



## Oracle Configuration Services Exhibit

*This exhibit incorporates by reference the terms of the order for Exadata Database Machine, Exadata Storage Expansion Rack, SuperCluster, Exalogic on SuperCluster, Oracle Big Data Appliance, Exalogic, Oracle Exalytics In-Memory Machine Configuration, Engineered Systems Upgrade Configuration Services, Oracle Zero Data Loss Recovery Appliance Configuration Services SuperCluster Compute Node and/or Exadata Eighth Rack.*

### 1. Description of Services

#### A. Exadata Database Machine Configuration Services

	Part #
Oracle Exadata Configuration Service (5 to 7 servers): Onsite Delivery	B82273
Oracle Exadata Configuration Service (8 to 22 servers): Onsite Delivery	B82275
Oracle Exadata Configuration Service (Eighth, Quarter rack, 5 to 7 servers)	B66858
Oracle Exadata Configuration Service	B51555

If your order contains Exadata Database Machine configuration services, Oracle will perform one (1) time per rack the following services.

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Storage Servers:
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Set up configuration files for a database server host;
  - Configure shared storage;
  - Install Oracle Database including Automated Storage Management (ASM), Cluster Ready Services (CRS) and Real Application Clusters (RAC) and Oracle Virtual Machine (OVM);
  - Install any required Database patches as listed in the Critical Issue My Oracle Support document;
  - Create an ASM disk group for the Oracle Exadata Storage Server Software;
  - Create up to four Oracle homes each containing one (1) Oracle database consisting of up to four (4) RAC clusters or up to four (4) OVMs;
  - Configure the following optional items, if required;
    - i. Enable Write Back Flash Cache (WBFC) on your database servers
    - ii. Enable Oracle ASM Cluster File Systems (ACFS) on your storage servers
    - iii. Configure Link Aggregation Control Protocol (LACP) provides active - active bonding for one network (client or backup)
    - iv. Configure Virtual Local Area Network (VLAN) tagging – for one client and one backup network
    - v. Configure listener services (create the additional listener, change port or protocol address of listener)
  - Configure the Exadata Oracle Enterprise Manager (OEM) agent from your currently installed OEM.

- III. Post-Installation Tasks:
- Perform post installation verification; and
  - Provide final summary report.

Unless otherwise specified in your order, the Exadata Database Machine Configuration Services are performed remotely, utilizing one (1) of the following options:

1. A gateway. A “gateway” is the computing platform, consisting of the Oracle Advanced Support Gateway available on My Oracle Support (“MOS”) and a physical or virtual hardware platform, which hosts Oracle’s tools. Oracle will provide the necessary software and instructions to install the gateway or you may provide Oracle remote access to install the gateway on your behalf. Once the gateway is installed, Oracle will deploy additional software on the gateway which will be used to deliver your services. The gateway must be fully installed, connected and operational in order for you to receive the services; or
2. Oracle Continuous Connection Network (“OCCN”). OCCN is secure network between you and Oracle from which Oracle can access your system to perform the services. Oracle will provide you the requirements for implementing the OCCN; or
3. Oracle Web Conference (“OWC”).

## **B. SuperCluster Configuration Services (Part# B65372)**

If your order contains SuperCluster configuration services, Oracle will perform one (1) time per rack the following services.

- I. Review the build diagram and Bill of Materials provided to you at the end of the installation services activity.
- II. Configure SuperCluster compute nodes as follows:
  - Configure network (Ethernet <client access network, backup network and/or management network>, and InfiniBand);
  - Configure either link aggregation or virtual lan (VLAN) tagging on Ethernet network;
  - Partition InfiniBand switch;
  - Deploy the number of SuperCluster dedicated domains (Root and/or Database and/or Application domains) supported by Your SuperCluster hardware configuration up to a maximum of one (1) domain per CMIOU.
  - Deploy up to eight (8) additional virtual machines per SuperCluster on dedicated Root domain and/or dedicated Database domains; a combination of the following options; Database zones, Database IO domains, Application IO domains
  - Configure ZFS Storage Appliance.
- IV. Establish and validate the physical connection to your network.
- V. Configure Exadata Storage Servers:
  - Setup database connectivity;
  - Configure shared storage;
  - Configure logins and network addresses;
  - Create a cell, cell disks and grid disks;
  - Setup configuration files for a database server host;
  - Install one Oracle\_home with one (1) Oracle Database, Automated Storage Management (ASM), Cluster Ready Services (CRS) and Real Application Clusters (RAC);
  - Configure the following; up to four (4) Real Application Clusters (RAC) with two (2) nodes per cluster, or up to two (2) RAC with four (4) nodes each; up to a maximum of eight (8) virtual machines on the dedicated Root domains and/or dedicated Database domains; using one of the following deployment options:
    - i. Database IO domains only;
    - ii. Combination of Database zones and/or Database IO domains
    - iii. Dedicated Database domains only
    - iv. Database zones in dedicated Database domains only

- v. Combination of dedicated Database domains and/or Database zones in dedicated Database domains
  - Install any required database patches as listed in the Critical Issue My Oracle Support document;
  - Create up to three (3) ASM disk groups per RAC for Oracle Exadata Storage Server Software; and
- VI. Configure Oracle Configuration Manager (OCM).
- VII. Configure SuperCluster additional software:
- Configure SuperCluster Backup tool (osc-config backup) with your integrated ZFS Storage Appliance;
- VIII. Post-Installation Tasks:
- Post installation verification; and
  - Deliver final summary report.

**C. Exalogic on SuperCluster Configuration Services (Part # B66862)**

If your order contains Exalogic on SuperCluster configuration services, Oracle will perform one (1) time per rack the following services.

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the SuperCluster compute nodes for Exalogic:
  - Configure users and login accounts;
  - Setup database connectivity – to an existing Oracle database;
  - Set up node manager;
  - Configure Exalogic software;
  - Install the following Fusion Middleware components individually, as required:
    - i. WebLogic server;
    - ii. Coherence cluster;
    - iii. JRockit or Hotspot; and
    - iv. Install required and recommended patches.
  - Configure WebLogic Gridlink connectivity to Oracle Exadata Database Machine over Infiniband (if deployed with an Oracle Exadata Database Machine or SuperCluster); and
- III. Install Oracle Enterprise Manager agents for Exalogic on licensed SuperCluster compute nodes.
- IV. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.

**D. Exadata Storage Expansion Rack Configuration Services**

	<b>Part #</b>
Oracle Exadata Storage Expansion Configuration Service (8 to 19 servers)	B64314
Oracle Exadata Storage Expansion Configuration-Service (Quarter rack, 4-7 servers)	B66861

If your order contains Exadata Storage Expansion Rack configuration services, Oracle will perform one (1) time per rack the following services.

- I. Configure the Exadata Storage Servers:
  - Install Exadata Cell storage software;
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Perform validations, quality assurance (QA) and stress tests;
  - Set up configuration files for a database server host, and;
  - Configure shared storage to support Oracle Real Application Clusters.
- II. Post-Installation Tasks:

- Perform post installation verification; and
  - Provide final summary report.
- III. Remote Delivery. Unless otherwise specified in your order, the Exadata Storage Expansion Rack Configuration Services are performed remotely, utilizing one (1) of the following options:
- A gateway. A “gateway” is the computing platform, consisting of the Oracle Advanced Support Gateway available on My Oracle Support (“MOS”) and a physical or virtual hardware platform, which hosts Oracle’s tools. Oracle will provide the necessary software and instructions to install the gateway or you may provide Oracle remote access to install the gateway on your behalf. Once the gateway is installed, Oracle will deploy additional software on the gateway which will be used to deliver your services. The gateway must be fully installed, connected and operational in order for you to receive the services; or
  - Oracle Continuous Connection Network (“OCCN”). OCCN is secure network between you and Oracle from which Oracle can access your system to perform the services. Oracle will provide you the requirements for implementing the OCCN; or
  - Oracle Web Conference (“OWC”)

**E. Oracle Big Data Appliance Configuration Services**

	<b>Part #</b>
Oracle Big Data Appliance Configuration Service	B65793

If your order contains Oracle Big Data Appliance configuration services, Oracle will perform one (1) time per rack the following services.

- I. Configure the Big Data Servers:
- Verify factory setup; and
  - If needed, patch to the latest base image of Oracle Enterprise Linux.
- II. Install the following software:
- Cloudera Distribution Including Apache Hadoop (Cloudera CDH™);
  - Non-Hadoop Big Data Appliance software (i.e., MySQL, NoSQL); and
  - The following optional software:
    - i. Open source distribution of R;
    - ii. Oracle Loader for Hadoop;
    - iii. Oracle Data Integrator Application Adapter for Hadoop; and
    - iv. Oracle R connector for Hadoop.
- IV. Post-Installation Tasks:
- Perform post installation verification; and
  - Provide final summary report.
- V. Remote Delivery. Unless otherwise specified in your order, the Big Data Appliance (BDA) Machine Configuration Services are performed remotely, utilizing one (1) of the following options:
- A gateway. A “gateway” is the computing platform, consisting of the Oracle Advanced Support Gateway available on My Oracle Support (“MOS”) and a physical or virtual hardware platform, which hosts Oracle’s tools. Oracle will provide the necessary software and instructions to install the gateway or you may provide Oracle remote access to install the gateway on your behalf. Once the gateway is installed, Oracle will deploy additional software on the gateway which will be used to deliver your services. The gateway must be fully installed, connected and operational in order for you to receive the services; or
  - Oracle Continuous Connection Network (“OCCN”). OCCN is secure network between you and Oracle from which Oracle can access your system to perform the services. Oracle will provide you the requirements for implementing the OCCN; or
  - Oracle Web Conference (“OWC”)

## F. Oracle Exalytics In-Memory Machine Configuration Services (Part #B65792)

If your order contains Oracle Exalytics In-Memory Machine configuration services, Oracle will perform one (1) time per machine the following services:

- I. Configure the Exalytics Server(s):
  - Install and configure Oracle VM Manager on your VM or machine other than Exalytics;
  - Re-image system to Oracle VM;
  - Configure Oracle VM;
  - Create up to two (2) Oracle VM on your Exalytics server;
  - Configure one (1) network connection for each Oracle VM guest and one (1) network configuration for each Oracle VM Server (OVS);
  - Configure users and login accounts;
  - Configure network (Ethernet, InfiniBand (IB<sup>1</sup>));
  - Setup connectivity to an existing database outside the Exalytics system;
  - Run Repository Creation Utility (RCU) to create required Oracle Business Intelligence (BI) schemas against the database;
  - Configure internal Exalytics storage;
  - Configure server by turning off sub-capacity features as required;
  - Install and configure up to two (2) instances of the standard Exalytics software components listed below. You may select any combination of the following:
    - i. Oracle Business Intelligence Enterprise Edition (OBIEE) which includes the following components:
      - a. Business Intelligence Enterprise Edition;
      - b. Business Intelligence Publisher;
      - c. Real Time Decisions (optional); and
      - d. Embedded Essbase Suite (optional).
      - e. Oracle Times Ten In-Memory Database which includes the following components:
        1. TimesTen Client;
        2. TimesTen Server; and
        3. Data Manager.
    - ii. Oracle Business Intelligence Enterprise Edition (OBIEE) which includes the following components:
      - a. Business Intelligence Enterprise Edition;
      - b. Business Intelligence Publisher;
      - c. Real Time Decisions (optional); and
      - d. Embedded Essbase Suite (optional).
      - e. Oracle Database 12c which include the following components:
        1. Oracle Database 12c single instance server; and
        2. Oracle Database 12c-In-memory option.
    - iii. Oracle Endeca which includes the following components (Note: not available for Exalytics T-series server)
      - a. Endeca Server;
      - b. Endeca Studio;
      - c. Endeca Provision; and
      - d. Endeca Integration Server (ETL).
      - e. For the avoidance of doubt, the following services are excluded from the Endeca services which may be purchased separately:
        1. Endeca client tools;
        2. Integrator client;
        3. Text Enrichment; and
        4. Sentiment Analysis.
    - iv. Oracle Essbase with optional Enterprise Performance Management (EPM) Foundation Services.
      - a. The scope of EPM services may vary based upon the version of the EPM software. Additional information applicable to your version of EPM is available at

<http://www.oracle.com/technetwork/middleware/bi-foundation/hyperion-supported-platforms-085957.html>

- b. You may select any combination of the following EPM components for configuration:
  1. Shared Services;
  2. Calculation Manager;
  3. EPM Workspace;
  4. Essbase;
  5. Administration Services;
  6. Provider Services;
  7. Essbase Studio;
  8. Financial Reporting; and
  9. Oracle Hyperion Planning.
- c. For the avoidance of doubt, the following services are excluded from the EPM services and may be purchased separately:
  1. EPM Architect;
  2. Essbase Integration Services;
  3. Interactive Reporting;
  4. SQR Production Reporting;
  5. Web Analysis;
  6. Financial Management;
  7. Performance Scorecard;
  8. Strategic Finance;
  9. Profitability & Cost Management;
  10. Financial Close Management;
  11. Disclosure Management;
  12. Data Relationship Management;
  13. FDM; and
  14. FDMEE.

## II. Post-Installation Tasks:

- Perform post installation verification; and
- Provide final summary report.

<sup>1</sup>IB configuration of Exalytics to any Oracle engineered system in an OVM environment is outside the scope of service described in this exhibit.

### F.1. Oracle Exalytics In-Memory Machine Configuration Services: Virtualization (Part #B73876)

If your order contains Virtualization configuration services Oracle Exalytics In-Memory Machine, Oracle will perform one (1) time per machine the following services:

- I. Configure the Exalytics Server(s):
  - Install and configure Oracle VM (OVM) Manager on your virtual machine or any other non-Exalytics machine;
  - Re-image system to OVM;
  - Configure OVM;
    - i. Create up to two (2) Oracle Virtual Machines (OVM) on your Exalytics X-series system or
    - ii. Create up to two (2) Logical Domains (LDOM) and up to two (2) empty Solaris Zones on each LDOM; no additional software will be installed or configured on your Exalytics T-series system; and
  - Configure user and login accounts.

Note: Additional instances of OVM guests or Zones may be purchased as described in Section F.3. below.

## **F.2. Oracle Exalytics In-Memory Machine Configuration Services: Clustering (Part #B73877)**

If your order contains Clustering configuration services for Oracle Exalytics In-Memory Machine, Oracle will perform one (1) time per machine the following service:

- I. Configure the Exalytics Server(s):
  - Configure one (1) or both of the following:
    - i. OBIEE, TimesTen and Essbase for clustering; and/or
    - ii. OBIEE WebLogic Administration Server for high availability.
  - Check cluster connectivity by verifying the following:
    - i. OBIEE scalability settings;
    - ii. OBIEE failover settings; and
    - iii. Persistent store configuration (move) on an existing shared storage.

## **F.3. Oracle Exalytics In-Memory Machine Configuration Services: Additional Software (Part #B73878)**

If your order contains Additional Software configuration services for Oracle Exalytics In-Memory Machine, Oracle will perform one (1) time per machine the following services:

- I. Configure the Exalytics Server(s) for Additional Software:
  - Standard software installation and configuration of one (1) of the following Exalytics software components:
    - i. OBIEE and Oracle Times Ten In-Memory Database; or
    - ii. OBIEE and Oracle Database 12c In-Memory option; or
    - iii. Oracle Essbase with optional Enterprise Performance Management (EPM) Foundation Services; or
    - iv. Oracle Endeca; or
    - v. Web Analysis; or
    - vi. Interactive Reporting; or
    - vii. EPMA Architect; or
    - viii. Two (2) empty Solaris Zones on Exalytics T-series, or Two (2) empty OVM Guests on Exalytics X-series; no additional software will be installed on your Exalytics system; or
    - ix. OEM Agent (one (1) instance per machine or one (1) agent per OVM guest); no OEM discovery of the system will be carried out; or
    - x. Clustering per node for OBIEE, TimesTen and Essbase; or
    - xi. Clustering per node for OBIEE, with standalone Oracle Database 12c In-Memory option and Essbase; or
    - xii. Clustering per node for OBIEE WebLogic Administration Server (high availability).
  - For the avoidance of doubt, all other EPM products, to include the following are excluded from the services and may be purchased separately:
    - i. Data Relationship Management;
    - ii. Disclosure Management;
    - iii. Financial Close Management;
    - iv. Strategic Finance;
    - v. Performance Scorecard; and
    - vi. Financial Management.

## G. Oracle Exalogic Configuration Service: Networking (Part #B81205)

If your order contains Networking configuration services for Oracle Exalogic, Oracle will perform one (1) time per machine the following services:

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exalogic Server (s)
  - Setup share directories on compute nodes
  - Install Weblogic software
  - Configure Weblogic domain
  - Setup database connectivity/gridlink data source to existing customer database
  - Configure NIS/NFS
  - Configure SDP listeners
- III. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.

## H. Engineered Systems Upgrade Configuration Services.

### H.1. Engineered Systems Upgrade Configuration Services: Database Servers

	Part #
Oracle Engineered Systems Upgrade Configuration Service: Database Servers (11-15)	B82262
Oracle Engineered Systems Upgrade Configuration Service: Database Servers (1-4)	B82260
Oracle Engineered Systems Upgrade Configuration Service: Database Servers (16-20)	B82263
Oracle Engineered Systems Upgrade Configuration Service: Database Servers (5-10)	B82261

If your order contains configuration services for the Engineered Systems Upgrade: Database Servers, Oracle will perform one (1) time per machine the following services:

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Database Servers:
  - Install Oracle Database including Automated Storage Management (ASM), Cluster Ready Services (CRS) and Real Application Clusters (RAC);
  - Install any required Database patches as listed in the Critical Issue My Oracle Support Document;
  - Create an ASM disk group for the Oracle Exadata Storage Server Software; and
  - Configure Database servers as follows: extend existing Databases up to a maximum of four (4) Databases and one (1) RAC Cluster.
- III. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.



## H.2. Engineered Systems Upgrade Configuration Service: Storage Servers

	Part #
Oracle Engineered Systems Upgrade Configuration Service: Storage Servers (1-10)	B82264
Oracle Engineered Systems Upgrade Configuration Service: Storage Servers (11-20)	B82265
Oracle Engineered Systems Upgrade Configuration Service: Storage Servers (21-30)	B82266
Oracle Engineered Systems Upgrade Configuration Service: Storage Servers (31-40)	B82267

If your order contains configuration services for the Engineered Systems Upgrade: Storage Servers, Oracle will perform one (1) time per machine the following services:

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Storage Servers:
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Set up configuration files for a database server host;
  - Configure shared storage utilizing one (1) of the following:
    - a. Create an ASM disk group for the Oracle Exadata Storage Server Software; or
    - b. Extend existing ASM disk groups, up to a maximum of four (4) ASM disk groups to new Exadata Storage Servers.
- III. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.

## H.3. Engineered Systems Upgrade Configuration Service: Data Rebalance

	Part #
Oracle Engineered Systems Upgrade Configuration Service: Data Rebalancing (17-25TB)	B82270
Oracle Engineered Systems Upgrade Configuration Service: Data Rebalancing (1-8TB)	B82268
Oracle Engineered Systems Upgrade Configuration Service: Data Rebalancing (9-99TB)	B82269

If your order contains configuration services for the Engineered Systems Upgrade: Data Rebalance, Oracle will perform one (1) time per upgrade installation the following services.

- I. Review the existing Exadata Storage Cells database files.
- II. Create a series of automated tasks with scripts to rebalance existing cell disks, and grid disks.
- III. Commence automated tasks to rebalance data.
- IV. Remain available to monitor rebalancing process and progress, up to a maximum of two (2) days.
- V. Post-Installation Tasks:
  - Perform post task verification; and
  - Provide final summary report.

## H.4. Engineered Systems Upgrade Configuration Service: SuperCluster Compute Node (Part B87604)

One chassis, up to 8 CMIOU

If your order contains configuration services for the Engineered Systems Upgrade: SuperCluster Compute Node, Oracle will perform one (1) time per upgrade installation the following services:

- I. Review and preservation of your existing SuperCluster logical domains (LDOMs) configurations, Oracle Solaris and Exa-family repositories;
- II. Configure SuperCluster Compute Node as follows:

- Add new dedicated LDOMs based on your new hardware resources; and
  - Add new resources to your current domains.
- III. Post-Installation Tasks:
- Perform post task verification; and
  - Provide final summary report.

#### **H.5. Engineered Systems Upgrade Configuration Services: Exadata Eighth Rack (Part #B88184)**

If your order contains configuration services for the Engineered Systems Upgrade: Exadata Eighth Rack, Oracle will perform one (1) time per machine the following services:

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Database Servers additional flash drives as follows:
  - Enable database servers cores for quarter rack functionality;
  - Install Oracle Database including Automated Storage Management (ASM), Cluster Ready Services (CRS) and Real Application Clusters (RAC);
  - Install any required Database patches as listed in the Critical Issue My Oracle Support Document;
  - Create an ASM disk group for the Oracle Exadata Storage Server Software; and
  - Configure Database servers as follows; extend existing Databases; up to a maximum of four (4) Databases and one (1) RAC Cluster,
- III. Configure the Exadata Storage Servers additional high capacity drives as follows:
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Set up configuration files for a database server host;
  - Configure shared storage utilizing one (1) of the following:
    - a. Create an ASM disk group for the Oracle Exadata Storage Server Software; or
    - b. Extend existing ASM disk groups, up to a maximum of four (4) ASM disk groups to new Exadata Storage Servers.
- IV. Create a series of automated tasks with scripts to rebalance existing cell disks, and grid disks;
  - Commence automated tasks to rebalance data
  - Remain available to monitor rebalancing process and progress, up to a maximum of one (1) day
- V. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.

#### **H.6. Engineered Systems Upgrade Configuration Service: Storage Servers with Data Rebalancing**

**Part # B90693** Oracle Engineered Systems Upgrade Configuration Service: Storage Servers with Data Balancing (1-10)

**Part # B90694** Oracle Engineered Systems Upgrade Configuration Service: Storage Servers with Data Balancing (11-20)

If your order contains configuration services for the Engineered Systems Upgrade: Storage Servers with Data Rebalancing, Oracle will perform one (1) time per machine the following services:

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Storage Servers:
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Set up configuration files for a database server host;

- Configure shared storage utilizing one (1) of the following:
    - a. Create an ASM disk group for the Oracle Exadata Storage Server Software; or
    - b. Extend existing ASM disk groups, up to a maximum of four (4) ASM disk groups to new Exadata Storage Servers.
- III. Review the existing Exadata Storage Cells database files.
- Create a series of automated tasks with scripts to rebalance existing cell disks, and grid disks.
  - Commence automated tasks to rebalance data.
  - Remain available to monitor rebalancing process and progress, up to a maximum of two (2) days.
- IV. Post-Installation Tasks:
- Perform post task verification; and
  - Provide final summary report.

#### **I. Oracle Zero Data Loss Recovery Appliance Configuration Service (Part #B82258)**

If your order contains Zero Data Loss Recovery Appliance configuration services, Oracle will perform one (1) time per rack the following services.

- I. Review the build diagram and Bill of Materials provided to you at the end of installation services activity.
- II. Configure the Exadata Storage Servers:
  - Configure logins and network addresses;
  - Create a cell, cell disks, and grid disks;
  - Set up configuration files for a database server host;
  - Configure shared storage;
  - Install Oracle Database including Automated Storage Management (ASM), Cluster Ready Services (CRS), Real Application Clusters (RAC); and Recovery Manager (RMAN);
  - Install any required Database critical patches;
  - Create an ASM disk group for the Oracle Exadata Storage Server Software;
  - Create default Recovery Appliance Oracle Database;
  - Perform a Test Backup (up to 50GB) with a database supplied by you; and
  - Configure the Recovery Appliance OEM agent on a previously installed Oracle Enterprise Manager 12c, which must be prepared for Recovery Appliance discovery.
- III. Post-Installation Tasks:
  - Perform post installation verification; and
  - Provide final summary report.

#### **J. Supplemental Resources (Part #B85453)**

If your order contains Supplemental Resources, Oracle will provide additional resources, either onsite or remotely, to assist in the furtherance of Oracle Configuration Services as defined herein, up to the maximum number of days per resource role as set forth in your order. A "day" is defined as one (1) resource working eight (8) hours per day.

2. Your Obligations and Project Assumptions. You acknowledge that your timely provision of and access to office accommodations, facilities, equipment, assistance, cooperation, complete and accurate information and data from your officers, agents, and employees, and suitably configured computer products (collectively, "cooperation") are essential to the performance of any services as set forth in this exhibit. Oracle will not be responsible for any deficiency in performing services if such deficiency results from your failure to provide full cooperation.

You acknowledge that Oracle's ability to perform the services depends upon your fulfillment of the following obligations and the following project assumptions:

A. Your Obligations

1. Maintain the properly configured hardware/operating system platform to support the services.
2. Obtain licenses under separate contract for any necessary Oracle software and hardware programs before the commencement of services.
3. Maintain annual technical support for the Oracle software and hardware with access to software patches and updates made available by Oracle under separate contract throughout the term of the services.
4. Purchase, at a minimum, Oracle Exalytics In-Memory Configuration Services, if your order contains Oracle Exalytics In-Memory Machine Configuration Services: Virtualization; Oracle Exalytics In-Memory Machine Configuration Services: Clustering; and/or Oracle Exalytics In-Memory Machine Configuration Services: Additional Software.
5. Provide Oracle with full access to the relevant functional, technical and business resources with adequate skills and knowledge to support the performance of services.
6. Provide any notices and obtain any consents required for Oracle to perform services under this Exhibit.
7. Provide Oracle access to any production environments or shared development environments to the extent necessary for Oracle to perform services.
8. As required by U.S. Department of Labor regulations (20 CFR 655.734), if services are to be performed in the US, allow Oracle to post a Notice regarding Oracle H-1B employee(s) at the work site prior to the employee's arrival on site.
9. Provide complete and accurate information to Oracle regarding the systems, including, without limitation, the serial numbers for the systems.
10. Prior to the commencement of services, provide Oracle with a single point of contact who will be available to Oracle, for the duration of the services, to coordinate services at your location.
11. Prior to the commencement of services, perform back-up or archival reproductions of all software and data contained on all hardware system(s), and within any of your systems or equipment that may be affected by the services.
12. Prior to the commencement of services, inform Oracle of any storage, server, system, application, equipment or environment modifications that may affect Oracle's performance of the services.
13. Provide configuration options, prior to the commencement of the service in your order. Updates to your configuration options are limited to two (2) updates during the term of the service.
14. Ensure the physical environment where the services are to be performed is appropriately modified (e.g., disabling fire alarms and suspending use of oxygen depletion systems) for the duration of the services so as to allow Oracle to safely perform the services.
15. Perform all configuration customizations including but not limited to partitioning, virtualization, additional users, additional Oracle applications and/or core technology instances.
16. Perform backup and restoration of data on the existing hardware.
17. Upon commencement of services and for four (4) consecutive business days thereafter, you will make available to Oracle, access to all affected racks for a minimum of eight (8) hours per day, between the hours of 8:00 am through 8:00 pm local time.
18. Network Access. If your order contains services which are performed remotely, the following Network Access obligations shall apply:
  - i. For services performed utilizing a gateway:
    - a. You agree to the install of the Oracle Advanced Support Software Gateway and provide a server that meets Oracle's minimum requirements to install the gateway software. Oracle's minimum requirements for the gateway are available at <http://www.oracle.com/us/support/library/advanced-support-gateway-host-reqs-1896462.pdf>.
    - b. Provide the infrastructure to allow the necessary network access for Oracle to perform the service. The required infrastructure includes, but is not limited to, necessary private and public-facing IP addresses, proper firewall settings, necessary predefined ports, and appropriate inbound and outbound connectivity. Any delays with providing the infrastructure to install the gateway will delay the start of the service.
    - c. Provide a server, if applicable, that meets Oracle's minimum requirements and install the gateway software application. Oracle's minimum requirements for the gateway are available at <http://www.oracle.com/us/support/library/advanced-support-gateway-host-reqs-1896462.pdf>

- ii. For services performed utilizing OCCN, you will implement the OCCN in accordance with the specifications provided by Oracle.
  - iii. For services performed utilizing OCCN or OWC, you agree that Oracle may access your systems throughout the performance of services using an Oracle defined standard virtual private network ("VPN"). If necessary to perform services hereunder, Oracle will provide you with a single pre-configured VPN device. You are responsible for the installation of the VPN device on your internet network, in accordance with Oracle's specifications, to create a network connection between Oracle and you.
  - iv. You are responsible for ensuring that your network and systems comply with specifications that Oracle provides and that all components of your Oracle software environment are accessible through the gateway, VPN, or OWC. Oracle is not responsible for network connections or for issues, problems or conditions arising from or related to network connections, such as bandwidth issues, excessive latency, network outages, and/or any other conditions that are caused by an internet service provider, or the network connection.
19. Restrict Oracle's access to any content or information that imposes privacy, security or regulatory obligations greater than those specified in this exhibit.

**B. Project Assumptions**

1. Unless otherwise set forth in your order, the scope of, and fees for, services under this exhibit are for services performed at the building(s) at the location(s) specified in your order. Requests to perform services for additional locations shall be addressed in accordance with Oracle's change control process.
2. Services will be scheduled to commence on a mutually agreeable date and time at the location where the services are to be performed.

You acknowledge that if Oracle's cost of providing services is increased because of your failure to meet the obligations listed in this exhibit, failure to provide cooperation, or because of any other circumstance outside of Oracle's control, then you agree to pay Oracle for such increased costs. Such increased costs may include time during which Oracle resources are under-utilized because of delays.

3. Fees and Expenses. You agree to pay Oracle the fees for services as identified in your order. All services and payments are noncancelable and nonrefundable.

Expenses related to the providing of the services are in addition to the fees for services identified in your order. Such expenses will be invoiced monthly as they are incurred and are due within 30 days of the invoice date.

4. The term of Services shall be six (6) months from the effective date of your order ("Term").

Notwithstanding any provision or interpretation of this exhibit to the contrary, Oracle's obligation to provide you with services under this exhibit terminates six (6) months from the effective date of your order ("End Date"). As of the End Date, any portion of the services that Oracle has not provided prior to the End Date shall be automatically forfeited by you on the End Date, and you shall not be entitled to any refund, or any credit toward additional or other services, for any unused portion of the services. In order for Oracle to provide services to you after the End Date, Oracle and you shall mutually agree, in writing, under a separate order, to the terms and fees for such services.