Oracle® Exadata Database Machine

Configuration Worksheets

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This document is designed to help you define the Oracle Exadata Database Machine configuration settings for your environment. Working with your network and database administrators, evaluate your current environmental settings, such as current IP address use and network configuration. Next, define the settings for Oracle Exadata Database Machine, such as network configuration and backup method.

This document includes the configuration worksheets for Oracle Exadata Database Machine, as well as links to the owner's guide. The owner's guide contains additional information for each configuration worksheet and site requirements for Oracle Exadata Database Machine.

The information you provide is used to create the Oracle Exadata Database Machine Installation Template. It is important that you complete the worksheets, and provide them to your Oracle representative prior to installation. All information is required unless otherwise indicated. The Installation Template will be used to complete installation and configuration of your Oracle Exadata Database Machine. Site-specific adjustments to the Installation Template must be made in consultation with your Oracle representative.

This document includes the following topics:

ORACLE

Notes:

- Complete the configuration worksheets early in the process, and prior to receiving your Oracle Exadata Database Machine so that site-specific adjustments to the Installation Template do not delay installation.
- If you have purchased more than one Oracle Exadata Database Machine and you do not plan to cable them together, then you must complete one set of worksheets for each Oracle Exadata Database Machine.

1 Overview of the Network Configuration Process

The following procedure describes the network configuration process:

1. Read this document and the owner's guide to understand the networking requirements and guidelines.
2. Identify your current management network.
3. Identify your current client access network.
4. Decide if channel bonding will be used to access the client access network. Oracle recommends bonding the client access network to provide higher availability for client connections to the database.

   See Also: *Oracle Exadata Database Machine Owner's Guide* for information about channel bonding

5. Determine if you need to connect any additional networks.

   See Also: *Oracle Exadata Database Machine Owner's Guide* for information about additional networks

6. Determine if you will connect multiple Oracle Exadata Database Machines, or segregate Oracle Exadata Database Machine into clusters. If you plan do to either of these, then contact your Oracle representative.
7. Fill out the configuration worksheets, and supply the completed configuration worksheets to your Oracle representative. The information provided by you will be used to generate the Installation Template.
8. Verify the Installation Template that will be used during initial configuration. The Installation Template is provided by your Oracle representative based on the worksheets completed in step 7.

   Note: Inform your Oracle representative if there are any site-specific adjustments.

9. Configure your existing network to use the new IP addresses and host names supplied on the Installation Template in your existing networks.

   See Also: *Oracle Exadata Database Machine Owner's Guide* for information about DNS configuration

10. Review the network and IP address requirements, and the Installation Template to understand the network connections necessary.

    See Also: *Oracle Exadata Database Machine Owner's Guide* for information about network and IP address requirements

11. Run the network connections to the planned Oracle Exadata Database Machine location.
12. Inform your Oracle representative when you have completed these steps.

Your site is now ready to receive your Oracle Exadata Database Machine.

2 Default Oracle Environment Settings

Table 1 lists the default settings when selecting `Standard OS Authentication` for the OS owner used during installation to create the Oracle software environment. These default settings are in addition to the information in the configuration worksheets.

Table 1 Oracle Environment Default Settings when Using Standard OS Authentication

Oracle Database Item	Default Setting
Oracle Inventory group name	oinstall
Oracle Inventory group identifier	1001
DBA group name	dba
DBA group identifier	1002
Oracle software owner user name	oracle
Oracle software owner user identifier	1000
Oracle software owner default password	welcome
Oracle base directory (ORACLE_BASE)	`/u01/app/oracle`
Oracle inventory directory	`/u01/app/oraInventory`
Grid infrastructure home directory	`/u01`
Database name	dbm
Database character set	AL32UTF8[1]
Database national character set	AL16UTF16[1]
Database block size	8192
ASM disk groups	DATA for the default data file location RECO for the fast recovery area **Note:** Default DATA and RECO disk group size depends on the type of system, the type of disk drives, and the type of backup.

Table 1 (Cont.) Oracle Environment Default Settings when Using Standard OS

Oracle Database Item	Default Setting
Exadata Smart Flash Cache	All flash disks are configured as flash cache
Starting IP address for InfiniBand private network[2]	192.168.10.1
Subnet mask for InfiniBand network	255.255.252.0

[1] The default database created during installation uses Unicode database character set AL32UTF8, and national character set AL16UTF16. Oracle recommends Unicode for all new deployments. To use a different database character set or national character set after installation, run Database Configuration Assistant (DBCA) to create a new database using the desired character set, and to delete the default database.

[2] All InfiniBand addresses must be in the same subnet, with a minimum subnet mask of 255.255.252.0 (or /22). The subnet mask chosen should be wide enough to accommodate possible future expansion of the Oracle Exadata Database Machine and InfiniBand network.

Table 2 lists the default settings when selecting `Role Separated Authentication` for the OS owner used during installation to create the Oracle software environment. These default settings are in addition to the information in the configuration worksheets.

Table 2 Oracle Environment Default Settings when Using Role Separated Authentication

Oracle Database Item	Default Setting
Grid infrastructure user name	grid
Grid infrastructure identifier	1000
RAC home user name	oracle
RAC home identifier	1001
Oracle inventory group name	oinstall
Oracle inventory identifier	1001
RAC home DBA group name	dba
RAC home DBA group identifier	1002
RAC home OPER group name	racoper
RAC home OPER group identifier	1003
ASM DBA group name	asmdba
ASM DBA group identifier	1004
ASM OPER group name	asmoper
ASM OPER group identifier	1005
ASM ADMIN group name	asmadmin
ASM ADMIN group identifier	1006
Oracle software owner default password	welcome

Table 2 (Cont.) Oracle Environment Default Settings when Using Role Separated

Oracle Database Item	Default Setting
Grid infrastructure home base directory	`/u01/app/grid`
Oracle database home base directory (ORACLE_BASE)	`/u01/app/oracle`
Oracle home directory (ORACLE_HOME)	`/u01/app/oracle/product/11.2.0/dbhome_1`
Oracle Inventory directory	`/u01/app/oraInventory`
Grid infrastructure home directory	`/u01`
Database name	dbm
Database character set	AL32UTF8[1]
Database national character set	AL16UTF16[1]
Database block size	8192
ASM disk groups	DATA for the default data file location RECO for the fast recovery area **Note:** Default DATA and RECO disk group size depends on the type of system, the type of disk drives, and the type of backup.
Exadata Smart Flash Cache	All flash disks are configured as flash cache
Starting IP address for InfiniBand private network[2]	192.168.10.1
Subnet mask for InfiniBand network	255.255.252.0

[1] The default database created during installation uses Unicode database character set AL32UTF8, and national character set AL16UTF16. Oracle recommends Unicode for all new deployments. To use a different database character set or national character set after installation, run Database Configuration Assistant (DBCA) to create a new database using the desired character set, and to delete the default database.

[2] All InfiniBand addresses must be in the same subnet, with a minimum subnet mask of 255.255.252.0 (or /22). The subnet mask chosen should be wide enough to accommodate possible future expansion of the Oracle Exadata Database Machine and InfiniBand network.

See Also:

- *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux* for additional information about the Oracle Database default settings
- *Oracle Database Globalization Support Guide* for additional information about using Unicode and selecting a proper database character set.

3 General Configuration Worksheet (Required)

Table 3 is the general configuration worksheet. All information in the worksheet is required. When filling out the worksheet, note the following items:

- The Oracle Exadata Database Machine name is used to generate host names for network interfaces for all systems. For example, a value of `dm01` will result in a

database server host name of `dm01db01`, and a storage server host name of `dm01cel01`. See Section 7 for an example of the Installation Template.

- 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 Oracle Exadata Database Machine indicates database backups will be 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) will be 40% and 60%, respectively.
  - Backups external to Oracle Exadata Database Machine indicates database backups will be created on disk or tape media that is external to Oracle Exadata Database Machine, and not on Exadata Storage Servers. If you are performing backups to disk storage external to Oracle Exadata Database Machine, such as to additional dedicated Exadata Storage Servers, an NFS server, virtual tape library or tape library, then select this option. When choosing this option, the FRA internal to Oracle Exadata Database Machine will contain 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) will be 80% and 20%, respectively.
- The protection level varies depending on the choice of backup method.
  - High Redundancy for ALL: This protection level is only applicable when the backup location is external to Oracle Exadata Database Machine. 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 control file. The RECO disk group contains archive logs, and flashback log files.
  - High Redundancy for DATA: This protection level is applicable when the backup location is internal or external to Oracle Exadata Database Machine. 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, temporary files, online redo logs, and control file. The RECO disk group contains archive logs, and flashback log files.
  - High Redundancy for Log and RECO: This protection level is only applicable when the backup location is external to Oracle Exadata Database Machine. 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, control file, archive logs, and flashback log files.
  - Normal Redundancy: This protection level is applicable when the backup location is internal or external to Oracle Exadata Database Machine. 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 control file. The RECO disk group contains archive logs, and flashback log files.
- A valid time zone name is required for Oracle Exadata Database Machine installation. Time zone data provided with Oracle Exadata Database Machine and Oracle Enterprise Linux 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/`

Table 3 General Configuration Worksheet

Item	Entry	Description and Example
Oracle Exadata Database Machine name		This name is the basis for all host names generated during installation. Select a value 4 characters or fewer. Example: dm01
Type of system	X2-8 Full Rack	Type of Oracle Exadata Database Machine being installed at your site. Valid values: X2-2 Full Rack, X2-2 Half Rack, X2-2 Quarter Rack, or X2-8 Full Rack
Disk type	High Performance	Type of hard disks in Oracle Exadata Database Machine. Valid values: High Performance or High Capacity
Country		Country where Oracle Exadata Database Machine will be installed. Example: United States
Time zone name		Time zone name where Oracle Exadata Database Machine will be installed. Example: America/Los_Angeles
Workload type	DW	Type of workload that will mainly be running on the database. Valid values: DW or OLTP
Backup method	Backups internal to Oracl	Type of database backups for Oracle Exadata Database Machine. Valid values: Backups internal to Oracle Exadata Database Machine, and backups external to Oracle Exadata Database Machine
Protection level	High for ALL	Type of protection level for Oracle ASM disk groups.

4 Network Configuration Worksheets

The following networks are used with Oracle Exadata Database Machine:

- Management network
- Client access network
- Additional networks (optional)
- InfiniBand private network

The InfiniBand private network is a non-routable network fully contained in Oracle Exadata Database Machine, and does not connect to your existing network. This network is automatically configured during installation.

Prior to filling out the network configuration worksheets, refer to *Oracle Exadata Database Machine Owner's Guide* for a description of each network, and the IP address requirements specific to each type of Oracle Exadata Database Machine.

Note:

- All networks must be on distinct and separate subnets from each other.
- All IP addresses must be statically-assigned IP addresses, not dynamically-assigned (DHCP) addresses.

This section contains the following worksheets:

- General Network Configuration Worksheet (Required)
- Management Network Configuration Worksheet (Required)
- Client Access Network Configuration Worksheet (Required)
- Additional Network NET2 Configuration Worksheet (Optional)
- Additional Network NET3 Configuration Worksheet (Optional)
- Power Distribution Unit Configuration Worksheet (Optional)

Note: The 10 GbE card in the rack can be used for the client access network, or a network connected to a media server for backups. Oracle does not configure this network as part of the deployment.

See Also: *Oracle Exadata Database Machine Owner's Guide* for additional information about network requirements

4.1 General Network Configuration Worksheet (Required)

Table 4 is the general network configuration worksheet.

Table 4 General Network Configuration Worksheet

Item	Entry	Description and Example
Domain name		Company network domain name. Example: example.com

Table 4 (Cont.) General Network Configuration Worksheet

Item	Entry	Description and Example
IP address of the name server		IP address of one or more network name servers. Example: 10.25.45.123, 10.25.45.125 **Note:** If you do not use DNS, then enter `None`.
IP address of the Network Time Protocol (NTP) time server		IP address of one or more network time servers. Example: 10.25.45.127

4.2 Management Network Configuration Worksheet (Required)

The management network is used for administrative work for all components of Oracle Exadata Database Machine. It connects the NET0 network interface on all servers, Integrated Lights Out Manager (ILOM), and switches to the Cisco Catalyst 4948 Ethernet switch in the rack.

The Cisco Catalyst 4948 Ethernet switch supplied with Oracle Exadata Database Machine is minimally configured during installation. The minimal configuration disables IP routing, and sets the following:

- Host name
- IP address
- Subnet mask
- Default gateway
- Domain name
- Name server
- NTP server
- Time
- Time zone

Additional configuration, such as defining multiple virtual local area networks (VLANs) or enabling routing, may be required for the switch to operate properly in your environment and is beyond the scope of the installation service. If additional configuration is needed, then your network administrator must perform the necessary configuration steps during installation of Oracle Exadata Database Machine.

Table 5 is the management network configuration worksheet.

Table 5 Management Network Configuration Worksheet

Item	Entry	Description and Example
Starting IP address		First IP address in the sequential range used for management/network interfaces. This network must be distinct from all other networks on Oracle Exadata Database Machine. Example: 10.204.74.100
Subnet mask		Subnet mask for the management network. Example: 255.255.248.0
Gateway IP address		Gateway IP address for the management network. Example: 10.204.72.1

4.3 Client Access Network Configuration Worksheet (Required)

The client access network is used for client access to the database servers. Table 6 is the client access network configuration worksheet.

Table 6 Client Access Network Configuration Worksheet

Item	Entry	Description and Example
Will channel bonding be used?	Yes	Channel bonding uses NET1 and NET2 ports to provide higher availability for client connections to the database. **Note:** Oracle recommends channel bonding be used to provide higher availability. Valid values: yes or no
Starting IP address		First IP address in the sequential range used for client access network interfaces. This network must be distinct from all other networks on Oracle Exadata Database Machine. Example: 172.16.10.100
Subnet mask		Subnet mask for client access network. Example: 255.255.252.0
Gateway IP address		Gateway IP address for the client access network. Example: 172.16.8.1

4.4 Additional Network NET2 Configuration Worksheet (Optional)

This is an optional network. Table 7 is the additional network NET2 configuration worksheet.

Note: If channel bonding is used for the client access network, then this worksheet is not needed because this network interface is unavailable for configuration.

Oracle recommends channel bonding to provide higher availability for client connections to the database.

Table 7 Additional Network NET2 Configuration Worksheet

Item	Entry	Description and Example
Starting IP address		First IP address in the sequential range used for additional network NET2 interfaces. This network must be distinct from all other networks on Oracle Exadata Database Machine. Example: 10.201.21.100
Subnet mask		Subnet mask for the additional network NET2. Example: 255.255.252.0
Gateway IP address		Gateway IP address for the additional network NET2. Example: 10.201.20.1
Network host name suffix		Suffix appended to host names to identify the NET2 network. Example: bck

4.5 Additional Network NET3 Configuration Worksheet (Optional)

This is an optional network. Table 8 is the additional network NET3 configuration worksheet.

Table 8 Additional Network NET3 Configuration Worksheet

Item	Entry	Description and Example
Starting IP address		First IP address in the sequential range used for additional network NET3 interfaces. This network must be distinct from all other networks on Oracle Exadata Database Machine. Example: 10.202.46.100
Subnet mask		Subnet mask for the additional network NET3. Example: 255.255.252.0
Gateway IP address		Gateway IP address for the additional network NET3. Example: 10.202.44.1

Table 8 (Cont.) Additional Network NET3 Configuration Worksheet

Item	Entry	Description and Example
Network host name suffix		Suffix appended to host names to identify the NET3 network. Example: dr

4.6 Power Distribution Unit Configuration Worksheet (Optional)

This is an optional set of network connections to the power distribution units (PDUs) in the rack. Table 9 is the PDU configuration worksheet.

Table 9 Power Distribution Unit Configuration Worksheet

Item	Entry	Description and Example
PDU-A IP address [eth0]		IP address for PDU-A in the rack.
PDU-B IP address [eth0]		IP address for PDU-B in the rack.

5 Cell Alert Delivery Configuration Worksheet (Optional)

Cell alerts can be delivered by way of Simple Mail Transfer Protocol (SMTP), Simple Network Management Protocol (SNMP), or both. Cell alert delivery may be configured during or after installation. To have cell alert delivery configured during installation, complete Table 10. Configuration is optional, but recommended.

Table 10 Cell Alert Delivery Configuration Worksheet

Item	Entry	Description and Example
smtpServer		SMTP e-mail server used to send alert notifications. Example: mail.example.com
smtpPort		SMTP e-mail server port used to send alert notifications. Example: 25 or 465
smtpUseSSL	Yes	Specification to use Secure Socket Layer (SSL) security when sending alert notifications. Valid values: yes or no
smtpToAddr		Address to send e-mail messages. It can be a comma-delimited list to allow multiple subscribers to alerts. Example: "all-admins@example.com, john.doe@example.com"
smtpFromAddr		SMTP e-mail address that sends alert notifications. Example: dm01@example.com

Table 10 (Cont.) Cell Alert Delivery Configuration Worksheet

Item	Entry	Description and Example
smtpFrom		SMTP e-mail user name that appears in alert notifications. Example: "Oracle Exadata Database Machine"
smtpUser		User name used for SMTP authentication. This parameter requires a value if the e-mail server requires a user name and password to send e-mail. Example: john.doe@example.com
smtpPwd		Password used for SMTP authentication. This parameter requires a value if your e-mail server requires a user name and password to send e-mail messages. Example: password
snmpSubscriber		Host, optional port, and optional community that subscribe to the SNMP alert notifications. The default port is 162. The default community is public. Example: snmp.example.com,162,public **Note:** Additional SNMP targets may be defined after installation. Refer to *Oracle Exadata Storage Server Software User's Guide* for additional information.

6 Sample Installation Template with Channel Bonding

The following is an example of a completed Installation Template in which the client access network uses channel bonding.

General Information

Oracle Exadata Database Machine name:	dm01
Type of System:	Full rack
Disk Type:	600G
Country:	United States (US)
Time Zone Name:	America/Los_Angeles
Backup Method:	Tape only

Default Oracle Environment Settings

Oracle Inventory group name:	oinstall
Oracle Inventory group identifier:	1001
DBA group name:	dba
DBA group identifier:	1002
OPER group name:	dba
OPER group identifier:	1002
Oracle software owner user name:	oracle
Oracle software owner user identifier:	1000
Oracle software owner default password:	welcome
Oracle base directory (ORACLE_BASE):	/u01/app/oracle
Oracle Inventory directory:	/u01/app/oraInventory
Grid infrastructure home directory:	/u01
Database name:	dbm
ASM disk groups:	2
DATA size:	33.5T
RECO for the fast recovery area:	
RECO size:	16.9T
Exadata Smart Flash Cache:	All flash disks

General Network Configuration

Domain Name:	example.com
IP address of name server(s):	(10.25.45.123, 10.25.45.125)
IP addr of the NTP server(s):	(10.25.45.127)

Management Network Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	10.204.74.100
Subnet Mask:	255.255.248.0
Gateway:	10.204.72.1
Total IP addresses:	51
Network connection requirements:	1 Ethernet connection for the Ethernet switch in the rack to connect to the existing management network 1 Ethernet connection for the KVM switch to connect to the existing management network 2 Ethernet connections for the PDUs (one connection per PDU) to connect to the existing management network

Server Components

Rack U Location	Component	NET0 Name	NET0 IP Address	ILOM Name	ILOM IP Address
U41	Exadata Storage Server	dm01cel14	10.204.74.121	dm01cel14-ilom	10.204.74.143
U39	Exadata Storage Server	dm01cel13	10.204.74.120	dm01cel13-ilom	10.204.74.142
U37	Exadata Storage Server	dm01cel12	10.204.74.119	dm01cel12-ilom	10.204.74.141
U35	Exadata Storage Server	dm01cel11	10.204.74.118	dm01cel11-ilom	10.204.74.140
U33	Exadata Storage Server	dm01cel10	10.204.74.117	dm01cel10-ilom	10.204.74.139
U31	Exadata Storage Server	dm01cel09	10.204.74.116	dm01cel09-ilom	10.204.74.138
U29	Exadata Storage Server	dm01cel08	10.204.74.115	dm01cel08-ilom	10.204.74.137
U28	Database server	dm01db08	10.204.74.107	dm01db08-ilom	10.204.74.129
U27	Database server	dm01db07	10.204.74.106	dm01db07-ilom	10.204.74.128
U26	Database server	dm01db06	10.204.74.105	dm01db06-ilom	10.204.74.127
U25	Database server	dm01db05	10.204.74.104	dm01db05-ilom	10.204.74.126
U19	Database server	dm01db04	10.204.74.103	dm01db04-ilom	10.204.74.125
U18	Database server	dm01db03	10.204.74.102	dm01db03-ilom	10.204.74.124
U17	Database server	dm01db02	10.204.74.101	dm01db02-ilom	10.204.74.123
U16	Database server	dm01db01	10.204.74.100	dm01db01-ilom	10.204.74.122
U14	Exadata Storage Server	dm01cel07	10.204.74.114	dm01cel07-ilom	10.204.74.136
U12	Exadata Storage Server	dm01cel06	10.204.74.113	dm01cel06-ilom	10.204.74.135
U10	Exadata Storage Server	dm01cel05	10.204.74.112	dm01cel05-ilom	10.204.74.134
U8	Exadata Storage Server	dm01cel04	10.204.74.111	dm01cel04-ilom	10.204.74.133
U6	Exadata Storage Server	dm01cel03	10.204.74.110	dm01cel03-ilom	10.204.74.132
U4	Exadata Storage Server	dm01cel02	10.204.74.109	dm01cel02-ilom	10.204.74.131
U2	Exadata Storage Server	dm01cel01	10.204.74.108	dm01cel01-ilom	10.204.74.130

Switch Components

Rack U Location	Component	Admin Name	Admin IP Address
U24	InfiniBand Switch	dm01sw-ib3	10.204.74.148
U23	Ethernet Switch	dm01sw-ip	10.204.74.145
U21	KVM Switch	dm01sw-kvm	10.204.74.144
U20	InfiniBand Switch	dm01sw-ib2	10.204.74.147
U1	InfiniBand Spine Switch	dm01sw-ib1	10.204.74.146

Client Access Network Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	172.16.10.100
Subnet Mask:	255.255.252.0
Gateway:	172.16.8.1
Total IP addresses:	19
Channel Bonding in Use:	Yes
Network connection requirements:	16 Ethernet connections to connect database servers NET1 and NET2 ports to the client access network
SCAN Name:	dm01-scan
SCAN IP addresses:	(172.16.10.116, 172.16.10.117, 172.16.10.118)

Client Access Components

Rack U Location	Component	eth1 name	eth1 IP address	VIP name	VIP IP address
U28	Database server	dm0108	172.16.10.107	dm0108-vip	172.16.10.115
U27	Database server	dm0107	172.16.10.106	dm0107-vip	172.16.10.114
U26	Database server	dm0106	172.16.10.105	dm0106-vip	172.16.10.113
U25	Database server	dm0105	172.16.10.104	dm0105-vip	172.16.10.112
U19	Database server	dm0104	172.16.10.103	dm0104-vip	172.16.10.111
U18	Database server	dm0103	172.16.10.102	dm0103-vip	172.16.10.110
U17	Database server	dm0102	172.16.10.101	dm0102-vip	172.16.10.109
U16	Database server	dm0101	172.16.10.100	dm0101-vip	172.16.10.108

Additional Network NET2 Configuration

Unavailable for configuration because a bonded network configuration is used for the client access network

Additional Network NET3 Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	10.201.46.100
Subnet Mask:	255.255.252.0
Gateway:	10.202.44.1
Total IP addresses:	8
Network connection requirements:	8 Ethernet connections to connect database servers to additional network NET3

Additional Network NET3 Components

Rack U Location	Component	NET2 Name	NET2 IP Address
U28	Database server	dm0108-dr	10.201.46.107
U27	Database server	dm0107-dr	10.201.46.106
U26	Database server	dm0106-dr	10.202.46.105
U25	Database server	dm0105-dr	10.202.46.104
U19	Database server	dm0104-dr	10.202.46.103
U18	Database server	dm0103-dr	10.202.46.102
U17	Database server	dm0102-dr	10.202.46.101
U16	Database server	dm0101-dr	10.202.46.100

Private InfiniBand Network Configuration

Starting IP Address:	192.168.10.1
Subnet Mask:	255.255.248.0
Network connection requirements:	None, the InfiniBand network is fully contained within Oracle Exadata Database Machine

InfiniBand Components

Rack U Location	Component	BOND0 Name	BOND0 IP Address
U41	Exadata Storage Server	dm01cel14-priv	192.168.10.22
U39	Exadata Storage Server	dm01cel13-priv	192.168.10.21
U37	Exadata Storage Server	dm01cel12-priv	192.168.10.20
U35	Exadata Storage Server	dm01cel11-priv	192.168.10.19

Rack U Location	Component	BOND0 Name	BOND0 IP Address
U33	Exadata Storage Server	dm01cel10-priv	192.168.10.18
U31	Exadata Storage Server	dm01cel09-priv	192.168.10.17
U29	Exadata Storage Server	dm01cel08-priv	192.168.10.16
U28	Database server	dm01db08-priv	192.168.10.8
U27	Database server	dm01db07-priv	192.168.10.7
U26	Database server	dm01db06-priv	192.168.10.6
U25	Database server	dm01db05-priv	192.168.10.5
U19	Database server	dm01db04-priv	192.168.10.4
U18	Database server	dm01db03-priv	192.168.10.3
U17	Database server	dm01db02-priv	192.168.10.2
U16	Database server	dm01db01-priv	192.168.10.1
U14	Exadata Storage Server	dm01cel07-priv	192.168.10.15
U12	Exadata Storage Server	dm01cel06-priv	192.168.10.14
U10	Exadata Storage Server	dm01cel05-priv	192.168.10.13
U8	Exadata Storage Server	dm01cel04-priv	192.168.10.12
U6	Exadata Storage Server	dm01cel03-priv	192.168.10.11
U4	Exadata Storage Server	dm01cel02-priv	192.168.10.10
U2	Exadata Storage Server	dm01cel01-priv	192.168.10.9

Cell Alert Delivery Configuration

SMTP Notification	Enabled
Email Server:	mail.example.com
Port:	465
Use SSL:	Yes
To Address:	all-admins@example.com
	john.doe@example.com
From Address:	dm01@example.com
From Name:	DBM dm01
Auth User:	john.doe@example.com
Auth Password:	password
SNMP Notification	Enabled

SNMP Server:	snmp.example.com
SNMP Port:	162

7 Sample Installation Template without Channel Bonding

The following is an example of a completed Installation Template in which the client access network does not use channel bonding.

General Information

Oracle Exadata Database Machine name:	dm01
Type of System:	Full rack
Disk Type:	600G
Country:	United States (US)
Time Zone Name:	America/Los_Angeles
Backup Method:	Tape only

Default Oracle Environment Settings

Oracle Inventory group name:	oinstall
Oracle Inventory group identifier:	1001
DBA group name:	dba
DBA group identifier:	1002
OPER group name:	dba
OPER group identifier:	1002
Oracle software owner user name:	oracle
Oracle software owner user identifier:	1000
Oracle software owner default password:	welcome
Oracle base directory (ORACLE_BASE):	/u01/app/oracle
Oracle Inventory directory:	/u01/app/oraInventory
Grid infrastructure home directory:	/u01
Database name:	dbm
ASM disk groups:	2
DATA size:	33.5T
RECO for the fast recovery area:	
RECO size:	16.9T
Exadata Smart Flash Cache:	All flash disks

General Network Configuration

Domain Name:	example.com

IP address of name server(s):	(10.25.45.123, 10.25.45.125)
IP addr of the NTP server(s):	(10.25.45.127)

Management Network Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	10.204.74.100
Subnet Mask:	255.255.248.0
Gateway:	10.204.72.1
Total IP addresses:	51
Network connection requirements:	1 Ethernet connection for the Ethernet switch in the rack to connect to the existing management network 1 Ethernet connection for the KVM switch to connect to the existing management network 2 Ethernet connections for the PDUs (one connection per PDU) to connect to the existing management network

Server Components

Rack U Location	Component	NET0 Name	NET0 IP Address	ILOM Name	ILOM IP Address
U41	Exadata Storage Server	dm01cel14	10.204.74.121	dm01cel14-ilom	10.204.74.143
U39	Exadata Storage Server	dm01cel13	10.204.74.120	dm01cel13-ilom	10.204.74.142
U37	Exadata Storage Server	dm01cel12	10.204.74.119	dm01cel12-ilom	10.204.74.141
U35	Exadata Storage Server	dm01cel11	10.204.74.118	dm01cel11-ilom	10.204.74.140
U33	Exadata Storage Server	dm01cel10	10.204.74.117	dm01cel10-ilom	10.204.74.139
U31	Exadata Storage Server	dm01cel09	10.204.74.116	dm01cel09-ilom	10.204.74.138
U29	Exadata Storage Server	dm01cel08	10.204.74.115	dm01cel08-ilom	10.204.74.137
U28	Database server	dm01db08	10.204.74.107	dm01db08-ilom	10.204.74.129
U27	Database server	dm01db07	10.204.74.106	dm01db07-ilom	10.204.74.128
U26	Database server	dm01db06	10.204.74.105	dm01db06-ilom	10.204.74.127
U25	Database server	dm01db05	10.204.74.104	dm01db05-ilom	10.204.74.126

Rack U Location	Component	NET0 Name	NET0 IP Address	ILOM Name	ILOM IP Address
U19	Database server	dm01db04	10.204.74.103	dm01db04-ilom	10.204.74.125
U18	Database server	dm01db03	10.204.74.102	dm01db03-ilom	10.204.74.124
U17	Database server	dm01db02	10.204.74.101	dm01db02-ilom	10.204.74.123
U16	Database server	dm01db01	10.204.74.100	dm01db01-ilom	10.204.74.122
U14	Exadata Storage Server	dm01cel07	10.204.74.114	dm01cel07-ilom	10.204.74.136
U12	Exadata Storage Server	dm01cel06	10.204.74.113	dm01cel06-ilom	10.204.74.135
U10	Exadata Storage Server	dm01cel05	10.204.74.112	dm01cel05-ilom	10.204.74.134
U8	Exadata Storage Server	dm01cel04	10.204.74.111	dm01cel04-ilom	10.204.74.133
U6	Exadata Storage Server	dm01cel03	10.204.74.110	dm01cel03-ilom	10.204.74.132
U4	Exadata Storage Server	dm01cel02	10.204.74.109	dm01cel02-ilom	10.204.74.131
U2	Exadata Storage Server	dm01cel01	10.204.74.108	dm01cel01-ilom	10.204.74.130

Switch Components

Rack U Location	Component	Admin Name	Admin IP Address
U24	InfiniBand Switch	dm01sw-ib3	10.204.74.148
U23	Ethernet Switch	dm01sw-ip	10.204.74.145
U21	KVM Switch	dm01sw-kvm	10.204.74.144
U20	InfiniBand Switch	dm01sw-ib2	10.204.74.147
U1	InfiniBand Spine Switch	dm01sw-ib1	10.204.74.146

Client Access Network Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	172.16.10.100
Subnet Mask:	255.255.252.0
Gateway:	172.16.8.1
Total IP addresses:	19
Channel Bonding in Use:	No
Network connection requirements:	8 Ethernet connections to connect database servers NET1 port to the client access network

SCAN Name: dm01-scan

SCAN IP addresses: (172.16.10.116, 172.16.10.117, 172.16.10.118)

Client Access Components

Rack U Location	Component	eth1 name	eth1 IP address	VIP name	VIP IP address
U28	Database server	dm0108	172.16.10.107	dm0108-vip	172.16.10.115
U27	Database server	dm0107	172.16.10.106	dm0107-vip	172.16.10.114
U26	Database server	dm0106	172.16.10.105	dm0106-vip	172.16.10.113
U25	Database server	dm0105	172.16.10.104	dm0105-vip	172.16.10.112
U19	Database server	dm0104	172.16.10.103	dm0104-vip	172.16.10.111
U18	Database server	dm0103	172.16.10.102	dm0103-vip	172.16.10.110
U17	Database server	dm0102	172.16.10.101	dm0102-vip	172.16.10.109
U16	Database server	dm0101	172.16.10.100	dm0101-vip	172.16.10.108

Additional Network NET2 Configuration

Note: If you choose to not use channel bonding, then NET2 would include values similar to the following values.

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address: 10.201.21.100

Subnet Mask: 255.255.252.0

Gateway: 10.201.20.1

Total IP addresses: 8

Network connection requirements: 8 Ethernet connections to connect database servers to additional network NET2

Additional Network NET2 Components

Note: If you choose to not use channel bonding, then NET2 would include values similar to the following values.

Rack U Location	Component	NET2 Name	NET2 IP Address
U28	Database server	dm0108-bck	10.201.21.107
U27	Database server	dm0107-bck	10.201.21.106
U26	Database server	dm0106-bck	10.201.21.105
U25	Database server	dm0105-bck	10.201.21.104
U19	Database server	dm0104-bck	10.201.21.103
U18	Database server	dm0103-bck	10.201.21.102
U17	Database server	dm0102-bck	10.201.21.101
U16	Database server	dm0101-bck	10.201.21.100

Additional Network NET3 Configuration

All IP addresses and corresponding host names should be registered in DNS

Starting IP Address:	10.201.46.100
Subnet Mask:	255.255.252.0
Gateway:	10.202.44.1
Total IP addresses:	8
Network connection requirements:	8 Ethernet connections to connect database servers to additional network NET3

Additional Network NET3 Components

Rack U Location	Component	NET2 Name	NET2 IP Address
U28	Database server	dm0108-dr	10.201.46.107
U27	Database server	dm0107-dr	10.201.46.106
U26	Database server	dm0106-dr	10.202.46.105
U25	Database server	dm0105-dr	10.202.46.104
U19	Database server	dm0104-dr	10.202.46.103
U18	Database server	dm0103-dr	10.202.46.102
U17	Database server	dm0102-dr	10.202.46.101
U16	Database server	dm0101-dr	10.202.46.100

Private InfiniBand Network Configuration

Starting IP Address:	192.168.10.1
Subnet Mask:	255.255.248.0
Network connection requirements:	None, the InfiniBand network is fully contained within Oracle Exadata Database Machine

InfiniBand Components

Rack U Location	Component	BOND0 Name	BOND0 IP Address
U41	Exadata Storage Server	dm01cel14-priv	192.168.10.22
U39	Exadata Storage Server	dm01cel13-priv	192.168.10.21
U37	Exadata Storage Server	dm01cel12-priv	192.168.10.20
U35	Exadata Storage Server	dm01cel11-priv	192.168.10.19
U33	Exadata Storage Server	dm01cel10-priv	192.168.10.18
U31	Exadata Storage Server	dm01cel09-priv	192.168.10.17
U29	Exadata Storage Server	dm01cel08-priv	192.168.10.16
U28	Database server	dm01db08-priv	192.168.10.8
U27	Database server	dm01db07-priv	192.168.10.7
U26	Database server	dm01db06-priv	192.168.10.6
U25	Database server	dm01db05-priv	192.168.10.5
U19	Database server	dm01db04-priv	192.168.10.4
U18	Database server	dm01db03-priv	192.168.10.3
U17	Database server	dm01db02-priv	192.168.10.2
U16	Database server	dm01db01-priv	192.168.10.1
U14	Exadata Storage Server	dm01cel07-priv	192.168.10.15
U12	Exadata Storage Server	dm01cel06-priv	192.168.10.14
U10	Exadata Storage Server	dm01cel05-priv	192.168.10.13
U8	Exadata Storage Server	dm01cel04-priv	192.168.10.12
U6	Exadata Storage Server	dm01cel03-priv	192.168.10.11
U4	Exadata Storage Server	dm01cel02-priv	192.168.10.10
U2	Exadata Storage Server	dm01cel01-priv	192.168.10.9

Cell Alert Delivery Configuration

SMTP Notification	Enabled
Email Server:	mail.example.com
Port:	465

Use SSL:	Yes
To Address:	all-admins@example.com
	john.doe@example.com
From Address:	dm01@example.com
From Name:	DBM dm01
Auth User:	john.doe@example.com
Auth Password:	password
SNMP Notification	Enabled
SNMP Server:	snmp.example.com
SNMP Port:	162

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