GbE connections are made to your client network. Optionally, you can request two additional connections. All Root Domains within a PDomain must be cabled the same. This configuration choice must be made during the installation.

* SuperCluster M7 ships with these components:
  + One dual-port Sun Dual 10GbE SFP+ PCIe NIC in each CMIOU
  + Transceivers preinstalled in the 10GbE NICs
  + One 10-meter SFP-QSFP optical 4-way splitter cable for each CMIOU

If you plan to use the supplied cables for the connection to your client access network, you must provide these 10GbE client access network infrastructure components:

* 10GbE switch with available connections, such as the Sun Network 10GbE Switch 72p
* Appropriate number of transceivers to connect the splitter cables to your 10GbE switch

If you do not want to use the supplied cables for the connection to your client access network, you must provide these 10GbE client access network infrastructure components:

* 10GbE switch
* Suitable optical cables with connections for the compute server side
* Suitable transceivers to connect all cables to your 10GbE switch

If you do not have a 10GbE client access network infrastructure set up at your site, you must have a 10GbE network switch available at the time of installation that SuperCluster can be connected to, even if the network speed drops from 10 Gb to 1 Gb on the other side of the 10GbE network switch. SuperCluster cannot be installed at the customer site without the 10GbE client access network infrastructure in place.

Understanding IB Network IP Addresses

This section describes the IB network and the IP addresses that are needed for this network.

Note these important characteristics of the IB network:

* The IB network is a private network. The IP addresses and host names assigned to the components and domains for the IB network should not be registered in the DNS.
* The IB addresses for the components associated with the Database Domains must be on a different subnet from the IB addresses for the components associated with the Application Domains and Root Domains.
* These are the default IB IP addresses for all components in the system that should remain, if possible:
* Sequential IP addresses for the first subnet, starting with 192.168.28.1, for the ZFS storage appliance. The ending IP address for this subnet varies, depending on the number of domains and database zones in the system.
* Sequential IP addresses for the second subnet, starting with 192.168.10.1, for components associated with the Database Domains. The ending IP address for this subnet varies, depending on the number of Database Domains in the system.
* Sequential IP addresses for the third subnet, starting with 192.168.24.1, for the iSCSI devices using IPoIB. The ending IP address for this subnet varies, depending on the number of dedicated domains and Root Domains in the system.
* If there are conflicts with the default IP addresses for the IB network and existing IP addresses already on your network, or if this is another SuperCluster system that is being monitored through the same Enterprise Controller host, you can change the default IP addresses. The addresses for the components associated with the Database Domains must remain on a different subnet from the addresses for the components associated with the ZFS storage appliance.

IP Addresses for the ZFS Storage IB Network

The default starting IP address for this subnet is 192.168.28.1, and the IP addresses for this subnet are assumed to be sequential.

**Note** – The instructions in this section assume the starting IP address for this subnet is 192.168.28.1 based on the assumption that this is the only SuperCluster system being monitored by the Enterprise Controller host. If this is not the case, you must use different IP addresses ranges for the IB network for each SuperCluster system. See the list of requirements in IP Addresses and Oracle Enterprise Manager Ops Center 12c Release 2 on page 48 for more information.

You need IP addresses for these components for the ZFS storage IB network:

* Two IP addresses for the ZFS storage controller cluster
* One IP address for every dedicated domain (Database Domain or Application Domain) and Root Domain in each PDomain
* One IP address for every database zone that is set up by your Oracle installer (see Oracle Setup of Database Zones and I/O Domains Overview on page 18 for more information)
* One IP address for every I/O Domain that is set up by your Oracle installer (see Oracle Setup of Database Zones and I/O Domains Overview on page 18 for more information)

**Note** – Even though your Oracle installer can configure up to eight I/O Domains during the initial installation of your Oracle SuperCluster, keep in mind that you will be able to configure additional I/O Domains after the initial installation. So additional IP addresses might be needed for the IB network for these future configurations you set up. Keep this in mind so that you can plan accordingly for the total number of IP addresses needed for the IB network for the future.

IP Addresses for the Database Domain IB Network

The default starting IP address for this subnet is 192.168.10.1, and the IP addresses for this subnet are assumed to be sequential.

**Note** – The instructions in this section assume the starting IP address for this subnet is 192.168.10.1 based on the assumption that this is the only SuperCluster system being monitored by the Enterprise Controller host. If this is not the case, you must use different IP addresses ranges for the IB network for each SuperCluster system. See the list of requirements in IP Addresses and Oracle Enterprise Manager Ops Center 12c Release 2 on page 48 for more information.

You need IP addresses for the following components on the Database Domain IB network:

* Two IP addresses for every storage server in your system
* Two IP addresses for every Database Domain (dedicated domain) in your system
* Two IP addresses for every Database I/O Domain set up by your Oracle installer[[8]](#footnote-8)
* Two IP addresses for every database zone set up by your Oracle installer8

**Note** – Even though your Oracle installer can configure up to eight database zones or I/O Domains during the initial installation of your Oracle SuperCluster, keep in mind that you can configure additional database zones and I/O Domains after the initial installation. So additional IP addresses might be needed for the IB network for these future configurations you set up. Keep this in mind so that you can plan accordingly for the total number of IP addresses needed for the IB network for the future.

IP Addresses for the iSCSI Devices Using IPoIB Network

The default starting IP address for this subnet is 192.168.24.1, and the IP addresses for this subnet are assumed to be sequential.

**Note** – The instructions in this section assume the starting IP address for this subnet is 192.168.24.1 based on the assumption that this is the only SuperCluster system being monitored by the Enterprise Controller host. If this is not the case, you must use different IP addresses ranges for the IB network for each SuperCluster system. See the list of requirements in IP Addresses and Oracle Enterprise Manager Ops Center 12c Release 2 on page 48 for more information.

For the iSCSI devices using IPoIB network, you need IP addresses for these components:

* Two IP addresses for the ZFS storage controller cluster
* Two IP addresses for every domain (either dedicated domains or Root Domains) that you have in your SuperCluster M8 or SuperCluster M7.

Note that you not need additional IP addresses for database zones or I/O Domains for the iSCSI devices using IPoIB network.

For example, assume you have the following configuration:

* Two compute servers, using the R2-1 PDomain configuration:
* Two PDomains in each compute server, for a total of four PDomains in this SuperCluster
* Four CMIOUs in each PDomain, or a total of eight CMIOUs in each compute server
* U4-3 LDom configuration on each PDomain (three LDoms), with the following types of domains in each U4-3 LDom configuration:
* First domain: Database Domain, containing zones, with the Oracle installer setting up four database zones
* Second domain: Database Domain, where the Database Domain does not contain zones
* Third domain: Root Domain, with the Oracle installer setting up four I/O Domains

In this situation, you would need **26** total IP addresses for the iSCSI devices using IPoIB network:

* Two network IP addresses for the ZFS storage controller cluster
* Two network IP addresses for each of the three LDoms on each PDomain, with four total PDomains on the two compute servers (2 x 3 x 4).

**What’s Next**

Go to Network Configuration Worksheets on page.

Chapter

9

Network Configuration Worksheets

Read and understand the information in Determining Network IP Addresses on page 46 before completing any worksheets in this section.

Use the worksheets in this section to provide the starting IP address and to determine the total number of IP addresses that you will need for the networks for your system:

* Client Access Network Worksheets on page 57
* Management Network Configuration Worksheets on page 59

Client Access Network Worksheets

Client Access Network -- Physical Connections Worksheet

You must provide a 10GbE client access network infrastructure components such as a switch and transceivers for the switch. For further details, refer to these resources:

* Physical Connections for the Client Access Network on page 52

Resources in other documents:

* Preparing the Networks
* Connect SuperCluster Systems to the Facility Networks
* Compute Server Cables Components

Additionally, for SuperCluster M8, specify how the quad-port 10GbE interfaces are physically configured using this worksheet.

Table 4 – (SuperCluster M8 Only) Client Network Physical Connections Worksheet

|  |  |
| --- | --- |
| Item | Entry |
| **For SuperCluster M8:**  Each quad-port NIC provides four 10 GbE ports through splitter cables. The ports are paired together, providing port pair 1 and port pair 2.  By default, port pair 1 is used as the default client access network, and port pair 2 is unused.  You can request that port pair 2 be made available as an additional network resource, providing another 10 GbE interface to the same network, or be configured as a different network providing network isolation.  Enable port pair 2? (**yes**, **no**) |  |
| **For SuperCluster M8 with port pair 2 enabled:**  Specify how the additional network interface is configured:   * **Network 1** – Configure port pair 2 to client access network 1, delivering additional ports and additional bandwidth on the same network. * **Network 2** -- Set up as separate isolated network on network 2. |  |
| Note to Oracle personnel – Run the appropriate port pairing commands to configure the port pairs. |

Client Access Network -- Number of IP Addresses Worksheets

With the introduction of multiple client access networks in the version 2.4 release of the SuperCluster software, you now provide the necessary information for each client network in Client Access Networks Configuration Worksheets on page 68.

As you provide information later in this document on each of the logical domains that you want in your SuperCluster, you also provide information on which of the client access networks you want to use for each of your logical domains.

Use the following table to determine the number of IP addresses that you will need for each client access network, depending on which client access network it is and the type of logical domain.

Table 5 -- Client Access Network IP Addresses Worksheet

|  |  |
| --- | --- |
| Item | Entry |
| If this is the first (default) client access network, default entry of 2 for the 10GbE client access IP addresses for the ZFS storage controllers. | 2 |
| If the first LDom in the first PDomain is a Root Domain, enter 1 in this field. Do not provide entries for any other Root Domain in your SuperCluster. |  |
| For compute server 1, enter the number of dedicated domains, I/O Domains and database zones that the Oracle installer will configure on this server, so that one 10GbE client access IP address is assigned to each of these domains and zones.  Do not include any Root Domains in this entry. |  |
| For compute server 2, enter the number of dedicated domains, I/O Domains and database zones that the Oracle installer will configure on this server, so that one 10GbE client access IP address is assigned to each of these domains and zones.  Do not include any Root Domains in this entry. |  |
| For compute server 1, how many of the following are part of a RAC:   * Database Domains (dedicated domains or Database I/O Domains) * Database zones   Enter the total number of Database Domains and database zones on this server that are part of a RAC, so that one RAC VIP address is assigned to each Database Domain and database zone in the server. |  |
| For compute server 2, how many of the following are part of a RAC:   * Database Domains (dedicated domains or Database I/O Domains) * Database zones   Enter the total number of Database Domains and database zones on this server that are part of a RAC, so that one RAC VIP address is assigned to each Database Domain and database zone in the server. |  |
| How many Oracle RACs will there be altogether within your SuperCluster M8 or SuperCluster M7?  Enter the total number of Oracle RACs that will be in your system times 3 so that three SCAN IP addresses are assigned to each RAC. For example, if you have four Oracle RACs in your system, enter 12 in this field. |  |
| Add the entries from the Entry column. This is the total number of IP addresses that you will need for the client access network for this server. |  |

**What’s Next**

Go to Management Network Configuration Worksheets on page 59 to provide network parameters for the IB network.

Management Network Configuration Worksheets

Complete the worksheets in the following sections for the management network:

* General Management Network Configuration Worksheet on page 59
* Management Network IP Addresses Configuration Worksheet on page 60

General Management Network Configuration Worksheet

Use this worksheet to provide the subnet mask and gateway IP address for the management network.

Table 6 -- General Management Network Configuration Worksheet

|  |  |  |
| --- | --- | --- |
| Item | Entry | Description and Example |
| Management network starting IP address |  | Starting IP address for the management network.  Example: 10.204.74.100 |
| Management network gateway IP address |  | Gateway IP address for the management network.  Example: 10.204.74.1 |
| Management network subnet mask |  | Subnet mask for the management network.  Example: 255.255.255.0 |
| Use management network gateway for default gateway? |  | For the default gateway, you can use either the management network gateway or the client access network gateway. Options for this field:   * Yes if the management network gateway will be the default gateway * No if the management network gateway will not be the default gateway (if the client access network gateway will be the default gateway) |

Management Network IP Addresses Configuration Worksheet

Complete this worksheet to determine the total number of IP addresses needed for the management network. These IP addresses should be sequential, beginning with the starting IP address that you provided in General Management Network Configuration Worksheet on page 59.

Table 7 -- Management Network IP Addresses Configuration Worksheet

|  |  |
| --- | --- |
| Item | Entry |
| Default entry of 12 for the 1GbE host management and Oracle ILOM IP addresses for the switches, PDUs, and ZFS storage controllers. | 12 |
| Enter the number of compute servers in your SuperCluster M8 or SuperCluster M7 (1 or 2) for the 1GbE host management IP addresses for the floating service processors in each compute server. |  |
| For every storage server in your SuperCluster M8 or SuperCluster M7, enter the number of storage servers times 2 for the 1GbE host management and Oracle ILOM IP addresses for each storage server. |  |
| For every PDomain in your SuperCluster M8 or SuperCluster M7, enter the number of PDomains times 2 (IP addresses for the service processors in each server). |  |
| For compute server 1, how many domains (dedicated domains, Root Domains and I/O Domains) and database zones will the Oracle installer configure on this server?  Enter the total number of domains and database zones on this server. |  |
| For compute server 2, how many domains (dedicated domains, Root Domains and I/O Domains) and database zones will the Oracle installer configure on this server?  Enter the total number of domains and database zones on this server. |  |
| Add the entries from the Entry column. This is the total number of IP addresses that you need for the management network. |  |

**What’s Next**

Go to IB Network IP Addresses Configuration Worksheets on page 61.

IB Network IP Addresses Configuration Worksheets

Complete the worksheets in this section for the IB network.

General IB Network Configuration Worksheet

Use this worksheet to provide the subnet mask and gateway IP address for the IB network.

Table 8 -- General IB Network Configuration Worksheet

|  |  |  |
| --- | --- | --- |
| Item | Entry | Description and Example |
| IB network subnet mask | 255.255.252.0 | Subnet mask for the IB network. Only valid entry for this field:  255.255.252.0 |

IP Addresses for the ZFS Storage IB Network Configuration Worksheets

The default starting IP address for this subnet is 192.168.28.1, and the IP addresses for this subnet are assumed to be sequential.

Table 9 -- IP Addresses for the ZFS Storage IB Network Configuration Worksheets

|  |  |
| --- | --- |
| Item | Entry |
| Default entry of 2 for the IB IP addresses for the ZFS storage controller cluster. | 2 |
| Enter the number of dedicated domains (Database Domain or Application Domain) and Root Domains in each PDomain. |  |
| Enter the number of I/O Domains and database zones that will be set up by your Oracle installer at the time of the initial installation. |  |
| Add the entries from the Entry column. This is the total number of IP addresses that you will need for the ZFS storage IB network. |  |

If there are conflicts on your network with sequential IP addresses starting with 192.168.28.1 for this subnet, enter an alternate starting IP address for this subnet in the table below. Note that you can choose a different subnet from 192.168.28.1, if necessary, as long as it is not the same subnet as the one used in the section IP Addresses for the Database Domain IB Network Configuration Worksheets on page 63.

|  |  |
| --- | --- |
| Item | Entry |
| Enter the alternate starting IP address. |  |
| If necessary, enter the alternate subnet for the IB network for this subnet. |  |

IP Addresses for the Database Domain IB Network Configuration Worksheets

The default starting IP address for this subnet is 192.168.10.1, and the IP addresses for this subnet are assumed to be sequential.

Table 10 -- IP Addresses for the Database Domain IB Network Configuration Worksheets

|  |  |
| --- | --- |
| Item | Entry |
| For every storage server in your SuperCluster M8 or SuperCluster M7, enter the number of storage servers times 2. For example, if you have three storage servers in your system, enter 6 here. |  |
| For compute server 1, enter the number of Database Domains (dedicated domains or Database I/O Domains) and database zones on this server times 2. For example, if you have two Database Domains (dedicated domains or Database I/O Domains) and four database zones in your system, enter 12 here. |  |
| For compute server 2, enter the number of Database Domains (dedicated domains or Database I/O Domains) and database zones on this server times 2. For example, if you have two Database Domains (dedicated domains or Database I/O Domains) and four database zones in your system, enter 12 here. |  |
| Add the entries from the Entry column. This is the total number of IP addresses that you need for the Database Domain IB network. |  |

If there are conflicts on your network with sequential IP addresses starting with 192.168.10.1 for this subnet, enter an alternate starting IP address for this subnet in the table below. Note that you can choose a different subnet from 192.168.10.1, if necessary, as long as it is not the same subnet used in the section IP Addresses for the ZFS Storage IB Network Configuration Worksheets on page 62.

|  |  |
| --- | --- |
| Item | Entry |
| Enter the alternate starting IP address. |  |
| If necessary, enter the alternate subnet for the IB network for this subnet. |  |

IP Addresses for the iSCSI Devices Using IPoIB Network Configuration Worksheets

The default starting IP address for this subnet is 192.168.24.1, and the IP addresses for this subnet are assumed to be sequential.

Complete this worksheet to determine the total number of IP addresses needed for the iSCSI devices using IPoIB network. Provide the information only for the number of PDomains that you have in your SuperCluster M8 or SuperCluster M7. In other words, if you have two total PDomains in your SuperCluster M8 or SuperCluster M7, provide the information only for the first two PDomains and ignore the questions for the third and fourth PDomains.

Table 11 -- IP Addresses for the iSCSI Devices Using IPoIB Network Configuration Worksheets

|  |  |
| --- | --- |
| Item | Entry |
| For the *first* PDomain in your SuperCluster M8 or SuperCluster M7, enter the number of LDoms that are part of this PDomain (1-4 LDoms). |  |
| For the *second* PDomain in your SuperCluster M8 or SuperCluster M7, enter the number of LDoms that are part of this PDomain (1-4 LDoms). |  |
| If applicable, for the *third* PDomain in your SuperCluster M8 or SuperCluster M7, enter the number of LDoms that are part of this PDomain (1-4 LDoms). |  |
| If applicable, for the *fourth* PDomain in your SuperCluster M8 or SuperCluster M7, enter the number of LDoms that are part of this PDomain (1-4 LDoms). |  |
| Add the entries from the Entry column. This is the total number of LDoms that you have in your SuperCluster M8 or SuperCluster M7. |  |
| Multiply the total number of LDoms in your SuperCluster M8 or SuperCluster M7 by 2. This is the total number of IP addresses that you need for the LDoms for the iSCSI devices using IPoIB network. |  |
| Default entry of 2 for the IP addresses for the ZFS storage controller cluster. | 2 |
| Add these two entries together (LDom IP addresses entry and ZFS storage controller cluster entry). This is the total number of IP addresses that you need for the iSCSI devices using IPoIB network. |  |

**What’s Next**

Go to Rack Configuration Worksheets on page 48 to provide general rack configuration information.

Chapter

10

Rack Configuration Worksheets

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this chapter.

General Rack Configuration Worksheets

Table 12: General Rack Configuration Worksheets

| Item | Entry | Description and Example |
| --- | --- | --- |
| Number of Client Networks |  | Determine how many client networks are needed for the entire SuperCluster M8 or SuperCluster M7.  Options: 1 – 8  Minimum is 1.  Optionally, for dedicated domains, you can specify 2 through 8.  NOTE: Provide the number of client networks in this table, and provide the actual client network information in Client Access Networks Configuration Worksheets on page 68. |
| Number of Network Recipes |  | Determine how many network recipes are needed for the entire SuperCluster M8 or SuperCluster M7.  Options: 1 – 8  NOTE: Provide the number of network recipes in this table, and provide the actual network recipe information in Network Recipe Configuration Worksheets on page 73. |
| Number of VLAN Tags |  | Determine how many VLAN tags are needed for the entire SuperCluster M8 or SuperCluster M7.  Options: 1 – 16  NOTE: Provide the number of VLAN tags in this table, and provide the actual VLAN tags in VLAN Tag Configuration Worksheets on page 79. |
| Use Client Hostnames |  | Every Oracle Solaris domain on SuperCluster M8 or SuperCluster M7 has a host name. By default, the host name given is the same name associated with the management network interface. But the host name can also be the set to the name associated with the 10GbE client network interface. Determine if you want to use the client interface host name as the host name for all Oracle Solaris domains. For example, you may choose to use the client interface host names if your applications require that the host name match the interface over which the clients connect.   * Choose Yes if you want to have the *client interface*  host name as the host name for all Oracle Solaris domains. * Choose No if you want the *default management* host name as the host name for all Oracle Solaris domains.   Note: Hostnames must be in lowercase.  Options: Yes or No  Default option is No. |
| Number Clusters for Oracle Database |  | Enter the type and total number of:   * RAC Clusters * Clusterware instances * Grid Infrastructures   NOTE: Provide the number of RAC Clusters in this table, and provide the actual cluster details in RAC Cluster Configuration Worksheets on page 81. |
| Number of InfiniBand Switches |  | Two IB leaf switches and one IB spine switch is typically included in SuperCluster M8 or SuperCluster M7. However, some configurations of the system do not include the IB spine switch.  Options: 2 or 3   * Choose 2 if your SuperCluster does not include the IB spine switch * Choose 3 if your SuperCluster has the two IB leaf switches and the IB spine switch |
| Number of Exadata Storage Servers |  | The number of storage servers that you have in your SuperCluster M8 or SuperCluster M7.  Options:   * 3 – 11 storage servers if you have one compute server in your SuperCluster M8 or SuperCluster M7 * 3 – 6 storage servers if you have two compute servers in your SuperCluster M8 or SuperCluster M7 |
| Hostname Prefix |  | The prefix is used to generate host names for network interfaces for components in the system. For example, a value of sc01 results in a compute node host name of sc01db01, and a storage server host name of sc01cel01. Because this is used to generate host names for network interfaces for components in the system, Use a name of fewer than six characters for the prefix.  Note: Hostnames must be in lowercase.  Example: sc01 |
| Exadata Storage Server Type |  | The type of storage servers that you have in your SuperCluster M8 or SuperCluster M7.  Options:   * Extreme Flash * High Capacity |

Note to Oracle installers – Information on the starting IP addresses for the management and IB networks can be found in Network Configuration Worksheets on page 56.

**What’s Next**

Go to Client Access Networks Configuration Worksheets on page 68 to provide starting IP addresses and IP address ranges for the three networks for your system.

Chapter

11

Client Access Networks Configuration Worksheets

Complete the worksheets in this chapter to provide the necessary information for each of the client access networks that you want to use for your SuperCluster:

* Client Network 01 (Default Client Network)

Complete these worksheets for additional networks for dedicated domains:

* Client Network 02 on page 69
* Client Network 03 on page 69
* Client Network 04 on page 70
* Client Network 05 on page 70
* Client Network 06 on page 71
* Client Network 07 on page 71
* Client Network 08 on page 72

Client Network 01 (Default Client Network)

Table 13 -- Client Network 01 (Default Client Network)

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Table 14 – Optional Second Client Network for Root Domains

Only complete this table if you selected to configure a second port pair for SuperCluster M8 Root Domains, and you want the second port pair to connect to a different network endpoint. See Client Access Network -- Physical Connections Worksheet on page 57.

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 02

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 15 -- Client Network 02

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 03

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 16 -- Client Network 03

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 04

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 17 -- Client Network 04

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 05

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 18 -- Client Network 05

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 06

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 19 -- Client Network 06

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 07

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 20 -- Client Network 07

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

Client Network 08

Note – Only specify additional client networks if you want additional networks for dedicated domains.

Table 21 -- Client Network 08

| Item | Entry | Description and Example |
| --- | --- | --- |
| Start IP |  | Starting IP address for this client access network. |
| Gateway |  | Gateway IP address for this client access network. |
| Netmask |  | Subnet mask for this client access network. |

**What’s Next**

Go to Network Recipe Configuration Worksheets on page 73.

Chapter

12

Network Recipe Configuration Worksheets

Complete the worksheets in this chapter to provide the necessary information for each of the network recipes that you want to use for your SuperCluster:

* Network Recipe 01 (Default Client Network) on page 73
* Network Recipe 02 on page 74
* Network Recipe 03 on page 74
* Network Recipe 04 on page 75
* Network Recipe 05 on page 76
* Network Recipe 06 on page 76
* Network Recipe 07 on page 77
* Network Recipe 08 on page 77

Network Recipe 01 (Default Client Network)

Table 22 -- Network Recipe 01

| Item | Entry | Description and Example |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe.  Example: los\_angeles |
| Domain Name |  | Domain name for this particular network recipe.  Example: example.com |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces.  Example: 192.0.2.1 192.0.2.2 |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces.  Example: 192.0.2.14 192.0.2.15 |
| Time zone |  | Time zone for this network recipe.  Example: America/Los\_Angeles |

Network Recipe 02

Table 23 -- Network Recipe 02

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 03

Table 24 -- Network Recipe 03

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 04

Table 25 -- Network Recipe 04

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 05

Table 26 -- Network Recipe 05

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 06

Table 27 -- Network Recipe 06

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 07

Table 28 -- Network Recipe 07

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

Network Recipe 08

Table 29 -- Network Recipe 08

| Item | Entry | Description |
| --- | --- | --- |
| Recipe Name |  | Name for this particular network recipe. |
| Domain Name |  | Domain name for this particular network recipe. |
| Name Servers |  | IP addresses of the name servers for this network recipe, separated by spaces. |
| Time Servers |  | IP addresses of the time servers for this network recipe, separated by spaces. |
| Time zone |  | Time zone for this network recipe. |

**What’s Next**

Go to VLAN Tag Configuration Worksheets on page 79.

Chapter

13

VLAN Tag Configuration Worksheets

Complete the worksheets in this chapter to provide the necessary information for the VLAN tags that you want to use for your SuperCluster, if necessary.

Table 30 -- VLAN Tag Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| VLAN Tag 01 |  | This VLAN tag ID.  Example: 101 |
| VLAN Tag 02 |  | This VLAN tag ID.  Example: 102 |
| VLAN Tag 03 |  | This VLAN tag ID.  Example: 103 |
| VLAN Tag 04 |  | This VLAN tag ID.  Example: 104 |
| VLAN Tag 05 |  | This VLAN tag ID.  Example: 105 |
| VLAN Tag 06 |  | This VLAN tag ID.  Example: 106 |
| VLAN Tag 07 |  | This VLAN tag ID.  Example: 107 |
| VLAN Tag 08 |  | This VLAN tag ID.  Example: 108 |
| VLAN Tag 09 |  | This VLAN tag ID.  Example: 109 |
| VLAN Tag 10 |  | This VLAN tag ID.  Example: 110 |
| VLAN Tag 11 |  | This VLAN tag ID.  Example: 111 |
| VLAN Tag 12 |  | This VLAN tag ID.  Example: 112 |
| VLAN Tag 13 |  | This VLAN tag ID.  Example: 113 |
| VLAN Tag 14 |  | This VLAN tag ID.  Example: 114 |
| VLAN Tag 15 |  | This VLAN tag ID.  Example: 115 |
| VLAN Tag 16 |  | This VLAN tag ID.  Example: 116 |

**What’s Next**

Go to RAC Cluster Configuration Worksheets on page 81.

Chapter

14

RAC Cluster Configuration Worksheets

Complete the worksheets in this chapter to provide the necessary information for each of the RAC Clusters that you want to use for your SuperCluster:

* RAC Cluster Worksheets (Clusters 1 – 10) on page 81
* RAC Cluster Worksheets (Clusters 11 – 20) on page 87
* RAC Cluster Worksheets (Clusters 21 – 32) on page 92

RAC Cluster Worksheets (Clusters 1 – 10)

Table 31 -- RAC Cluster 1

| Item | Entry | Description and Example |
| --- | --- | --- |
|  |  |  |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 32 -- RAC Cluster 2

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 33 -- RAC Cluster 3

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 34 -- RAC Cluster 4

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 35 -- RAC Cluster 5

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 36 -- RAC Cluster 6

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 37 -- RAC Cluster 7

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 38 -- RAC Cluster 8

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 39 -- RAC Cluster 9

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 40 -- RAC Cluster 10

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

RAC Cluster Worksheets (Clusters 11 – 20)

Table 41 -- RAC Cluster 11

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 42 -- RAC Cluster 12

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 43 -- RAC Cluster 13

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 44 -- RAC Cluster 14

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 45 -- RAC Cluster 15

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 46 --RAC Cluster 16

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 47 -- RAC Cluster 17

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 48 -- RAC Cluster 18

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 49 -- RAC Cluster 19

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 50 -- RAC Cluster 20

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

RAC Cluster Worksheets (Clusters 21 – 32)

Table 51 -- RAC Cluster 21

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 52 -- RAC Cluster 22

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 53 -- RAC Cluster 23

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 54 -- RAC Cluster 24

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 55 -- RAC Cluster 25

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 56 -- RAC Cluster 26

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 57 -- RAC Cluster 27

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 58 -- RAC Cluster 28

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 59 -- RAC Cluster 29

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 60 -- RAC Cluster 30

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 61 -- RAC Cluster 31

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

Table 62 -- RAC Cluster 32

| Item | Entry | Description and Example |
| --- | --- | --- |
| Client Network |  | The client network that you want to use for this cluster. See the information that you provided in Client Access Networks Configuration Worksheets on page 68 for more information on the available client networks.  Example: Client network 1 |
| Network Recipe |  | The network recipe that you want to use for this cluster. See the information that you provided in Network Recipe Configuration Worksheets on page 73 for more information on the available network recipes.  Example: Network recipe 1 |
| VLAN |  | The VLAN tag that you want to use for this cluster, if necessary. See VLAN Tag Configuration Worksheets on page 79 for more information on the available VLAN tags.  Example: 101 |

**What’s Next**

Go to PDomain 0 on Compute Server 1: Configuration Worksheets on page 99 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 on compute server 1.

Chapter

15

PDomain 0 on Compute Server 1: Configuration Worksheets

Complete the worksheets in this chapter to provide this information for PDomain 0 in compute server 1:

* Number of LDoms in this PDomain
* PDomains with eight CMIOUs: 1 LDom (only available option)
* Type of LDoms in this PDomain:
* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[9]](#footnote-9)
* Root Domain, with some I/O Domains set up at the initial installation9

**Note** – Only Database Domains that are dedicated domains can host database zones. Database I/O Domains cannot host database zones.

**Note** – Refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide* for more detailed information on the different configurations available.

* Amount of CPU resources that you want to allocate to each LDom in this PDomain
* Amount of memory resources that you want allocated to each LDom in this PDomain
* Either of the following for each LDom in this PDomain:
  + Which cluster that you want for each Database Domain or database zone, with that cluster’s client network, network recipe and VLAN tagging configurations, or
  + Specific client network, network recipe and VLAN tagging configurations for each non-cluster LDom

Enter the configuration information for PDomain 0 on compute server 1 in the tables in the appropriate section, depending on the number of CMIOUs that you have in this PDomain.

|  |  |
| --- | --- |
| Check One Box | PDomain 0 on Compute Server 1 Configuration |
|  | PDomain With One CMIOU on page 100 |
|  | PDomain With Two CMIOUs on page 103 |
|  | PDomain With Three CMIOUs on page 106 |
|  | PDomain With Four CMIOUs on page 109 |

PDomain With One CMIOU

Enter this configuration information if PDomain 0 in compute server 1 has one CMIOU:

* LDom Configuration on page 100
* CPU Resource Allocation on page 101
* Memory Resource Allocation on page 101
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 101
* Database Zone Information on page 102

LDom Configuration

Read and understand the information in LDom Configurations For PDomains With One CMIOU on page 20 before completing the worksheets in this section.

Table 63 -- PDomain 0 In Compute Server 1 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 0 on Compute Server 1 |
|  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With One CMIOU on page 29 before completing the worksheets in this section.

Table 64 -- PDomain 0 in Compute Server 1 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| CPU Resource Allocation for PDomain 0 in Compute Server 1 | Total Number of Cores |
|  |  |
| Note - Total number of cores must be 32, unless some resources are parked. |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With One CMIOU on page 39 before completing the worksheets in this section.

Table 65 -- PDomain 0 in Compute Server 1 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| Memory Resource Allocation for PDomain 0 in Compute Server 1 | Total Amount of Memory |
|  |  |
| Note - Total amount of memory resources must be 960 GB (SuperCluster M8) or 480 GB (SuperCluster M7), unless some resources are parked. |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC Cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 66 -- PDomain 0 In Compute Server 1 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 0 on Compute Server 1 |
| Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

Table 67 – Zone RAC Assignments

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 1 is populated with CMIOUs, go to PDomain 1 on Compute Server 1: Configuration Worksheets on page 114 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 1.
* If the second PDomain in compute server 1 is not populated, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.

PDomain With Two CMIOUs

Enter this configuration information if PDomain 0 in compute server 1 has two CMIOUs:

* LDom Configurations on page 103
* CPU Resource Allocation on page 103
* Memory Resource Allocation on page 103
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 104
* Database Zone Information on page 105

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Two CMIOUs on page 20 before completing the worksheets in this section.

Table 68 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 1 | |
| Check One Box | Config | One | Two |
|  | U2-1 |  | |
|  | U2-2 |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Two CMIOUs on page 30 before completing the worksheets in this section.

Table 69 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | Total Number of Cores |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total number of cores must be 64, unless some resources are parked. | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Two CMIOUs on page 40 before completing the worksheets in this section.

Table 70 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | Total Amount of Memory |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total amount of memory resources must be 1920 GB (SuperCluster M8) or 960 GB (SuperCluster M7), unless some resources are parked. | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 71 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 1 | |
| Check One Box | Config | One | Two |
|  | U2-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U2-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 72 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 1 is populated with CMIOUs, go to PDomain 1 on Compute Server 1: Configuration Worksheets on page 114 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 1.
* If the second PDomain in compute server 1 is not populated, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.

PDomain With Three CMIOUs

Enter this configuration information if PDomain 0 in compute server 1 has three CMIOUs:

* LDom Configurations on page 106
* CPU Resource Allocation on page 107
* Memory Resource Allocation on page 107
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 108
* Database Zone Information on page 109

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Three CMIOUs on page 22 before completing the worksheets in this section.

Table 73 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 0 in Compute Server 1 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 |  | | |
|  | U3-2 |  | |  |
|  | U3-3 |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Three CMIOUs on page 31 before completing the worksheets in this section.

Table 74 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total number of cores must be 96, unless some resources are parked. | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Three CMIOUs on page 40 before completing the worksheets in this section.

Table 75 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Amount of Memory |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total amount of memory must be 2880 GB (SuperCluster M8) or 1440 GB (SuperCluster M7), unless some resources are parked. | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 76 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 0 in Compute Server 1 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | |
|  | U3-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U3-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 77 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 1 is populated with CMIOUs, go to PDomain 1 on Compute Server 1: Configuration Worksheets on page 114 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 1.
* If the second PDomain in compute server 1 is not populated, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.

PDomain With Four CMIOUs

Enter this configuration information if PDomain 0 in compute server 1 has four CMIOUs:

* LDom Configurations on page 110
* CPU Resource Allocation on page 110
* Memory Resource Allocation on page 111
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 111
* Database Zone Information on page 112

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Four CMIOUs on page 24 before completing the worksheets in this section.

Table 78 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 |  | | | |
|  | U4-2 |  | |  | |
|  | U4-3 |  | |  |  |
|  | U4-4 |  |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Four CMIOUs on page 33 before completing the worksheets in this section.

Table 79 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Number of Cores |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total number of cores must be 128, unless some resources are parked. | | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Four CMIOUs on page 42 before completing the worksheets in this section.

Table 80 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Amount of Memory |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total amount of memory resources must be 3840 (SuperCluster M8) or 1980 GB (SuperCluster M7), unless some resources are parked. | | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 81 -- PDomain 0 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | | |
|  | U4-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U4-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U4-4 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 82 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 1 is populated with CMIOUs, go to PDomain 1 on Compute Server 1: Configuration Worksheets on page 114 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 1.
* If the second PDomain in compute server 1 is not populated, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.

Chapter

16

PDomain 1 on Compute Server 1: Configuration Worksheets

Complete the worksheets in this chapter to provide this information for PDomain 1 in compute server 1:

* Number of LDoms in this PDomain
* PDomains with eight CMIOUs: 1 LDom (only available option)
* Type of LDoms in this PDomain:
* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[10]](#footnote-10)
* Root Domain, with some I/O Domains set up at the initial installation10

**Note** – Only Database Domains that are dedicated domains can host database zones. Database I/O Domains cannot host database zones.

**Note** – Refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide* for more detailed information on the different configurations available.

* Amount of CPU resources that you want to allocate to each LDom in this PDomain
* Amount of memory resources that you want allocated to each LDom in this PDomain
* Either of the following for each LDom in this PDomain:
  + Which RAC cluster that you want for each Database Domain or database zone, with that RAC cluster’s client network, network recipe and VLAN tagging configurations, or
  + Specific client network, network recipe and VLAN tagging configurations for each non-RAC cluster LDom

Enter the configuration information for PDomain 1 on compute server 1 in these tables, depending on the number of CMIOUs that you have in this PDomain:

|  |  |
| --- | --- |
| Check One Box | PDomain 1 on Compute Server 1 Configuration |
|  | PDomain With One CMIOU on page 115 |
|  | PDomain With Two CMIOUs on page 118 |
|  | PDomain With Three CMIOUs on page 121 |
|  | PDomain With Four CMIOUs on page 124 |

PDomain With One CMIOU

Enter this configuration information if PDomain 1 in compute server 1 has one CMIOU:

* LDom Configurations on page 115
* CPU Resource Allocation on page 116
* Memory Resource Allocation on page 116
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 116
* Database Zone Information on page 117

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With One CMIOU on page 20 before completing the worksheets in this section.

Table 83 -- PDomain 1 In Compute Server 1 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 1 on Compute Server 1 |
|  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With One CMIOU on page 29 before completing the worksheets in this section.

Table 84 -- PDomain 1 in Compute Server 1 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| CPU Resource Allocation for PDomain 1 in Compute Server 1 | Total Number of Cores |
|  |  |
| Note - Total number of cores must be 32, unless some resources are parked. |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With One CMIOU on page 39 before completing the worksheets in this section.

Table 85 -- PDomain 1 in Compute Server 1 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| Memory Resource Allocation for PDomain 1 in Compute Server 1 | Total Amount of Memory |
|  |  |
| Note - Total amount of memory resources must be 960 GB (SuperCluster M8) or 480 GB (SuperCluster M7), unless some resources are parked. |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 86 -- PDomain 1 In Compute Server 1 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 1 on Compute Server 1 |
| Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 87 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If your SuperCluster M8 or SuperCluster M7 has two compute servers, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.
* If your SuperCluster M8 or SuperCluster M7 does not have two compute servers, go to Completing the General Configuration Worksheets on page 159.

PDomain With Two CMIOUs

Enter this configuration information if PDomain 1 in compute server 1 has two CMIOUs:

* LDom Configurations on page 118
* CPU Resource Allocation on page 118
* Memory Resource Allocation on page 119
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 119
* Database Zone Information on page 120

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Two CMIOUs on page 20 before completing the worksheets in this section.

Table 88 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 1 | |
| Check One Box | Config | One | Two |
|  | U2-1 |  | |
|  | U2-2 |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Two CMIOUs on page 30 before completing the worksheets in this section.

Table 89 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | CPU Resource Allocation for PDomain 1 in Compute Server 1 | | Total Number of Cores |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total number of cores must be 64, unless some resources are parked. | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Two CMIOUs on page 40 before completing the worksheets in this section.

Table 90 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | Memory Resource Allocation for PDomain 1 in Compute Server 1 | | Total Amount of Memory |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total amount of memory resources must be 1920 GB (SuperCluster M8) or 960 GB (SuperCluster M7), unless some resources are parked. | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 91 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 1 | |
| Check One Box | Config | One | Two |
|  | U2-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U2-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 92 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If your SuperCluster M8 or SuperCluster M7 has two compute servers, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.
* If your SuperCluster M8 or SuperCluster M7 does not have two compute servers, go to Completing the General Configuration Worksheets on page 159.

PDomain With Three CMIOUs

Enter this configuration information if PDomain 1 in compute server 1 has three CMIOUs:

* LDom Configurations on page 121
* CPU Resource Allocation on page 122
* Memory Resource Allocation on page 122
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 123
* Database Zone Information on page 124

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Three CMIOUs on page 22 before completing the worksheets in this section.

Table 93 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 1 in Compute Server 1 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 |  | | |
|  | U3-2 |  | |  |
|  | U3-3 |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Three CMIOUs on page 31 before completing the worksheets in this section.

Table 94 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 1 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total number of cores must be 96, unless some resources are parked. | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Three CMIOUs on page 40 before completing the worksheets in this section.

Table 95 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 1 in Compute Server 1 | | |  |
| Check One Box | Config | One | Two | Three | Total Amount of Memory |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total amount of memory must be 2880 GB (SuperCluster M8) or 1440 GB (SuperCluster M7), unless some resources are parked. | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 96 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 1 in Compute Server 1 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | |
|  | U3-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U3-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 97 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If your SuperCluster M8 or SuperCluster M7 has two compute servers, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.
* If your SuperCluster M8 or SuperCluster M7 does not have two compute servers, go to Completing the General Configuration Worksheets on page 159.

PDomain With Four CMIOUs

Enter this configuration information if PDomain 1 in compute server 1 has four CMIOUs:

* LDom Configurations on page 125
* CPU Resource Allocation on page 125
* Memory Resource Allocation on page 126
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 126
* Database Zone Information on page 127

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Four CMIOUs on page 24 before completing the worksheets in this section.

Table 98 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 |  | | | |
|  | U4-2 |  | |  | |
|  | U4-3 |  | |  |  |
|  | U4-4 |  |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Four CMIOUs on page 33 before completing the worksheets in this section.

Table 99 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 1 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Number of Cores |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total number of cores must be 128, unless some resources are parked. | | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Four CMIOUs on page 42 before completing the worksheets in this section.

Table 100 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 1 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Amount of Memory |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total amount of memory resources must be 3840 (SuperCluster M8) or 1980 GB (SuperCluster M7), unless some resources are parked. | | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 101 -- PDomain 1 in Compute Server 1 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | | |
|  | U4-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U4-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U4-4 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 102 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If your SuperCluster M8 or SuperCluster M7 has two compute servers, go to PDomain 0 on Compute Server 2: Configuration Worksheets on page 129 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 0 in compute server 2.
* If your SuperCluster M8 or SuperCluster M7 does not have two compute servers, go to Completing the General Configuration Worksheets on page 159.

Chapter

17

PDomain 0 on Compute Server 2: Configuration Worksheets

Complete the worksheets in this chapter to provide this information for PDomain 0 in compute server 2:

* Number of LDoms in this PDomain
* PDomains with eight CMIOUs: 1 LDom (only available option)
* Type of LDoms in this PDomain:
* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[11]](#footnote-11)
* Root Domain, with some I/O Domains set up at the initial installation11

**Note** – Only Database Domains that are dedicated domains can host database zones. Database I/O Domains cannot host database zones.

**Note** – Refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide* for more detailed information on the different configurations available.

* Amount of CPU resources that you want to allocate to each LDom in this PDomain
* Amount of memory resources that you want allocated to each LDom in this PDomain
* Either of the following for each LDom in this PDomain:
  + Which RAC cluster that you want for each Database Domain or database zone, with that RAC cluster’s client network, network recipe and VLAN tagging configurations, or
  + Specific client network, network recipe and VLAN tagging configurations for each non-RAC cluster LDom

Enter the configuration information for PDomain 0 on compute server 2 in these tables, depending on the number of CMIOUs that you have in this PDomain:

|  |  |
| --- | --- |
| Check One Box | PDomain 0 on Compute Server 2 Configuration |
|  | PDomain With One CMIOU on page 130 |
|  | PDomain With Two CMIOUs on page 133 |
|  | PDomain With Three CMIOUs on page 136 |
|  | PDomain With Four CMIOUs on page 139 |

PDomain With One CMIOU

Enter this configuration information if PDomain 0 in compute server 2 has one CMIOU:

* LDom Configurations on page 130
* CPU Resource Allocation on page 131
* Memory Resource Allocation on page 131
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 131
* Database Zone Information on page 132

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With One CMIOU on page 20 before completing the worksheets in this section.

Table 103 -- PDomain 0 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 0 on Compute Server 2 |
|  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With One CMIOU on page 29 before completing the worksheets in this section.

Table 104 -- PDomain 0 in Compute Server 2 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| CPU Resource Allocation for PDomain 0 in Compute Server 2 | Total Number of Cores |
|  |  |
| Note - Total number of cores must be 32, unless some resources are parked. |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With One CMIOU on page 39 before completing the worksheets in this section.

Table 105 -- PDomain 0 in Compute Server 2 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| Memory Resource Allocation for PDomain 0 in Compute Server 2 | Total Amount of Memory |
|  |  |
| Note - Total amount of memory resources must be 960 GB (SuperCluster M8) or 480 GB (SuperCluster M7), unless some resources are parked. |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 106 -- PDomain 0 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 0 on Compute Server 2 |
| Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 107 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 2 is populated with CMIOUs, go to PDomain 1 on Compute Server 2: Configuration Worksheets on page 144 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 2.
* If the second PDomain in compute server 2 is not populated, go to Completing the General Configuration Worksheets on page 159.

PDomain With Two CMIOUs

Enter this configuration information if PDomain 0 in compute server 2 has two CMIOUs:

* LDom Configurations on page 133
* CPU Resource Allocation on page 133
* Memory Resource Allocation on page 134
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 134
* Database Zone Information on page 135

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Two CMIOUs on page 20 before completing the worksheets in this section.

Table 108 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 2 | |
| Check One Box | Config | One | Two |
|  | U2-1 |  | |
|  | U2-2 |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Two CMIOUs on page 30 before completing the worksheets in this section.

Table 109 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | CPU Resource Allocation for PDomain 0 in Compute Server 2 | | Total Number of Cores |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total number of cores must be 64, unless some resources are parked. | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Two CMIOUs on page 40 before completing the worksheets in this section.

Table 110 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | Memory Resource Allocation for PDomain 0 in Compute Server 2 | | Total Amount of Memory |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total amount of memory resources must be 1920 GB (SuperCluster M8) or 960 GB (SuperCluster M7), unless some resources are parked. | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 111 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 2 | |
| Check One Box | Config | One | Two |
|  | U2-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U2-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 112 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 2 is populated with CMIOUs, go to PDomain 1 on Compute Server 2: Configuration Worksheets on page 144 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 2.
* If the second PDomain in compute server 2 is not populated, go to Completing the General Configuration Worksheets on page 159.

PDomain With Three CMIOUs

Enter this configuration information if PDomain 0 in compute server 2 has three CMIOUs:

* LDom Configurations on page 136
* CPU Resource Allocation on page 137
* Memory Resource Allocation on page 137
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 138
* Database Zone Information on page 139

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Three CMIOUs on page 22 before completing the worksheets in this section.

Table 113 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 0 in Compute Server 2 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 |  | | |
|  | U3-2 |  | |  |
|  | U3-3 |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Three CMIOUs on page 31 before completing the worksheets in this section.

Table 114 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 2 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total number of cores must be 96, unless some resources are parked. | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Three CMIOUs on page 40 before completing the worksheets in this section.

Table 115 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 2 | | |  |
| Check One Box | Config | One | Two | Three | Total Amount of Memory |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total amount of memory must be 3840 GB (SuperCluster M8) or 1440 GB (SuperCluster M7), unless some resources are parked. | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 116 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 0 in Compute Server 2 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | |
|  | U3-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U3-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 117 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 2 is populated with CMIOUs, go to PDomain 1 on Compute Server 2: Configuration Worksheets on page 144 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 2.
* If the second PDomain in compute server 2 is not populated, go to Completing the General Configuration Worksheets on page 159.

PDomain With Four CMIOUs

Enter this configuration information if PDomain 0 in compute server 2 has four CMIOUs:

* LDom Configurations on page 140
* CPU Resource Allocation on page 140
* Memory Resource Allocation on page 141
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 141
* Database Zone Information on page 142

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Four CMIOUs on page 24 before completing the worksheets in this section.

Table 118 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 2 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 |  | | | |
|  | U4-2 |  | |  | |
|  | U4-3 |  | |  |  |
|  | U4-4 |  |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Four CMIOUs on page 33 before completing the worksheets in this section.

Table 119 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 2 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Number of Cores |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total number of cores must be 128, unless some resources are parked. | | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Four CMIOUs on page 42 before completing the worksheets in this section.

Table 120 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 2 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Amount of Memory |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total amount of memory resources must be 3840 (SuperCluster M8) or 1980 GB (SuperCluster M7), unless some resources are parked. | | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 121 -- PDomain 0 in Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 2 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | | |
|  | U4-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U4-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U4-4 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 122 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

* If the second PDomain (PDomain 1) in compute server 2 is populated with CMIOUs, go to PDomain 1 on Compute Server 2: Configuration Worksheets on page 144 to provide LDom configuration information and CPU and memory resource allocation information for PDomain 1 in compute server 2.
* If the second PDomain in compute server 2 is not populated, go to Completing the General Configuration Worksheets on page 159.

Chapter

18

PDomain 1 on Compute Server 2: Configuration Worksheets

Complete the worksheets in this chapter to provide this information for PDomain 1 in compute server 2:

* Number of LDoms in this PDomain
* PDomains with eight CMIOUs: 1 LDom (only available option)
* Type of LDoms in this PDomain:
* Application Domain running the Oracle Solaris 11 OS (dedicated domain)
* Database Domain (dedicated domain), with or without zones[[12]](#footnote-12)
* Root Domain, with some I/O Domains set up at the initial installation12

**Note** – Only Database Domains that are dedicated domains can host database zones. Database I/O Domains cannot host database zones.

**Note** – Refer to the *Oracle SuperCluster M8 and SuperCluster M7 Overview Guide* for more detailed information on the different configurations available.

* Amount of CPU resources that you want to allocate to each LDom in this PDomain
* Amount of memory resources that you want allocated to each LDom in this PDomain
* Either of the following for each LDom in this PDomain:
  + Which RAC cluster that you want for each Database Domain or database zone, with that RAC cluster’s client network, network recipe and VLAN tagging configurations, or
  + Specific client network, network recipe and VLAN tagging configurations for each non-RAC cluster LDom

Enter the configuration information for PDomain 1 on compute server 2 in these tables, depending on the number of CMIOUs that you have in this PDomain:

|  |  |
| --- | --- |
| Check One Box | PDomain 1 on Compute Server 2 Configuration |
|  | PDomain With One CMIOU on page 145 |
|  | PDomain With Two CMIOUs on page 147 |
|  | PDomain With Three CMIOUs on page 151 |
|  | PDomain With Four CMIOUs on page 154 |

PDomain With One CMIOU

Enter this configuration information if PDomain 1 in compute server 2 has one CMIOU:

* LDom Configurations on page 145
* CPU Resource Allocation on page 146
* Memory Resource Allocation on page 146
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 146
* Database Zone Information on page 147

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With One CMIOU on page 20 before completing the worksheets in this section.

Table 123 -- PDomain 1 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 1 on Compute Server 2 |
|  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With One CMIOU on page 29 before completing the worksheets in this section.

Table 124 -- PDomain 1 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| CPU Resource Allocation for PDomain 1 in Compute Server 2 | Total Number of Cores |
|  |  |
| Note - Total number of cores must be 32, unless some resources are parked. |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With One CMIOU on page 39 before completing the worksheets in this section.

Table 125 -- PDomain 1 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |  |
| --- | --- |
| Memory Resource Allocation for PDomain 1 in Compute Server 2 | Total Amount of Memory |
|  |  |
| Note - Total amount of memory resources must be 960 GB (SuperCluster M8) or 480 GB (SuperCluster M7), unless some resources are parked. |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 126 -- PDomain 1 In Compute Server 2 Configuration Worksheet: One CMIOU

|  |
| --- |
| Type of Domain on PDomain 1 on Compute Server 2 |
| Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 127 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

Go to Completing the General Configuration Worksheets on page 159.

PDomain With Two CMIOUs

Enter this configuration information if PDomain 1 in compute server 2 has two CMIOUs:

* LDom Configurations on page 148
* CPU Resource Allocation on page 148
* Memory Resource Allocation on page 149
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 149
* Database Zone Information on page 150

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Two CMIOUs on page 20 before completing the worksheets in this section.

Table 128 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 2 | |
| Check One Box | Config | One | Two |
|  | U2-1 |  | |
|  | U2-2 |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Two CMIOUs on page 30 before completing the worksheets in this section.

Table 129 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | CPU Resource Allocation for PDomain 1 in Compute Server 2 | | Total Number of Cores |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total number of cores must be 64, unless some resources are parked. | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Two CMIOUs on page 40 before completing the worksheets in this section.

Table 130 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Check One Box | Config | Memory Resource Allocation for PDomain 1 in Compute Server 2 | | Total Amount of Memory |
| One | Two |
|  | U2-1 |  | |  |
|  | U2-2 |  |  |  |
| **Note -** Total amount of memory resources must be 1920 GB (SuperCluster M8) or 960 GB (SuperCluster M7), unless some resources are parked. | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 131 -- PDomain 1 in Compute Server 2 Configuration Worksheet: Two CMIOUs

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 2 | |
| Check One Box | Config | One | Two |
|  | U2-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U2-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 132 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

Go to Completing the General Configuration Worksheets on page 159.

PDomain With Three CMIOUs

Enter this configuration information if PDomain 1 in compute server 2 has three CMIOUs:

* LDom Configurations on page 151
* CPU Resource Allocation on page 152
* Memory Resource Allocation on page 152
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 153
* Database Zone Information on page 154

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Three CMIOUs on page 22 before completing the worksheets in this section.

Table 133 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 1 in Compute Server 2 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 |  | | |
|  | U3-2 |  | |  |
|  | U3-3 |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Three CMIOUs on page 31 before completing the worksheets in this section.

Table 134 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 1 in Compute Server 2 | | |  |
| Check One Box | Config | One | Two | Three | Total Number of Cores |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total number of cores must be 96, unless some resources are parked. | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Three CMIOUs on page 40 before completing the worksheets in this section.

Table 135 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 1 in Compute Server 2 | | |  |
| Check One Box | Config | One | Two | Three | Total Amount of Memory |
|  | U3-1 |  | | |  |
|  | U3-2 |  | |  |  |
|  | U3-3 |  |  |  |  |
| Note - Total amount of memory must be 2880 GB (SuperCluster M8) or 1440 GB (SuperCluster M7), unless some resources are parked. | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 136 -- PDomain 1 in Compute Server 2 Configuration Worksheet: Three CMIOUs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Number and Type of LDoms on PDomain 1 in Compute Server 2 | | |
| Check One Box | Config | One | Two | Three |
|  | U3-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | |
|  | U3-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U3-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 137 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

Go to Completing the General Configuration Worksheets on page 159.

PDomain With Four CMIOUs

Enter this configuration information if PDomain 1 in compute server 2 has four CMIOUs:

* LDom Configurations on page 155
* CPU Resource Allocation on page 155
* Memory Resource Allocation on page 156
* Client Access Network, Network Recipe, VLAN Tag and Cluster Information on page 156
* Database Zone Information on page 157

LDom Configurations

Read and understand the information in LDom Configurations For PDomains With Four CMIOUs on page 24 before completing the worksheets in this section.

Table 138 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 0 in Compute Server 1 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 |  | | | |
|  | U4-2 |  | |  | |
|  | U4-3 |  | |  |  |
|  | U4-4 |  |  |  |  |

CPU Resource Allocation

Read and understand the information in CPU Resource Allocation For PDomains With Four CMIOUs on page 33 before completing the worksheets in this section.

Table 139 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | CPU Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Number of Cores |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total number of cores must be 128, unless some resources are parked. | | | | | |  |

Memory Resource Allocation

Read and understand the information in Memory Resource Allocation For PDomains With Four CMIOUs on page 42 before completing the worksheets in this section.

Table 140 -- PDomain 1 In Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Memory Resource Allocation for PDomain 0 in Compute Server 1 | | | |  |
| Check One Box | Config | One | Two | Three | Four | Total Amount of Memory |
|  | U4-1 |  | | | |  |
|  | U4-2 |  | |  | |  |
|  | U4-3 |  | |  |  |  |
|  | U4-4 |  |  |  |  |  |
| Note - Total amount of memory resources must be 3840 (SuperCluster M8) or 1980 GB (SuperCluster M7), unless some resources are parked. | | | | | |  |

Client Access Network, Network Recipe, VLAN Tag and Cluster Information

Read and understand the information in Understanding Client Access Network, Network Recipe, VLAN Tag, and RAC Cluster Options on page 43 before completing the worksheets in this section.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any Database Domain or database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information. Therefore:

* If an LDom is a member of a RAC cluster, enter that RAC cluster number here. It will automatically get IP addresses from that RAC cluster’s client access network and will use that cluster’s network recipe and VLAN tagging information.
* If an LDom is *not* a member of a RAC cluster, enter the following:
  + Client network number that you want to use for this LDom
  + Network recipe that you want to use for this LDom
  + VLAN tagging information, if necessary, for this LDom

Table 141 -- PDomain 1 in Compute Server 2 Configuration Worksheet: Four CMIOUs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Number and Type of Domains on PDomain 1 in Compute Server 2 | | | |
| Check One Box | Config | One | Two | Three | Four |
|  | U4-1 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | | |
|  | U4-2 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | |
|  | U4-3 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |
|  | U4-4 | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: | Cluster number:  *OR*  Client network number:  Network recipe:  VLAN tag: |

Database Zone Information

If this LDom is a Database Domain with zones, your Oracle installer can set up a maximum of eight zones on this Database Domain during the initial installation. Your Oracle installer will also set up the RAC clusters for the zones in this Database Domain, where multiple zones within this Database Domain could be clustered together, or could be clustered together with zones in other Database Domains.

For every RAC cluster in your SuperCluster, you provided client network, network recipe, and VLAN tagging information in RAC Cluster Configuration Worksheets on page 81. Any database zone that is a member of a RAC cluster automatically gets assigned IP addresses from that RAC cluster’s client access network and has that cluster’s network recipe and VLAN tagging information.

For each zone in this Database Domain, enter the RAC cluster number that you want that zone to be a member of.

Table 142 -- Zone RAC Assignments

| Database Zones | Cluster Number | Database Zones | Cluster Number |
| --- | --- | --- | --- |
| Zone 1 |  | Zone 5 |  |
| Zone 2 |  | Zone 6 |  |
| Zone 3 |  | Zone 7 |  |
| Zone 4 |  | Zone 8 |  |

**What’s Next**

Go to Completing the General Configuration Worksheets on page 159.

Chapter

19

Completing the General Configuration Worksheets

Complete the configuration worksheets in this chapter to provide general configuration information for your SuperCluster M8 or SuperCluster M7.

General SuperCluster Configuration Information

When filling out the worksheets in this chapter, note the following items:

* SuperCluster ships with the Oracle Solaris Operating System (Oracle Solaris OS) installed on the compute servers.
* The name (prefix) of SuperCluster s used to generate host names for network interfaces for the components and logical domains in the system.

The name of SuperCluster is completely user-definable, but because the name for SuperCluster is used to generate the host names for the components listed above, you should use six characters or fewer for the name of SuperCluster. You enter the name of SuperCluster in Customer Details Configuration Worksheet on page 165.

**Note** – It is possible to create a name for SuperCluster that is longer than six characters. However, you might get the following error message: Maximum combined length of cell short hostname + diskgroup name is too long - max length is 23 characters. The installer can manually shorten the disk group name to accommodate the combined maximum length of 23 characters in this case.

* For certain components, the company network domain name, such as example.com, is also used to generate host names for network interfaces for those components. The company network domain name is completely user-definable. The company network domain name is defined in Operating System Configuration Worksheet on page 167 in this document.
* The backup method information is used to size the ASM disk groups created during installation. The amount of usable disk space varies depending on the backup method. The backup methods are as follows:
* Backups internal to SuperCluster mean database backups are created only on disk in the Fast Recovery Area (FRA). In addition to the database backups, there are other objects such as Archived Redo Logs and Flashback Log Files stored in the FRA. The division of disk space between the DATA disk group and the RECO disk group (the FRA) is 40% and 60%, respectively.
* Backups external to SuperCluster mean database backups are created on disk or tape media that is external to that currently deployed on SuperCluster systems, and not on existing Exadata Storage Servers. If you are performing backups to disk storage external to SuperCluster, such as to additional dedicated storage servers, an NFS server, virtual tape library or tape library, then do not reserve additional space in the RECO disk group. When choosing this option, the FRA internal to SuperCluster contains objects such as archived redo log files and flashback log files. The division of disk space between the DATA disk group and the RECO disk group (the FRA) is 80% and 20%, respectively.
* A valid time zone name is required for SuperCluster installation. Time zone data provided with the system comes from the zoneinfo database. A valid time zone name is suitable as a value for the TZ environment variable consisting of form area/location. For example, a valid entry is America/New\_York. Invalid entries are EST, EDT, UTC-5, and UTC-4. For a list of time zone names, refer to the zone.tab file in the zoneinfo database available in the public domain at <ftp://elsie.nci.nih.gov/pub/>.
* Use high redundancy disk groups for mission critical applications. The location of the backup files depends on the backup method. To reserve more space for the DATA disk group, choose external backups. This is especially important when the RECO disk group is high redundancy. This table shows the backup options and settings.

|  |  |  |
| --- | --- | --- |
| Description | Redundancy Level for DATA Disk Group | Redundancy Level for RECO Disk Group |
| **High Redundancy for ALL**  Both the DATA disk group and RECO disk group are configured with Oracle ASM high redundancy. The DATA disk group contains data files, temporary files, online redo logs, and a control file. The RECO disk group contains archive logs, and flashback log files. | High | High |
| **High Redundancy for DATA**  The DATA disk group is configured with Oracle  ASM high redundancy, and the RECO disk group is configured with Oracle ASM normal redundancy. The DATA disk group contains data files, online redo logs, and a control file. The RECO disk group contains archive logs, temporary files, and flashback log files. | High | Normal |
| **High Redundancy for Log and RECO**  The DATA disk group is configured with Oracle  ASM normal redundancy, and the RECO disk group is configured with Oracle ASM high redundancy. The DATA disk group contains the data files and temporary files. The RECO disk group contains online redo logs, a control file, archive logs, and flashback log files. | Normal | High |
| **Normal Redundancy**  The DATA Disk Group and RECO disk group are configured with Oracle ASM normal redundancy. The DATA disk group contains data files, temporary files, online redo logs, and a control file. The RECO disk group contains online redo logs, archive logs, and flashback log files. | Normal | Normal |

Exadata Storage Server Information for SuperCluster M8

Oracle Exadata X7-2L Storage Servers are supported in SuperCluster M8. Each storage server includes either Extreme Flash (EF) or High Capacity (HC) storage.

These are the characteristics of the Exadata Storage Servers:

* SuperCluster M8 comes with a minimum of three storage servers.
  + In a single-server configuration, up to eight additional storage servers can be added to the system, for a total of eleven storage servers in the system.
  + In a dual-server configuration, up to three additional storage servers can be added to the system, for a total of six storage servers in the system.
* The expansion rack is available as a quarter rack, with four storage servers. You can increase the number of storage servers in the expansion rack up to a maximum of 18 storage servers.

See Oracle Exadata Storage Server Software User's Guide for information about maximum availability. Also see these tables for more information on storage capacities based on the level of redundancy that you choose. These tables list the storage capacities for a single storage server. To determine the system’s total storage server capacity, multiply the single storage server capacity with the total number of storage servers in the system.

Table 143 -- X7-2L Single Storage Server Capacities

|  |  |  |
| --- | --- | --- |
| Capacity Type | 8 x 6.4-TB Extreme Flash Drives | 12 x 10-TB High Capacity Drives |
| Raw PCI flash capacity[[13]](#footnote-13) | 51.2 TB | 120 TB |
| Usable mirrored capacity (ASM normal redundancy) | 20 TB | 50 TB |
| Usable triple mirrored capacity (ASM high redundancy) | 17.2 TB | 37.5 TB |

Note – The tables do not include capacities of the PCIe flash cards that are part of the HC storage server infrastructure.

Exadata Storage Server Information for SuperCluster M7

Oracle Exadata X5-2L Storage Servers and Oracle Exadata X6-2L Storage Servers are supported in SuperCluster M7. You can install a combination of storage server models in a system. Each storage server includes either Extreme Flash (EF) or High Capacity (HC) storage.

These are the characteristics of the Exadata Storage Servers:

* SuperCluster M7 comes with a minimum of three storage servers.
  + In a single-server configuration, up to eight additional storage servers can be added to the system, for a total of eleven storage servers in the system.
  + In a dual-server configuration, up to three additional storage servers can be added to the system, for a total of six storage servers in the system.
* The expansion rack is available as a quarter rack, with four storage servers. You can increase the number of storage servers in the expansion rack up to a maximum of 18 storage servers.

See Oracle Exadata Storage Server Software User's Guide for information about maximum availability. Also see these tables for more information on storage capacities based on the level of redundancy that you choose. These tables list the storage capacities for a single storage server. To determine the system’s total storage server capacity, multiply the single storage server capacity with the total number of storage servers in the system.

Table 144 -- X5-2L Single Storage Server Capacities

|  |  |  |
| --- | --- | --- |
| Capacity Type | 8 x 1.6-TB Extreme Flash Drives | 12 x 8-TB High Capacity Drives |
| Raw PCI flash capacity[[14]](#footnote-14) | 12.8 TB | 96 TB |
| Usable mirrored capacity (ASM normal redundancy) | 5 TB | 40 TB |
| Usable triple mirrored capacity (ASM high redundancy) | 4.3 TB | 30 TB |

Table 145 -- X6-2L Single Storage Server Capacities

|  |  |  |
| --- | --- | --- |
| Capacity Type | 8 x 3.2-TB Extreme Flash Drives | 12 x 8-TB High Capacity Drives |
| Raw PCI flash capacity[[15]](#footnote-15) | 25.6 TB | 96 TB |
| Usable mirrored capacity (ASM normal redundancy) | 10 TB | 40 TB |
| Usable triple mirrored capacity (ASM high redundancy) | 8.6 TB | 30 TB |

Note – The tables do not include capacities of the PCIe flash cards that are part of the HC storage server infrastructure.

What’s Next

Go to General Configuration Worksheets on page 164 to complete the general configuration worksheets.

Chapter

20

General Configuration Worksheets

Read and understand the information in Completing the General Configuration Worksheets on page 159 before completing any worksheets in this chapter:

* Customer Details Configuration Worksheet on page 165
* Backup/Data Guard Ethernet Network Configuration Worksheet on page 166
* Operating System Configuration Worksheet on page 167
* Home and Database Configuration Worksheet on page 169
* (Optional) Cell Alerting Configuration Worksheet on page 170
* (Optional) Oracle Configuration Manager Configuration Worksheet on page 172
* Auto Service Request Configuration Worksheet on page 173

Customer Details Configuration Worksheet

Table 146 -- Customer Details Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Customer Name |  | The customer name. The name can contain any alphanumeric characters, including spaces. This field cannot be empty. |
| Application |  | The application that will be used on the domains. |
| Region |  | Country where SuperCluster will be installed.  Example: United States |
| Time Zone |  | Time zone name where SuperCluster will be installed.  Example: America/Los\_Angeles |
| Compute OS | Oracle Solaris | The operating system for the domains on SuperCluster.  Oracle Solaris is the only valid entry for this field, even if you have Database Domains in your system. |

Backup/Data Guard Ethernet Network Configuration Worksheet

Table 147 -- Backup/Data Guard Ethernet Network Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Enable backup/Data Guard Network |  | Determine if a backup network is being used for this system.  Options: Enabled or Disabled |
| Starting IP Address for Pool |  | This is the starting IP address for the IP addresses assigned to the backup network.  **Note** - The pool should consist of consecutive IP addresses. If consecutive IP addresses are not available, then specific IP addresses can be modified during the configuration process. |
| Pool Size |  | The value of this field is defined by the type of SuperCluster M8 or SuperCluster M7 (single server or dual server). |
| Ending IP Address for Pool |  | The value of this field is defined by the starting IP address and the pool size. |
| Subnet Mask |  | The subnet mask for the backup network. |
| Gateway |  | The gateway for the subnet. Ensure that the defined IP address is correct for the gateway. |
| Implement host based bonded network |  | This option is selected when using a bonded network.  Options: Enabled or Disabled |

Operating System Configuration Worksheet

Table 148 -- Custom Details Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Domain Name |  | The company network domain name, such as example.com. The name can contain alphanumeric characters, periods (.), and hyphens (-). The name must start with an alphanumeric character. This field cannot be empty. |
| DNS Servers |  | The IP address for the domain name servers. At least one IP address must be provided. |
| NTP Servers |  | The IP address for the Network Time Protocol servers. At least one IP address must be provided. |
| Separate Grid Infrastructure owner from Database owner |  | Determine if the responsibilities and privileges are separated by role.  Providing system privileges for the storage tier using the SYSASM privilege instead of the SYSDBA privilege provides a clear division of responsibility between Oracle ASM administration and database administration. Role separation also helps to prevent different databases using the same storage from accidentally overwriting each other's files.  Options: Selected or Unselected |
| Grid ASM Home OS User |  | The user name for the Oracle ASM owner. The default is grid. This user owns the Oracle Grid Infrastructure installation.  This option is available when using role-separated authentication. |
| Grid ASM Home OS UserId |  | The identifier for the Oracle ASM owner. The default is 1000.  This option is available when using role-separated authentication. |
| Grid ASM Home Base Location |  | The directory for the Oracle grid infrastructure. The default is /u01/app/grid.  This option is available when using role-separated authentication. |
| ASM DBA Group |  | The name for the Oracle ASM DBA group. The default is asmdba. Membership in this group enables access to the files managed by Oracle ASM.  This option is available when using role-separated authentication. |
| ASM DBA GroupID |  | The identifier for the Oracle ASM DBA group. The default is 1004.  This option is available when using role-separated authentication. |
| ASM Home Operator Group |  | The name for the Oracle ASM operator group. The default is asmoper.  This group of operating system users has a limited set of Oracle instance administrative privileges including starting up and stopping the Oracle ASM instance.  This option is available when using role-separated authentication. |
| ASM Home Operator GroupId |  | The identifier for the Oracle ASM operator group. The default is 1005.  This option is available when using role-separated authentication. |
| ASM Home Admin Group |  | The name for the Oracle ASM administration group. The default is asmadmin.  This group uses SQL to connect to an Oracle ASM instance as SYSASM using operating system authentication. The SYSASM privileges permit mounting and dismounting of disk groups, and other storage administration tasks. SYSASM privileges provide no access privileges on an Oracle Database instance.  This option is available when using role-separated authentication. |
| ASM Home Admin GroupId |  | The identifier for the Oracle ASM administration group. The default is 1006.  This option is available when using role-separated authentication. |
| RDBMS Home OS User |  | The user name for the owner of the Oracle Database installation. The default is oracle. |
| RDBMS Home OS UserId |  | The identifier for the owner of the Oracle Database installation. The default is 1001. |
| RDBMS Home Base Location |  | The directory for the Oracle Database installation. The default is /u01/app/oracle. |
| RDBMS DBA Group |  | The name for the database administration group. The default is 1002. |
| RDBMS Home Operator Group |  | The name for the Oracle Database operator group. The default is racoper. |
| RDBMS Home Operator GroupId |  | The identifier for the Oracle Database operator group. The default is 1003. |
| Oinstall Group |  | The name for the Oracle Inventory group. The default is oinstall. |
| Oinstall GroupId |  | The identifier for the Oracle Inventory group. The default is 1001. |

Home and Database Configuration Worksheet

Use this worksheet to provide information on the home and database configuration. The disk group sizes shown in the configuration page are approximate, based on the type of SuperCluster M8 or SuperCluster M7, and redundancy.

For more information about disk group redundancy and backups, see Completing the General Configuration Worksheets on page 159.

Table 149 -- Home and Database Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Inventory Location |  | The directory path for the Oracle inventory (oraInventory). The default is /u01/app/oraInventory. |
| Grid Infrastructure Home |  | The directory path for the Grid infrastructure. The default is /u01/app/release\_number/grid. |
| Database Home Location |  | The directory path for the Oracle Database. The default is /u01/app/oracle/product/release\_number/dbhome\_1. |
| Software Install Languages |  | The language abbreviation for the languages installed for the database. The default is English (en). |
| DATA Disk Group Name |  | The name of the DATA disk group. The default is DATA\_DM01. |
| DATA Disk Group Redundancy |  | The type of redundancy for the DATA disk group. The options are NORMAL and HIGH. Use HIGH redundancy disk groups for mission critical applications. |
| RECO Disk Group Name |  | The name of the RECO disk group. The default is RECO\_DM01. |
| RECO Disk Group Redundancy |  | The type of redundancy for the RECO disk group. The options are NORMAL and HIGH. Use HIGH redundancy disk groups for mission critical applications. |
| Reserve additional space in RECO for database backups |  | Determine if the backups will occur within SuperCluster.  When backups occur within SuperCluster, the RECO disk group size increases, and the DATA disk group size decreases.  Options: Selected or Unselected |
| Database Name |  | The name of the database. The default is dbm. |
| Block Size |  | The block size for the database. The default is 8192.  Options are:   * 4096 * 8192 * 16384 * 32768 |
| Database Type |  | The type of workload that will mainly run on the database. The options are OLTP for online transaction processing, and DW for data warehouse. |

(Optional) Cell Alerting Configuration Worksheet

Cell alerts can be delivered by way of Simple Mail Transfer Protocol (SMTP), Simple Network Management Protocol (SNMP), or both. You can configure the cell alert delivery during or after installation.

Table 150 -- Cell Alerting Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Enable Email Alerting |  | If cell alerts should be delivered automatically, then select this option. |
| Recipients’ Addresses |  | The email addresses for the recipients of the cell alerts. You can enter multiple addresses in the dialog box. The number of email addresses is shown. |
| SMTP Server |  | The SMTP email server used to send alert notifications, such as mail.example.com |
| Uses SSL |  | Specification to use Secure Socket Layer (SSL) security when sending alert notifications. |
| Port |  | The SMTP email server port used to send alert notifications, such as 25 or 465. |
| Name |  | The SMTP email user name that is displayed in the alert notifications, such as SuperCluster M7. |
| Email Address |  | The SMTP email address that sends the alert notifications, such as dm01@example.com. |
| Enable SNMP Alerting |  | Determine if alerts will be delivered using SNMP.  Options: Enabled or Disabled |
| SNMP Server |  | The host name of the SNMP server, such as snmp.example.com.  **Note** - You can define additional SNMP targets after installation. Refer to the *Oracle Exadata Storage Server Software User's* *Guide* for information. |
| Port |  | The port for the SNMP server. The default port is 162. |
| Community |  | The community for the SNMP server. The default is public. |

(Optional) Oracle Configuration Manager Configuration Worksheet

Use the Oracle Configuration Manager to collect configuration information and upload it to the Oracle repository.

Table 151 -- Oracle Configuration Manager Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Enable Oracle Configuration Manager |  | Determine if Oracle Configuration Manager will be used to collect configuration information.  Options: Enabled or Disabled |
| Receive Updates via MOS |  | Determine if you are planning to receive My Oracle Support updates automatically for SuperCluster.  Options: Enabled or Disabled |
| MOS Email Address |  | The My Oracle Support address to receive My Oracle Support updates. |
| Access Oracle Configuration Manager via Support Hub |  | Determine if you are planning to access Oracle Configuration Manager using Support Hub.  Oracle Support Hub enables Oracle Configuration Manager instances to connect to a single internal port (the Support Hub), and upload configuration data, eliminating the need for each individual Oracle Configuration Manager instance in the database servers to access the Internet.  Options: Enabled or Disabled |
| Support Hub Hostname |  | The host name for Support Hub server.  See Also: *Oracle Configuration Manager Companion Distribution Guide* |
| Hub User Name |  | The operating system user name for the Support Hub server. |
| HTTP Proxy Used in Upload to Oracle Configuration Manager |  | Determine if an HTTP proxy will be used to upload configuration information to the Oracle repository.  Options: Enabled or Disabled |
| HTTP Proxy Host |  | The proxy server to connect to Oracle. The proxy can be between the following:   * Database servers and Oracle[[16]](#footnote-16) * Database servers and Support Hub[[17]](#footnote-17) * Support Hub and Oracle   Example: [proxy\_user@]proxy\_host[:proxy\_port]  The proxy\_host and proxy\_port entries are optional.  **Note** - If passwords are needed, then provide them during installation. |
| Proxy Port |  | The port number for the HTTP proxy server. The default is 80. |
| HTTP Proxy Requires Authentication |  | Determine if the HTTP proxy requires authentication.  Options: Enabled or Disabled |
| HTTP Proxy User |  | The user name for the HTTP proxy server. |

Auto Service Request Configuration Worksheet

You can install and configure Auto Service Request (ASR) for use with SuperCluster.

Table 152 -- Auto Service Request Configuration Worksheet

| Item | Entry | Description and Example |
| --- | --- | --- |
| Enable Auto Service Request |  | Enable ASR for use with SuperCluster. The default is yes. |
| ASR Manager Host Name |  | The host name of the server for ASR.  **Note** - You should use a standalone server that has connectivity to SuperCluster. |
| ASR Technical Contact |  | The name of the technical contact for SuperCluster. |
| Technical Contact Email |  | The email address of the technical contact for SuperCluster. |
| My Oracle Support Account Name |  | The name for the My Oracle Support account. |
| HTTP Proxy Used in Upload to ASR. |  | Determine if an HTTP proxy will be used to upload ASR.  Options: Enabled or Disabled |
| HTTP Proxy Host |  | The host name of the proxy server. |
| Proxy Port |  | The port number for the HTTP proxy server. Default: 80 |
| HTTP Proxy Requires Authentication |  | Determine if the HTTP proxy server requires authentication.  Options: Enabled or Disabled |
| HTTP Proxy User |  | The user name used with the proxy server. |

1. You cannot have an Application Domain running Oracle Solaris 10 in SuperCluster M7. However, you can have Oracle Solaris 10 branded zones in Application Domains running Oracle Solaris 11 or Database Domains. [↑](#footnote-ref-1)
2. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-2)
3. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-3)
4. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-4)
5. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-5)
6. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information. [↑](#footnote-ref-6)
7. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information. [↑](#footnote-ref-7)
8. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information. [↑](#footnote-ref-8)
9. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-9)
10. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-10)
11. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-11)
12. See Oracle Setup of Database Zones and I/O Domains Overview on page 20 for more information on the maximum number of database zones and I/O Domains that can be set up by your Oracle installer. [↑](#footnote-ref-12)
13. For raw capacity, 1 GB = 1 billion bytes. Capacity calculated using normal space terminology of 1 TB = 1024 \* 1024 \* 1024 \* 1024 bytes. Actual formatted capacity is less. [↑](#footnote-ref-13)
14. For raw capacity, 1 GB = 1 billion bytes. Capacity calculated using normal space terminology of 1 TB = 1024 \* 1024 \* 1024 \* 1024 bytes. Actual formatted capacity is less. [↑](#footnote-ref-14)
15. For raw capacity, 1 GB = 1 billion bytes. Capacity calculated using normal space terminology of 1 TB = 1024 \* 1024 \* 1024 \* 1024 bytes. Actual formatted capacity is less. [↑](#footnote-ref-15)
16. Applicable when you do not have Oracle Support Hub. [↑](#footnote-ref-16)
17. Applicable when you only have Oracle Support Hub. [↑](#footnote-ref-17)