# Zero Data Loss Recovery Appliance

## Site Checklists

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Zero Data Loss Recovery Appliance Site Checklists, Release 23.1

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# 1 Site Checklists

Complete the checklists in this appendix to ensure the site is prepared for your new Oracle Engineered System.

> **Note:**
>
> For ease of reading, the Oracle Engineered System is sometimes referred to simply as "the rack", which indicates the entire system, not just the cabinet.

## System Components Checklist

Use this checklist to ensure that the system component considerations have been addressed.

The cells in the second column of the following table are intentionally left blank so that the site survey team can fill in the requested information.

**Table 1-1 System Components Checklist**

| System Components Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| What type of engineered system rack are you installing? (Exadata Database Machine, Big Data Appliance, Oracle Cloud Machine, Exadata Storage Expansion, Zero Data Loss Recovery Appliance, etc.) | | | | |
| Is the rack installation an extension to an existing system, rather than a new installation?<br>If it is an extension to an existing system, refer to the multi-rack cabling information for your Engineered System. | | | | |
| How many racks will be installed? | | | | |
| Have you ordered the multi-rack cabling service? | | | | |
| Are all Engineered System racks adjacent to each other? | | | | |
| If the connecting racks are not within the specified proximity, or you are connecting more than 3 racks together, then have you completed the following tasks?<br>• Purchased longer InfiniBand cables from an approved third-party provider?<br>• Asked Oracle Support Services to provide and schedule the custom multi-rack cabling service with the installation? | | | | |
| If you are connecting the new rack to other Oracle racks, then does each rack have a spine switch? | | | | |

**Table 1-1 (Cont.) System Components Checklist**

| System Components Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| If any of the racks you plan to interconnect using the InfiniBand network are missing a spine switch, then have you ordered the InfiniBand switch and cables? | | | | |
| If your data center does not have a 10 GbE network infrastructure, then have you ordered an external switch that supports both 1 GbE and 10 GbE (or 40 GbE)? | | | | |
| Have you purchased the cables and transceivers to connect the InfiniBand Gateway switches to your 10 GbE network infrastructure? | | | | |
| If the Management Network Switch is being replaced, then have you arranged for the replacement switch installation? | | | | |
| Will additional equipment be attached to or installed in the rack?<br>If yes, then:<br>• Describe the additions<br>• Have you verified that the additional equipment falls within Oracle guidelines?<br>• Is sufficient power and cooling available for the additional equipment? | | | | |

# Data Center Room Checklist

Use this checklist to ensure that the data center room requirements have been addressed.

| Data Center Room Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Has the rack location been allocated and is vacant? | | | | |
| Does the floor layout meet the equipment maintenance access requirements? | | | | |
| Will the rack be positioned so that the exhaust air of one rack does not enter the air inlet of another rack? | | | | |

| Data Center Room Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Have cabinet stabilization measures been considered? | | | | |
| If the data center has a raised floor:<br>• Does the raised floor satisfy the weight requirements for the new hardware?<br>• Is permission required to remove floor tiles for cabling and servicing below the floor? | | | | |
| Will the new hardware location require any non-standard cable lengths? | | | | |
| Is the floor to ceiling height a minimum of 2914 mm (114.72 inches)? | | | | |
| Is the depth of the raised floor a minimum of 46 cm (18 inches)? | | | | |

# Data Center Environment Checklist

Use this checklist to ensure that the data center environment requirements have been addressed.

| Data Center Environment Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Does the computer room air conditioning meet temperature and humidity requirements? | | | | |
| Does the installation floor layout satisfy the ventilation requirements? | | | | |
| If the room cooling is from a raised floor, then:<br>• Are the perforated floor tiles each rated at 400 CFM or greater?<br>• Can additional perforated floor tiles be obtained if required for additional cooling? | | | | |
| Does the data center air conditioning provide sufficient front-to-back airflow? | | | | |
| Is airflow adequate to prevent hot spots? | | | | |
| Can the data center continuously satisfy the environmental requirements? | | | | |

# Access Route Checklist

Use this checklist to ensure that the access route requirements are addressed.

| Access Route Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Has the access route been checked for clearances of the rack, in particular, the minimum width and height requirements for all doors on the route?<br>Dimensions of the packaged rack:<br>• Height: 2159 mm (85 inches)<br>• Width: 1219 mm (48 inches)<br>• Depth: 1575 mm (62 inches)<br>Dimensions of the unpackaged rack:<br>• Height: 1998 mm (78.66 inches)<br>• Width: 600 mm with side panels (23.62 inches)<br>• Depth 1200 mm (47.24 inches) | | | | |
| Are there any stairs, ramps, or thresholds that are of concern? If yes, then provide details. | | | | |
| Are all access route incline angles within the permitted range (6 degrees)? | | | | |
| Is the access route free of any obstacles that would expose the equipment to shock? | | | | |

| Access Route Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Are all the surfaces acceptable for rolling the new unpacked and packed equipment? | | | | |
| If a pallet jack is to be used:<br>• Can the pallet jack support the weight of the rack?<br>• Are the pallet jack tines compatible with the shipping pallet? | | | | |
| If there are stairs, is a loading elevator available for the equipment? | | | | |
| If an elevator is to be used:<br>• Is the elevator car wide enough for the device to be carried into it?<br>• Is the elevator car high enough for the device to be carried into it?<br>• Does the elevator door meet the height requirement?<br>• Can the elevator car handle the weight of a fully-loaded rack? | | | | |
| Can the access route support the weight of the unpacked rack? | | | | |

| Access Route Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is the access route onto the raised floor rated for dynamic loading of the rack? | | | | |

# Facility Power Checklist

Use this checklist to ensure that the facility power requirements have been addressed.

| Facility Power Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Have the operating voltage and electric current requirements been reviewed? | | | | |
| Will single-phase (low-voltage or high-voltage) or 3-phase (low-voltage or high-voltage) power be used? | | | | |
| Are enough power outlets provided within 2 meters for each rack? | | | | |
| Do the power outlets have appropriate socket receptacles for the PDU option ordered? Options are low voltage or high voltage, single-phase or 3-phase. | | | | |
| Will optional ground cables be attached to the rack? | | | | |
| Are the circuit breakers for the equipment suitable in terms of voltage and current-carrying capacities? | | | | |

| Facility Power Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Does the power frequency meet the equipment specifications? | | | | |
| Are power outlets available for the new equipment at the designated location? | | | | |
| Will system power be delivered from two separate grids? | | | | |
| Is there a UPS to power the equipment? | | | | |
| Are the minimum required power sources available to support the power load for the new hardware? Use kilowatt (kW) / kilovolt (kVA) to express power load. | | | | |

# Safety Checklist

Use this checklist to ensure that the safety requirements have been addressed.

| Safety Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is there an emergency power shut off? | | | | |
| Is there a fire protection system in the data center room? | | | | |
| Is the computer room adequately equipped to extinguish a fire? | | | | |
| Is antistatic flooring installed? | | | | |

| Safety Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is the area below the raised floor free of obstacles and blockages? | | | | |

# Logistics Checklist

Use this checklist to ensure that the logistics requirements have been addressed.

| Logistics Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is contact information for the data center personnel available? | | | | |
| Is there security or access control for the data center? | | | | |
| Are there any security background checks or security clearances required for Oracle personnel to access the data center? If yes, then provide the process for Oracle to follow. | | | | |
| How many days in advance must background checks be completed? | | | | |
| Are there any additional security access issues? | | | | |
| Is computer room access available for installation personnel? | | | | |
| Are laptops allowed in the data center? | | | | |
| Are cell phones allowed in the data center? | | | | |

| Logistics Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Are cameras allowed in the data center? | | | | |
| Does the building have a delivery dock? | | | | |
| Is there a delivery/ unpacking/staging area? | | | | |
| Is inside delivery planned (direct to the final rack location in the data center room)? | | | | |
| If the delivery is not inside, then is the site prepared for uncrating? | | | | |
| Is the delivery/ unpacking/staging area protected from the elements? | | | | |
| Does the building have adequate receiving space? | | | | |
| Is the unpacking area air-conditioned to avoid thermal shock for various hardware components? | | | | |
| Will sufficient moving personnel be available to transport the rack? | | | | |
| (If applicable to your country) Is union labor required for any part of the delivery or installation? | | | | |

| Logistics Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is the site prepared for uncrating and packaging removal? Package removal should take place *outside* the data center room. | | | | |
| Is uncrating of cabinet and cabinet packaging removal required? | | | | |
| Are there any restrictions on delivery truck length, width or height? | | | | |
| Is there storage space (cabinet) for the ride along spares? If not, does the customer allow cardboard boxes and other packing material in the computer room, since the spares are packed in cardboard boxes? | | | | |
| Is there a time constraint on dock access? If yes, please provide time constraints. | | | | |
| Is a tail or side lift required on the delivery carrier to unload the equipment at the delivery dock? | | | | |

| Logistics Checklist Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will any special equipment be required to place the rack in the data center room? Examples:<br>• Stair walkers<br>• Lifters<br>• Ramps<br>• Steel plates<br>• Floor covers | | | | |
| Does the delivery carrier require any special equipment, such as non-floor damaging rollers, transport dollies, pallet jacks or fork lifts? | | | | |

# Network Configuration Checklist

Use this checklist to ensure that the network configuration requirements have been addressed.

| Network Configuration Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Were any conflicts found while running the `checkip.sh` script before connecting the network? | | | | |
| Will the required network cables be laid from the network equipment to the location where the Oracle Rack will be installed? | | | | |
| Will the network cables that will connect to the Oracle Rack be labeled? | | | | |

| Network Configuration Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will the 10 GbE or 25 GbE interfaces be used for the ingest or replication network? | | | | |
| Have the optional 10 GbE or 25 GbE SFP+ transceivers and appropriate fiber cables been ordered? | | | | |
| Will the Management Network Switch have IP routing disabled (recommended)? | | | | |

# Auto Service Request Checklist

Use this checklist if you are planning to use Auto Service Request with the Oracle Exadata Database Machine.

| Auto Service Request Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Does the customer have a My Oracle Support account to register Auto Service Request? | | | | |
| Is the Oracle Support Customer Support Identifier (CSI) number available? | | | | |
| Are the host name and IP address for the server where ASR Manager will be installed available? | | | | |

| Auto Service Request Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will the system need a proxy server? If so, what is the host name and IP address for the proxy server? | | | | |
| Is the Customer Technical Contact information for Auto Service Request available? This information should include the first name, last name, and e-mail address of the contact. | | | | |

# Replication and Tape Backup Checklists

Complete this checklist if you are configuring Recovery Appliance with replication. Replication is optional.

| Replication Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will you use a dedicated subnet for replication to all downstream Recovery Appliances? | | | | |
| Will any downstream Recovery Appliance be in a different subnet? If yes, then provide the details of the downstream subnets? | | | | |
| Are the routes to the downstream Recovery Appliances configured? | | | | |

| Replication Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will replication be set up and tested when the Recovery Appliance is installed? | | | | |
| If replication will be tested during installation, are the other Recovery Appliances ready to send backups to or receive backups from the new Recovery Appliance? | | | | |

Complete this checklist if you are configuring Recovery Appliance with for tape backups.

| Tape Backup Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Will you use Oracle Secure Backup as the media manager? | | | | |
| Did you order the optional fiber channel cards? | | | | |
| Did you order installation services to connect Recovery Appliance to the tape system? | | | | |

Complete this checklist if you are using Oracle's StorageTek libraries.

| StorageTek Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Can the StorageTek console connect to the tape library? | | | | |
| Are the tape drives connected and ready to operate? | | | | |

| StorageTek Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| If you are using partitioning, did you assign tapes to the partitions? | | | | |

Complete this checklist if you are using StorageTek Automated Cartridge System Library Software (ACSLS) to manage an Oracle tape library.

| ACSLS Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Can you ping the ACSLS server? | | | | |
| Can you connect to the ACSLS server using Secure Shell (SSH)? | | | | |
| Do you know the password for the `acsss` user? | | | | |
| Are all ACSLS services online (that is, enabled with the `acsss` command)? | | | | |

Complete this checklist if you are using Oracle Key Manager.

| Oracle Key Manager Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Are all key management appliances (KMAs) online and replicating? | | | | |
| Do you have keys that are valid and ready to use? | | | | |
| Can you ping all drives (agents)? | | | | |
| Are all agents registered to Oracle Key Manager? | | | | |

Complete this checklist if you are using a third-party tape library or tape drives and Oracle Secure Backup as the media manager.

| Third-Party Tape Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| If you will use fiber channel to connect the compute servers to tape devices, are the tape devices online and accessible to the Recovery Appliance compute servers? | | | | |
| Is the tape device listed in the Oracle Tape Drive and Library Compatibility Matrix? | | | | |
| If you will use a Virtual Tape Library (VTL), is the VTL configured as FC-SCSI? | | | | |

The matrix is at:

http://www.oracle.com/technetwork/database/database-technologies/secure-backup/learnmore/osb-tapedevicematrix-520156.pdf

Complete this checklist if you are using a tape Storage Area Network (SAN).

| Tape SAN Checklist Items | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Are all the tape devices and robots zoned to each Recovery Appliance compute server? | | | | |
| Are all usable paths for tape devices zoned to each Recovery Appliance compute server? | | | | |
| Do you have the appropriate fiber cabling to reach the Recovery Appliance compute servers? | | | | |

# Re-racking Checklists

Use these checklists prior to re-racking configurations approved for re-rack by Oracle Exadata Configuration Assistant (OECA) or your Oracle contact.

**Note:**

- Customer must purchase both the Oracle Re-racking Service and Oracle Installation Service.
- Oracle does not provide support for customer-supplied equipment.

| Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Has the customer purchased the Oracle Re-racking Service? | | | | |
| Is there a cart capable of carrying the weight of the servers to move the components and associated cabling from the supplied rack to the customer supplied rack? | | | | |
| Is the target rack empty? | | | | |

| Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Do the target rack dimensions meet the following requirements?<br>• Height: 42 RU<br>• Width: 600 mm (23.62 inches)<br>• Depth: 1112 mm (43.78 inches) without front and rear doors<br>If the rack is less than 42 RU, then the customer must provide compatible PDUs to install in the target rack. | | | | |
| Is the distance between the front and rear mounting planes between the minimum of 610 mm and the maximum 915 mm (24 inches to 36 inches)? | | | | |
| Is the clearance depth in the front of the front mounting plane (distance to the front cabinet door) at least 25.4 mm (1 inch)? | | | | |
| Does the target rack meet the following minimum load capacity?<br>• 19 kg (41.89 lb) / RU | | | | |

| Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Is the rack a four-post rack (mounting at both front and rear)?<br>**Note**: Two-post racks are not compatible. | | | | |
| Does the target rack's horizontal opening and unit vertical pitch conform to ANSI/EIA 310-D-1992 or IEC 60297 standards? | | | | |
| Does the target rack have RETMA rail support?<br>**Note**: Oracle Engineered System racks require 19 inches (483 mm) for RETMA rail spacing width. The minimum rack width of 600 mm (23.63 inches) is recommended to accommodate the PDU and cable harnesses on the side. If the rack is less than 600 mm wide, then it must have additional depth to accommodate mounting behind the server CMAs. | | | | |
| Does the target rack support Oracle cable management arms (CMAs)? | | | | |
| Does the target rack support installation of Oracle vented and solid filler panels? | | | | |

| Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Can the target rack provide tie-downs along the left rear side of the rack to support the RDMA Network Fabric cables? The side is left rear side when viewed from the front of the rack. | | | | |
| Can the target rack provide tie-downs for the Ethernet wiring harness? | | | | |
| Is there sufficient space for the cable harnesses and the PDUs in the target rack? | | | | |
| Can a label with the Oracle Engineered System Rack serial number be printed and attached to the target rack? | | | | |

# PDU Checklist for Re-racking

Use this checklist to verify the power distribution unit (PDU) requirements when using the re-racking service.

| PDU Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Does the target rack support installation of standard Oracle PDUs?<br>If not, then complete this checklist. | | | | |

| PDU Re-racking Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Can the customer provide two equivalent PDUs with equivalent power capacity and at least 17 x 10A C13 plugs per PDU? | | | | |
| Can the customer ensure that each PDU and its circuits can support the Oracle Engineered System Rack power requirements in case one PDU fails? | | | | |
| Can the customer ensure power loads are evenly distributed across all circuits of a single PDU? | | | | |
| Can the customer provide appropriate power drops for the PDUs? | | | | |

# Recycling the Racks

Use this checklist when recycling the rack.

| Recycling Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| Does the customer want Oracle to take back and recycle the empty rack?<br>If yes, then the Oracle service engineer can pack the empty rack for recycling. | | | | |

| Recycling Considerations | Yes | No | N/A | Comment |
|---|---|---|---|---|
| If Oracle is recycling the rack, then has the customer completed the appropriate application at the Oracle Hardware Take Back Program website? | | | | |

**Related Topics**

- Product Take Back and Recycling website

# Index