Oracle® Solaris Cluster Data Service for Oracle E-Business Suite Guide
Ce logiciel et la documentation qu'il accompagne sont protégés par les lois sur la propriété intellectuelle. Ils sont concédés sous licence et soumis à des restrictions d'utilisation et de divulgation. Sauf disposition de votre contrat de licence ou de la loi, vous ne pouvez pas copier, reproduire, traduire, diffuser, modifier, breveter, transmettre, distribuer, exposer, exécuter, publier ou afficher le logiciel, même partiellement, sous quelque forme et par quelque procédé que ce soit. Par ailleurs, il est interdit de procéder à toute ingénierie inverse du logiciel, de le désassembler ou de le décompiler, excepté à des fins d'interopérabilité avec des logiciels tiers ou tel que prescrit par la loi.

Les informations fournies dans ce document sont susceptibles de modification sans préavis. Par ailleurs, Oracle Corporation ne garantit pas qu'elles soient exemptes d'erreurs et vous invite, le cas échéant, à lui en faire part par écrit.

Si ce logiciel, ou la documentation qui l'accompagne, est concédé sous licence au Gouvernement des États-Unis, ou à toute entité qui délivre la licence de ce logiciel ou l'utilise pour le compte du Gouvernement des États-Unis, la notice suivante s'applique:

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

Ce logiciel ou matériel a été développé pour un usage général dans le cadre d'applications de gestion des informations. Ce logiciel ou matériel n'est pas conçu ni n'est destiné à être utilisé dans des applications ou dans des applications pouvant causer des dommages corporels. Si vous utilisez ce logiciel ou matériel dans le cadre d'applications dangereuses, il est de votre responsabilité de prendre toutes les mesures de secours, de sauvegarde, de redondance et autres mesures nécessaires à son utilisation dans des conditions optimales de sécurité. Oracle Corporation et ses affiliés déclinent toute responsabilité quant aux dommages causés par l'utilisation de ce logiciel ou matériel pour ce type d'applications.

Oracle et Java sont des marques déposées d'Oracle Corporation et/ou de ses affiliés. Tout autre nom mentionné peut correspondre à des marques appartenant à d'autres propriétaires qu'Oracle.

Intel et Intel Xeon sont des marques ou des marques déposées d'Intel Corporation. Toutes les marques SPARC sont utilisées sous licence et sont des marques ou des marques déposées d'ACR International, Inc. AMD, Opteron, le logo AMD et le logo AMD Opteron sont des marques ou des marques déposées d'Advanced Micro Devices. UNIX est une marque déposée d'Open Group.

Ce logiciel ou matériel et la documentation qui l'accompagne peuvent fournir des informations ou des liens donnant accès à des contenus, des produits et des services émanant de tiers. Oracle Corporation et ses affiliés déclinent toute responsabilité ou garantie expresse quant aux contenus, produits ou services émanant de tiers. En aucun cas, Oracle Corporation et ses affiliés ne sauraient être tenus pour responsables des pertes subies, des coûts occasionnés ou des dommages causés par l'accès à des contenus, produits ou services tiers, ou à leur utilisation.
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>5</td>
</tr>
<tr>
<td>Installing and Configuring Oracle Solaris Cluster HA for Oracle E-Business Suite</td>
<td>9</td>
</tr>
<tr>
<td>HA for Oracle E-Business Suite Overview</td>
<td>9</td>
</tr>
<tr>
<td>Overview of Installing and Configuring HA for Oracle E-Business Suite</td>
<td>10</td>
</tr>
<tr>
<td>Planning the HA for Oracle E-Business Suite Installation and Configuration</td>
<td>11</td>
</tr>
<tr>
<td>Configuration Restrictions</td>
<td>11</td>
</tr>
<tr>
<td>Configuration Requirements</td>
<td>14</td>
</tr>
<tr>
<td>Installing and Configuring Oracle E-Business Suite</td>
<td>22</td>
</tr>
<tr>
<td>▼ How to Install and Configure Oracle E-Business Suite</td>
<td>22</td>
</tr>
<tr>
<td>Verifying the Installation and Configuration of Oracle E-Business Suite</td>
<td>26</td>
</tr>
<tr>
<td>▼ How to Verify the Installation and Configuration of Oracle E-Business Suite</td>
<td>26</td>
</tr>
<tr>
<td>Installing the HA for Oracle E-Business Suite Package</td>
<td>31</td>
</tr>
<tr>
<td>▼ How to Install the HA for Oracle E-Business Suite Package</td>
<td>31</td>
</tr>
<tr>
<td>Registering and Configuring HA for Oracle E-Business Suite</td>
<td>32</td>
</tr>
<tr>
<td>▼ How to Register and Configure HA for Oracle E-Business Suite</td>
<td>32</td>
</tr>
<tr>
<td>Verifying the HA for Oracle E-Business Suite Installation and Configuration</td>
<td>40</td>
</tr>
<tr>
<td>▼ How to Verify the HA for Oracle E-Business Suite Installation and Configuration</td>
<td>40</td>
</tr>
<tr>
<td>Upgrading HA for Oracle E-Business Suite</td>
<td>40</td>
</tr>
<tr>
<td>▼ How to Upgrade to the New Version of HA for Oracle E-Business Suite</td>
<td>40</td>
</tr>
<tr>
<td>Understanding the HA for Oracle E-Business Suite Fault Monitor</td>
<td>42</td>
</tr>
<tr>
<td>Resource Properties</td>
<td>42</td>
</tr>
<tr>
<td>Probing Algorithm and Functionality</td>
<td>42</td>
</tr>
<tr>
<td>Debugging HA for Oracle E-Business Suite</td>
<td>43</td>
</tr>
<tr>
<td>▼ How to Turn on Debugging for HA for Oracle E-Business Suite</td>
<td>43</td>
</tr>
</tbody>
</table>

| Index                                                                   | 45   |
Preface

*Oracle Solaris Cluster Data Service for Oracle E-Business Suite Guide* explains how to install and configure Oracle Solaris Cluster data services.

**Note** – This Oracle Solaris Cluster release supports systems that use the SPARC and x86 families of processor architectures. In this document, “x86” refers to the larger family of x86 compatible products. Information in this document pertains to all platforms unless otherwise specified.

This document is intended for system administrators with extensive knowledge of Oracle software and hardware. Do not use this document as a planning or presales guide. Before reading this document, you should have already determined your system requirements and purchased the appropriate equipment and software.

The instructions in this book assume knowledge of the Oracle Solaris Operating System and expertise with the volume-manager software that is used with Oracle Solaris Cluster software.

Bash is the default shell for Oracle Solaris 11. Machine names shown with the Bash shell prompt are displayed for clarity.

**Using UNIX Commands**

This document contains information about commands that are specific to installing and configuring Oracle Solaris Cluster data services. The document does not contain comprehensive information about basic UNIX commands and procedures, such as shutting down the system, booting the system, and configuring devices. Information about basic UNIX commands and procedures is available from the following sources:

- Online documentation for the Oracle Solaris Operating System
- Oracle Solaris Operating System man pages
- Other software documentation that you received with your system
Typographic Conventions

The following table describes the typographic conventions that are used in this book.

<table>
<thead>
<tr>
<th>Typeface</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>AaBbCc123</td>
<td>The names of commands, files, and directories, and onscreen computer output</td>
<td>Edit your \login file. Use \ls\ -a to list all files.</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td>What you type, contrasted with onscreen computer output</td>
<td>machine_name% you have mail.</td>
</tr>
<tr>
<td>aabbcc123</td>
<td>Placeholder: replace with a real name or value</td>
<td>password:</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td>Book titles, new terms, and terms to be emphasized</td>
<td>The command to remove a file is rm filename.</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td></td>
<td>Read Chapter 6 in the User's Guide.</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td></td>
<td>A cache is a copy that is stored locally.</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td></td>
<td>Do not save the file.</td>
</tr>
<tr>
<td>AaBbCc123</td>
<td></td>
<td>Note: Some emphasized items appear bold online.</td>
</tr>
</tbody>
</table>

Shell Prompts in Command Examples

The following table shows the default UNIX system prompt and superuser prompt for shells that are included in the Oracle Solaris OS. Note that the default system prompt that is displayed in command examples varies, depending on the Oracle Solaris release.

<table>
<thead>
<tr>
<th>Shell</th>
<th>Prompt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bash shell, Korn shell, and Bourne shell</td>
<td>$</td>
</tr>
<tr>
<td>Bash shell, Korn shell, and Bourne shell for superuser</td>
<td>#</td>
</tr>
<tr>
<td>C shell for superuser</td>
<td>machine_name%</td>
</tr>
<tr>
<td>C shell for superuser</td>
<td>machine_name#</td>
</tr>
</tbody>
</table>
Related Documentation

Information about related Oracle Solaris Cluster topics is available in the documentation that is listed in the following table. All Oracle Solaris Cluster documentation is available at http://www.oracle.com/technetwork/indexes/documentation/index.html.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware installation and administration</td>
<td>Oracle Solaris Cluster 4.1 Hardware Administration Manual</td>
</tr>
<tr>
<td></td>
<td>Individual hardware administration guides</td>
</tr>
<tr>
<td>Concepts</td>
<td>Oracle Solaris Cluster Concepts Guide</td>
</tr>
<tr>
<td>Software installation</td>
<td>Oracle Solaris Cluster Software Installation Guide</td>
</tr>
<tr>
<td>Data service installation and administration</td>
<td>Oracle Solaris Cluster Data Services Planning and Administration Guide</td>
</tr>
<tr>
<td></td>
<td>and individual data service guides</td>
</tr>
<tr>
<td>Data service development</td>
<td>Oracle Solaris Cluster Data Services Developer’s Guide</td>
</tr>
<tr>
<td>System administration</td>
<td>Oracle Solaris Cluster System Administration Guide</td>
</tr>
<tr>
<td></td>
<td>Oracle Solaris Cluster Quick Reference</td>
</tr>
<tr>
<td>Software upgrade</td>
<td>Oracle Solaris Cluster Upgrade Guide</td>
</tr>
<tr>
<td>Error messages</td>
<td>Oracle Solaris Cluster Error Messages Guide</td>
</tr>
<tr>
<td>Command and function references</td>
<td>Oracle Solaris Cluster Reference Manual</td>
</tr>
<tr>
<td></td>
<td>Oracle Solaris Cluster Data Services Reference Manual</td>
</tr>
<tr>
<td></td>
<td>Oracle Solaris Cluster Quorum Server Reference Manual</td>
</tr>
<tr>
<td>Compatible software</td>
<td>Oracle Solaris Cluster Compatibility Guide available at the Oracle Solaris Cluster Technical Resources page</td>
</tr>
</tbody>
</table>

Access to Oracle Support

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

If you have problems installing or using Oracle Solaris Cluster, contact your service provider and provide the following information.

■ Your name and email address (if available)
■ Your company name, address, and phone number
■ The model number and serial number of your systems
■ The release number of the operating environment (for example, Oracle Solaris 11)
■ The release number of Oracle Solaris Cluster (for example, Oracle Solaris Cluster 4.1)

Use the following commands to gather information about your system for your service provider.

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>prtconf -v</code></td>
<td>Displays the size of the system memory and reports information about peripheral devices</td>
</tr>
<tr>
<td><code>psrinfo -v</code></td>
<td>Displays information about processors</td>
</tr>
<tr>
<td><code>pkg list</code></td>
<td>Reports which packages are installed</td>
</tr>
<tr>
<td><code>prtdiag -v</code></td>
<td>Displays system diagnostic information</td>
</tr>
<tr>
<td><code>/usr/cluster/bin/clnode show-rev -v</code></td>
<td>Displays Oracle Solaris Cluster release and package version information for each node</td>
</tr>
</tbody>
</table>

Also have available the contents of the `/var/adm/messages` file.
This chapter explains how to install and configure Oracle Solaris Cluster HA for Oracle E-Business Suite (HA for Oracle E-Business Suite).

This chapter contains the following sections.

- “HA for Oracle E-Business Suite Overview” on page 9
- “Overview of Installing and Configuring HA for Oracle E-Business Suite” on page 10
- “Planning the HA for Oracle E-Business Suite Installation and Configuration” on page 11
- “Installing and Configuring Oracle E-Business Suite” on page 22
- “Verifying the Installation and Configuration of Oracle E-Business Suite” on page 26
- “Installing the HA for Oracle E-Business Suite Package” on page 31
- “Registering and Configuring HA for Oracle E-Business Suite” on page 32
- “Verifying the HA for Oracle E-Business Suite Installation and Configuration” on page 40
- “Upgrading HA for Oracle E-Business Suite” on page 40
- “Understanding the HA for Oracle E-Business Suite Fault Monitor” on page 42
- “Debugging HA for Oracle E-Business Suite” on page 43

**HA for Oracle E-Business Suite Overview**

The HA for Oracle E-Business Suite data service provides a mechanism for orderly startup and shutdown, fault monitoring, and automatic failover of the Oracle E-Business Suite.

Oracle E-Business Suite is a complete set of business applications that enables you to efficiently manage business processes by using a unified open architecture. This architecture is a framework for multi-tiered, distributed computing that supports Oracle products. The tiers that compose Oracle E-Business Suite are the database tier, applications tier, and desktop tier. These tiers can be distributed as a logical grouping and can be grouped on one or more nodes.
The distributed nature of Oracle E-Business Suite requires more than one cluster data service if all application and database tiers are to be managed by the cluster.

The following tables list the Oracle E-Business Suite components and the corresponding Oracle Solaris Cluster data service that provides high availability to that component.

### TABLE 2 Protection of Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Protected by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Server</td>
<td>HA for Oracle (Database and Listener)</td>
</tr>
<tr>
<td>Web Server</td>
<td>HA for Oracle E-Business Suite</td>
</tr>
<tr>
<td>Forms Server</td>
<td>HA for Oracle E-Business Suite</td>
</tr>
<tr>
<td>Concurrent Manager Server</td>
<td>HA for Oracle E-Business Suite</td>
</tr>
<tr>
<td>Concurrent Manager Listener</td>
<td>HA for Oracle E-Business Suite</td>
</tr>
</tbody>
</table>

The Admin Server and Discoverer Server are not normally run within Oracle Solaris Cluster and therefore are not protected by HA for Oracle E-Business Suite.

### Overview of Installing and Configuring HA for Oracle E-Business Suite

The following table summarizes the tasks for installing and configuring HA for Oracle E-Business Suite and provides cross-references to detailed instructions for performing these tasks. Perform the tasks in the order that they are listed in the table.

---

**Overview of Installing and Configuring HA for Oracle E-Business Suite**

The following table summarizes the tasks for installing and configuring HA for Oracle E-Business Suite and provides cross-references to detailed instructions for performing these tasks. Perform the tasks in the order that they are listed in the table.
Planning the HA for Oracle E-Business Suite Installation and Configuration

This section contains the information you need to plan your HA for Oracle E-Business Suite installation and configuration.

Configuration Restrictions

The configuration restrictions in the subsections that follow apply only to HA for Oracle E-Business Suite.

Caution – Your data service configuration might not be supported if you do not observe these restrictions.
Restriction for the Supported Configurations of HA for Oracle E-Business Suite

The HA for Oracle E-Business Suite data service can be configured as a failover service or, when using Concurrent Parallel Processing, as a scalable service.

Oracle E-Business Suite can be deployed in the global zone. Oracle E-Business Suite is installed by using rapidwiz onto a single-node, two-node or multi-node installation.

- In a single-node installation, you install the Database, Web, Forms, and Concurrent Manager Servers onto a single node.
- In a two-node installation, one node contains the Database and Concurrent Manager Servers, and the other node contains the Forms and Web Servers.
- In a multi-node installation, you can specify any combination of up to five nodes to install the Database, Web, Forms, and Concurrent Manager Servers.

The following are the components of an Oracle E-Business Suite configuration:

- **Database Server** – Using rapidwiz, install the Database Server as a single database instance. The Database Server must be managed by Oracle Solaris Cluster HA for Oracle as a failover service in the cluster.
- **Web Server** – Using rapidwiz, install the Web Server (Apache) onto a node. If this will run in the cluster, then the Web Server is managed by Oracle Solaris Cluster HA for Apache and can be deployed as either a failover or scalable service in the cluster.
- **Forms and Concurrent Manager Server** – Depending on how you install using rapidwiz, you can install the Forms and Concurrent Manager Servers onto the same node or onto different nodes. All of these components are managed by HA for Oracle E-Business Suite as a failover service in the cluster.
- **Parallel Concurrent Processing** – HA for Oracle E-Business Suite support for Parallel Concurrent Processing requires a minimum of Oracle E-Business Suite Version 12.1. When using rapidwiz, you must specify the physical hostnames that will be used within the Parallel Concurrent Processing deployment.
- **Clustered Oracle Process Manager and Notification (OPMN)** – OPMN is supported with at least Oracle E-Business Suite Version 12.1. When you use the rapidwiz installer, you must install an OPMN instance as a single Web Entry Point (an HTTP_Server) using a logical host. Other OPMN instances must provide just OC4J services (oafm, forms, and oacore) and must specify the physical hostnames. Refer to MOS Note 380489.1 for more information about setting up a single Web Entry Point OPMN instance.

The following example shows Clustered OPMN OC4J instances on physical servers pcastor3 and pcastor4, in addition to a single Web Entry Point OPMN instance using logical host ebiz.uth that can fail over between physical servers pcastor3 and pcastor4.

```
-bash-3.00$ ./adopmnctl.sh @cluster status
You are running adopmnctl.sh version 120.4.12000000.3
```
Checking status of OPNM managed processes in a cluster...

Processes in Instance: PROD_pcastor4.pcastor4.sfbay.com

<table>
<thead>
<tr>
<th>ias-component</th>
<th>process-type</th>
<th>pid</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC4J</td>
<td>oafm</td>
<td>11020</td>
<td>Alive</td>
</tr>
<tr>
<td>OC4J</td>
<td>forms</td>
<td>10892</td>
<td>Alive</td>
</tr>
<tr>
<td>OC4J</td>
<td>oacore</td>
<td>10672</td>
<td>Alive</td>
</tr>
<tr>
<td>HTTP_Server</td>
<td>HTTP_Server</td>
<td>N/A</td>
<td>Down</td>
</tr>
</tbody>
</table>

Processes in Instance: PROD_pcastor3.pcastor3.sfbay.com

<table>
<thead>
<tr>
<th>ias-component</th>
<th>process-type</th>
<th>pid</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC4J</td>
<td>oafm</td>
<td>29657</td>
<td>Alive</td>
</tr>
<tr>
<td>OC4J</td>
<td>forms</td>
<td>29535</td>
<td>Alive</td>
</tr>
<tr>
<td>OC4J</td>
<td>oacore</td>
<td>29413</td>
<td>Alive</td>
</tr>
<tr>
<td>HTTP_Server</td>
<td>HTTP_Server</td>
<td>N/A</td>
<td>Down</td>
</tr>
</tbody>
</table>

Processes in Instance: PROD_ebiz-lh.ebiz-lh.sfbay.com

<table>
<thead>
<tr>
<th>ias-component</th>
<th>process-type</th>
<th>pid</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC4J</td>
<td>oafm</td>
<td>N/A</td>
<td>Down</td>
</tr>
<tr>
<td>OC4J</td>
<td>forms</td>
<td>N/A</td>
<td>Down</td>
</tr>
<tr>
<td>OC4J</td>
<td>oacore</td>
<td>N/A</td>
<td>Down</td>
</tr>
<tr>
<td>HTTP_Server</td>
<td>HTTP_Server</td>
<td>16905</td>
<td>Alive</td>
</tr>
</tbody>
</table>

To implement clustered OPNM within Oracle Solaris Cluster, perform the following steps.

1. Ensure that each OPNM instance is deployed using a shared file system.
2. Install or clone the AppsTier Services for the OPNM OC4J instances where each OPNM OC4J instance uses the hostname of the node within the global cluster or the zone node of a zone cluster.
3. Install or clone the AppsTier Services for the OPNM Web Entry Point instance so that a logical host is used, regardless if the deployment of the OPNM Web Entry Point is within the global cluster or zone cluster. Using the example above, the OPNM Web Entry Point instance PROD_ebiz-lh.ebiz-lh.sfbay.com is deployed using a logical host (ebiz-lh) and can fail over between physical hosts pcastor3 and pcastor4.
4. Follow Metalink note-id 380489.1, section and subsection 3.1.1 for a Single Web Entry Point. When you use the example above, each OPNM instance context file should define the following context variable as follows.

   `<webentryhost oa_var="s_webentryhost">ebiz-lh</webentryhost>`
   `<login_page oa_var="s_login_page">http://ebiz-lh.sfbay.com:8000/OA_HTML/AppsLogin</login_page>`
   `<externURL oa_var="s_extern_url">http://ebiz-lh.sfbay.com:8000</externURL>`

Refer to Metalink note-id 380489.1 for a description of these context variables and other context variables that can be changed.
5. When installing or cloning the AppsTier for the OPMN instances, ensure that the OPMN Web Entry Point instance uses different port numbers that are used by the OPMN OC4J instances for ONS-related variables. For example:
   - ons_localport
   - ons_remoteport
   - ons_requestport

Failing to use different port numbers for the ONS-related variables prevents the OPMN Web Entry Point instance from starting.

**Restriction for the Location of Oracle E-Business Suite Files**

The Oracle E-Business Suite files are the data files that are created when you install Oracle E-Business Suite using the rapidwiz installer.

The Oracle E-Business Suite files must be placed on shared storage as either a cluster file system or a highly available local file system. The following tables show the mount points and acceptable file system types.

<table>
<thead>
<tr>
<th>Mount Point</th>
<th>Filesystem Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbnameDATA</td>
<td>Cluster file system or highly available local file system.</td>
</tr>
<tr>
<td>dbnameDB</td>
<td>Local, cluster file system or highly available local file system.</td>
</tr>
<tr>
<td>dbnameORA</td>
<td>Local, cluster file system or highly available local file system.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mount Point</th>
<th>Filesystem Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbnameCOMM_TOP</td>
<td>Cluster file system or highly available local file system.</td>
</tr>
<tr>
<td>dbnameAPPL_TOP</td>
<td>Cluster file system or highly available local file system.</td>
</tr>
<tr>
<td>dbnameAPPLCSF</td>
<td>Cluster file system or highly available local file system.</td>
</tr>
</tbody>
</table>

**Configuration Requirements**

The configuration requirements in this section apply only to HA for Oracle E-Business Suite.

---

**Caution** – If your data service configuration does not conform to these requirements, the data service configuration might not be supported.
Determine Which Solaris Zone Oracle E-Business Suite Will Use

Solaris zones provide a means of creating virtualized operating system environments within an instance of the Solaris OS. Solaris zones allow one or more applications to run in isolation from other activity on your system. For complete information about installing and configuring Solaris zones, refer to Oracle Solaris 11.1 Administration: Oracle Solaris Zones, Oracle Solaris 10 Zones, and Resource Management.

You must determine which Solaris zone Oracle E-Business Suite will use. Oracle E-Business Suite can run within the global zone configuration.

Running the AutoConfig Command

When you are required to run the AutoConfig command and your database tier or application tier uses a logical host, you must ensure that the logical host interpositioning is in place for the AutoConfig command. See Step 7 in “How to Install and Configure Oracle E-Business Suite” on page 22 for instructions on setting the customSID_app-logical-host.env file for the application tier. For the database tier you must manually set the environment variables LD_PRELOAD_32, LD_PRELOAD_64, and SC_LHOSTNAME before running AutoConfig.

▼ How to Run the AutoConfig Command

The following task shows how to run the Autoconfig command after upgrading the Oracle Database to 11.2.0.3. The upgrade is part of the installation of Oracle E-Business Suite 12.1 on Oracle Solaris 11, where the physical hostname was used incorrectly.

In the example below, the physical hostnames are pvino1 and pvino2. The logical hostnames used for the database tier and application tier are vino-1 and vino-2 respectively.

1 On a cluster member, assume a role that provides solaris.cluster.modify RBAC authorization.

2 Ensure that the logical hostname is available.

   a. You can manually add the logical interface or ensure that the Oracle Solaris Cluster logical host resource is online on the node where you intend to run the AutoConfig command.

      root@pvino1:~# ifconfig net0 addif vino-1 netmask 255.255.255.0 up
      Created new logical interface net0:1
      root@pvino1:~# root@pvino1:~# ifconfig net0 addif vino-2 netmask 255.255.255.0 up
      Created new logical interface net0:2

      You can also run the following command to ensure that the logical hostname is available:

      root@pvino1:~# clrs status db-lh apps-lh
      === Cluster Resources ===
      Resource Name   Node Name   State   Status Message
Perform the necessary setup tasks and run the AutoConfig command.

a. As the Oracle database user, set the environment variables for the database tier.

```bash
root@pvino1:~# su - oracle
Oracle Corporation SunOS 5.11 11.0 November 2011
-bash-4.1$
-bash-4.1$ export LD_PRELOAD_32=/usr/lib/secure/libschost.so.1
-bash-4.1$ export LD_PRELOAD_64=/usr/lib/secure/sparcv9/libschost.so.1
-bash-4.1$ SC_HOSTNAME=vino-1.us.oracle.com
-bash-4.1$ export LD_PRELOAD_32= LD_PRELOAD_64 SC_LHOSTNAME
-bash-4.1$ uname -n
vino-1.us.oracle.com
```

b. Ensure that the new Oracle Home listener file references the logical host.

```bash
-bash-4.1$ cd $ORACLE_HOME/network/admin
-bash-4.1$ pwd
/db/d01/oracle/PROD/db/tech_st/11.2.0/network/admin
-bash-4.1$ ls -l
```

```
total 19
-rw-r--r-- 1 oracle dba 1998 Jan 12 08:37 tnsnames.ora
-rw-r--r-- 1 oracle dba 875 Jan 12 08:37 sqlnet.ora
-rw-r--r-- 1 oracle dba 2 Jan 9 08:33 sqlnet_ifile.ora
-rw-r--r-- 1 oracle dba 382 Jan 10 01:46 sqlnet.log
-rw-r--r-- 1 oracle dba 2 Jan 9 08:33 sqlnet_ifile.ora
-rw-r--r-- 1 oracle dba 5 Jan 5 07:51 samples
```

```bash
-bash-4.1$ more listener.ora
```

```bash
# This file is automatically generated by AutoConfig. It will be read and
# overwritten. If you were instructed to edit this file, or if you are not
# able to use the settings created by AutoConfig, refer to Metalink Note
# 387859.1 for assistance.
```

Planning the HA for Oracle E-Business Suite Installation and Configuration
# Net8 definition for Database listener

LISTENER_PROD =
  (DESCRIPTION_LIST =
   (DESCRIPTION =
     (ADDRESS = (PROTOCOL = TCP)(HOST = vino-1.us.oracle.com)(PORT = 1521))
   )
  )

...  

### c. Start the 11.2.0.3 Database and Listener.

### d. Optional: Clean the current configuration.

This step is required only if you have an incorrect entry within FND_NODES. In this example, PVINO1 is not required. In this example, you must also run AutoConfig for the database tier and application tier when you install Oracle E-Business Suite 12.1 on Oracle Solaris 11.

```bash
-bash-4.1$ sqlplus apps/apps
SQL*Plus: Release 11.2.0.3.0 Production on Thu Jan 12 08:07:09 2012
Copyright (c) 1982, 2011, Oracle. All rights reserved.
Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
SQL> select node_name, node_mode, support_cp, support_web, support_admin,
   2 support_forms from FND_NODES;

<table>
<thead>
<tr>
<th>NODE_NAME</th>
<th>S</th>
<th>S</th>
<th>S</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>VINO-1</td>
<td>O</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>AUTHENTICATION</td>
<td>O</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>PVINO1</td>
<td>O</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>VINO-2</td>
<td>O</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
```

SQL> exec fnd_conc_clone.setup_clean
PL/SQL procedure successfully completed.

SQL> select node_name, node_mode, support_cp, support_web, support_admin,
   2 support_forms from FND_NODES;
no rows selected

SQL> exit

### e. As the Oracle Database user, generate the new Database Context file.

```bash
-bash-4.1$ uname -n
pvino-1
-bash-4.1$
-bash-4.1$ export LD_PRELOAD_32=/usr/lib/secure/libschost.so.1
-bash-4.1$ export LD_PRELOAD_64=/usr/lib/secure/sparcv9/libschost.so.1
-bash-4.1$ SC_LHOSTNAME=vino-1.us.oracle.com
-bash-4.1$ export LD_PRELOAD_32 LD_PRELOAD_64 SC_LHOSTNAME
-bash-4.1$ uname -n
vino-1.us.oracle.com
```
**Note** – If you are upgrading the Oracle Database, you must generate a new context file using `adbldxml.pl` for the database tier.

```bash
-bash-4.1$ perl adbldxml.pl
Starting context file generation for db tier.. Using JVM from /db/d01/oracle/PROD/db/tech_st/11.2.0/jdk/jre/bin/java to execute java programs.
APPS Password: apps
The log file for this adbldxml session is located at: /db/d01/oracle/PROD/db/tech_st/11.2.0/appsutil/log/adbldxml_01120836.log
Couldn't determine the localHost name.
Enter localHost name: vino-1
Enter the value for Display Variable: :10
The context file has been created at: /db/d01/oracle/PROD/db/tech_st/11.2.0/appsutil/PROD_vino-1.xml
```

f. **After you generate the new Database Context file, run the AutoConfig command for the database tier.**

You can run `adautocfg.sh`, unless you are upgrading the Oracle Database.

```bash
-bash-4.1$ pwd
/db/d01/oracle/PROD/db/tech_st/11.2.0/appsutil/scripts/PROD_vino-1
-bash-4.1$ ls -l adautocfg.sh
-rwx------ 1 oracle dba 1539 Jan 12 08:37 adautocfg.sh
-bash-4.1$
```
g. If you have upgraded your Oracle database and generated a new context file, the output appears similar to the following:

```
-bash-4.1$ adconfig.sh contextfile=/db/d01/oracle/PROD/db/tech_st/11.2.0 \
/appsutil/PROD_vino-1.xml
Enter the APPS user password:
The log file for this session is located at: /db/d01/oracle/PROD/db/tech_st/11.2.0 \
/appsutil/log/PROD_vino-1/01120837/adconfig.log

AutoConfig is configuring the Database environment...

AutoConfig will consider the custom templates if present.

Using ORACLE_HOME location : /db/d01/oracle/PROD/db/tech_st/11.2.0
Classpath : :/db/d01/oracle/PROD/db/tech_st/11.2.0/jdbc \
/lib/ojdbc5.jar:/db/d01/oracle/PROD/db/tech_st/11.2.0/appsutil/java \
/xmnparserv2.jar:/db/d01/oracle/PROD/db/tech_st/11.2.0/appsutil/java: \
/db/d01/oracle/PROD/db/tech_st/11.2.0/jlib/netcfg.jar:/db/d01/oracle/ \
PROD/db/tech_st/11.2.0/jlib/ldapjclnt11.jar
Using Context file : /db/d01/oracle/PROD/db/tech_st/11.2.0/ \
appsutil/PROD_vino-1.xml

Context Value Management will now update the Context file

  Updating Context file...COMPLETED

  Attempting upload of Context file and templates to database...COMPLETED

Updating rdbms version in Context file to db112
Updating rdbms type in Context file to 64 bits
Configuring templates from ORACLE_HOME ...

AutoConfig completed successfully.
```

-bash-4.1$ 
-bash-4.1$ sqlplus apps/apps 

SQL*Plus: Release 11.2.0.3.0 Production on Thu Jan 12 08:44:01 2012
Copyright (c) 1982, 2011, Oracle. All rights reserved.
Connected to: 
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> select node_name, node_mode, support_cp, support_web, support_admin, \
  support_forms from FND_NODES;

  NODE_NAME NODE_MODE SUPPORT_CP SUPPORT_WEB SUPPORT_ADMIN SUPPORT_FORMS
  ------------------ ------------- --------------- -------------- --------------- ...
  VINO-1 ON N S S S

SQL> exit

4 As the Oracle Application user, run the AutoConfig command on each application tier.

root@pvino1:~# uname -n
pvino1
root@pvino1:~# su - applmgr
Oracle Corporation SunOS 5.11 11.0 November 2011
-bash-4.1$ cat /apps/d01/oracle/PROD/apps/apps_st/appl/customPROD_vino-2.env
LD_PRELOAD_32=/usr/lib/secure/libschost.so.1
LD_PRELOAD_64=/usr/lib/secure/sparcv9/libschost.so.1
SC_LHOSTNAME=vino-2.us.oracle.com

export LD_PRELOAD_32 LD_PRELOAD_64 SC_LHOSTNAME
-bash-4.1$ . /apps/d01/oracle/PROD/apps/apps_st/appl/customPROD_vino-2.env

-bash-4.1$ uname -n
vino-2.us.oracle.com
-bash-4.1$
-bash-4.1$ cd $ADMIN_SCRIPTS_HOME
-bash-4.1$ ls -l

The log file for this session is located at: /apps/d01/oracle/PROD/inst/apps/PROD_vino-2/admin/log/01120906/adconfig.log

AutoConfig is configuring the Applications environment...

AutoConfig will consider the custom templates if present.
Using CONFIG_HOME location : /apps/d01/oracle/PROD/inst/apps/PROD_vino-2
Classpath : /apps/d01/oracle/PROD/apps/apps_st/comn/java/lib/appsborg2.zip:/apps/d01/oracle/PROD/apps/apps_st/comn/java/classes
Using Context file : /apps/d01/oracle/PROD/inst/apps/PROD_vino-2.xml

Context Value Management will now update the Context file
Updating Context file...COMPLETED
Planning the HA for Oracle E-Business Suite Installation and Configuration

Attempting upload of Context file and templates to database...COMPLETED

Configuring templates from all of the product tops...
  Configuring AD TOP........COMPLETED
  Configuring FND TOP.......COMPLETED
  Configuring ICX TOP.......COMPLETED
  Configuring MSC TOP.......COMPLETED
  Configuring IEO TOP.......COMPLETED
  Configuring BIS TOP.......COMPLETED
  Configuring AMS TOP.......COMPLETED
  Configuring CCT TOP.......COMPLETED
  Configuring WSH TOP.......COMPLETED
  Configuring CLN TOP.......COMPLETED
  Configuring OKE TOP.......COMPLETED
  Configuring OKL TOP.......COMPLETED
  Configuring OKS TOP.......COMPLETED
  Configuring CSF TOP.......COMPLETED
  Configuring IGS TOP.......COMPLETED
  Configuring IBY TOP.......COMPLETED
  Configuring JTF TOP.......COMPLETED
  Configuring MWA TOP.......COMPLETED
  Configuring CN TOP.......COMPLETED
  Configuring CSI TOP.......COMPLETED
  Configuring WLP TOP.......COMPLETED
  Configuring CSE TOP.......COMPLETED
  Configuring EAM TOP.......COMPLETED
  Configuring FTE TOP.......COMPLETED
  Configuring ONT TOP.......COMPLETED
  Configuring AR TOP.......COMPLETED
  Configuring AHL TOP.......COMPLETED
  Configuring OZF TOP.......COMPLETED
  Configuring IES TOP.......COMPLETED
  Configuring CSD TOP.......COMPLETED
  Configuring IGC TOP.......COMPLETED

AutoConfig completed successfully.
-bash-4.1$
-bash-4.1$ sqlplus apps/apps

SQL*Plus: Release 10.1.0.5.0 - Production on Thu Jan 12 09:09:49 2012
Copyright (c) 1982, 2005, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> select node_name, node_mode, support_cp, support_web, support_admin, support_forms from FND_NODES;

 NODE_NAME | N S S S S
------------------
 AUTHENTICATION  O N N N N
 VINO-1          O N N N N
 VINO-2          O Y Y Y Y

SQL>
Installing and Configuring Oracle E-Business Suite

This section contains the procedures you need to install and configure Oracle E-Business Suite.

▼ How to Install and Configure Oracle E-Business Suite

This section contains the procedures you need to install and configure Oracle E-Business Suite.

1 On a cluster member, assume a role that provides solaris.cluster.modify RBAC authorization.

2 Determine which Solaris zone to use.
   Refer to “Determine Which Solaris Zone Oracle E-Business Suite Will Use” on page 15 for more information.

3 If a Solaris zone will be used, create the zone.
   Refer to Oracle Solaris 11.1 Administration: Oracle Solaris Zones, Oracle Solaris 10 Zones, and Resource Management for complete information about installing and configuring a zone.

4 Create a cluster file system or highly available local file system for the Oracle E-Business Suite files.
   Refer to Oracle Solaris Cluster Software Installation Guide for information about creating a cluster file system and to Oracle Solaris Cluster Data Services Planning and Administration Guide for information about creating a highly available local file system.

5 Mount the highly available local file system.
   Perform this step from the global zone on one node of the cluster.
   - If a non-ZFS highly available local file system is being used for Oracle E-Business Suite, perform the following step.

   Note – Ensure that the node has ownership of the disk set or disk group.

   - For Solaris Volume Manager, type:
     
     # metaset -s disk-set -t

   - If the global zone is being used for Oracle E-Business Suite, type the following command.
     
     # mount highly-available-local-filesystem
If a ZFS highly available local file system is being used for Oracle E-Business Suite, perform one of the following steps.

If the global zone is being used for Oracle E-Business Suite, type the following command.

```
# zpool import -R / HAZpool
```

6 Plumb the Oracle E-Business Suite logical hostname.

**Note** – If you are using Parallel Concurrent Processing, omit this step. Parallel Concurrent Processing requires physical hostnames.

Perform this step in the global zone on one node of the cluster for each logical hostname being used by Oracle E-Business Suite.

If the global zone is being used for Oracle E-Business Suite, type the following command.

```
# ifconfig interface addif logical-hostname up
```

If a Solaris zone is being used for Oracle E-Business Suite, type the following command.

```
# ifconfig interface addif logical-hostname up zone zonename
```

If you are deploying Clustered OPMN OC4J instances, omit this step. Clustered OPMN OC4J instances require physical hostnames. If you are installing a Clustered OPMN single Web Entry Point server, you must still specify a logical hostname.

7 Enable logical host interpositioning.

Perform this step on all cluster nodes where Oracle E-Business Suite will run.

To provide logical host interpositioning for Oracle E-Business Suite, you must create the following symbolic links:

```
# cd /usr/lib/secure
# ln -s /usr/cluster/lib/libschost.so.1 libschost.so.1
# cd /usr/lib/secure/sparcv9
# ln -s /usr/cluster/lib/sparcv9/libschost.so.1 libschost.so.1
```

If you are installing at least Oracle E-Business Suite Version 12, perform the following steps:

a. Create a custom SID_app-logical-host.env file.

```
# su - oraapp-user
# vi app-base directory/apps/apps st/appl/customSID_app-logical-host.env
```

b. Add the following lines to the customSID_app-logical-host.env file:

```
LD_PRELOAD_32=/usr/lib/secure/libschost.so.1
LD_PRELOAD_64=/usr/lib/secure/64/libschost.so.1
SC_LHOSTNAME=app-logical-host
export LD_PRELOAD_32 LD_PRELOAD_64 SC_LHOSTNAME
```
c. Test the setup of the logical host interpositioning.

```
# su - oraapp-user
# . app-base_directory/apps/apps_st/appl/customSID_app-logical-host.env
# hostname
# uname -n
```

The hostname and `uname -n` commands should return the value that was set for the environment variable `SC_LHOSTNAME`.

8 Install the Oracle E-Business Suite software.

Perform this step in the global zone on one node of the cluster.

a. As the root role, execute `rapidwiz`.

When running the `rapidwiz` installer, unless you are installing Parallel Concurrent Processing or Clustered OPMN OC4J instances, you must enter the logical hostname as the node name for the Database, Administration, Concurrent Manager, Forms, and Web Server. If you are performing a two-node or multi-node installation, you must specify the appropriate logical hostname as the appropriate node for the Database, Administration, Concurrent Manager, Forms, and Web Server.

If you are installing Parallel Concurrent Processing, do not specify a logical hostname. Instead, specify the physical hostname for the Concurrent Manager (Batch services). Using `rapidwiz`, add a server and configure batch services for each physical hostname that will participate in Parallel Concurrent Processing.

If you are installing Clustered OPMN OC4J instances, do not specify a logical hostname. Instead, specify the physical hostname. Using `rapidwiz`, add a server for each physical hostname that will participate in Clustered OPMN OC4J instances. If you are installing a Clustered OPMN single Web Entry Point server, you must still specify a logical hostname.

When executing `rapidwiz`, save the `config.txt` file in a permanent location, for example, `/var/tmp/config.txt`. If you are installing at least Oracle E-Business Suite Version 12, save the `/var/tmp/conf_SID.txt` file before clicking OK on `rapidwiz` message `No install actions found`.

```
# cd oracle-ebusiness-suite-install-directory
# ./rapidwiz
```

b. As the root role, execute `rapidwiz` for each logical hostname.

Execute `rapidwiz` for each logical hostname that you entered when generating the `/var/tmp/config.txt` file or `/var/tmp/conf_SID` file.

```
# cd oracle-ebusiness-suite-install-directory
# ./rapidwiz -servername logical-hostname
```

9 Stop Oracle E-Business Suite.

Perform this step from the global zone where you installed Oracle E-Business Suite.
Note - If you installed Parallel Concurrent Processing, you installed batch services on the physical hostname. Therefore, to stop the Concurrent Manager, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

If you installed Clustered OPMN OC4J instances, you installed on the physical hostname. Therefore, to stop the Clustered OPMN OC4J instance, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

- For Oracle E-Business Suite Version 12, type the following commands.
  
  ```
  # su - oraapp-user
  $ cd app-base-directory/inst/apps/SID_app-logical-hostname/admin/scripts
  $ ./adstpall.sh apps/apps
  $ exit
  
  # su - oradb-user
  $ cd db-base-directory/SID/db/tech_st/*/appsutil/scripts/SID_db-logical-hostname
  $ ./adlnctl.sh stop SID
  $ ./addbctl.sh stop immediate
  ```

10 Unmount the highly available local file system.
   Perform this step from the global zone on the node where you installed Oracle E-Business Suite.
   
   - To unmount a non-ZFS highly available local file system that is being used for the Oracle E-Business Suite, perform one of the following steps.
     
     - If the global zone is being used for Oracle E-Business Suite, type the following command.
       ```
       # umount highly-available-local-filesystem
       ```

     - If a ZFS highly available local file system is being used for Oracle E-Business Suite, type the following command.
       ```
       # zpool export -f HAZpool
       ```

11 Unplumb the Oracle E-Business Suite logical hostname.
   Perform this step from the global zone on one node of the cluster for each logical hostname being used by Oracle E-Business Suite.
   ```
   # ifconfig interface removeif logical-hostname
   ```
Verifying the Installation and Configuration of Oracle E-Business Suite

This section contains the procedure you need to verify the installation and configuration.

▼ How to Verify the Installation and Configuration of Oracle E-Business Suite

This procedure does not verify that your application is highly available because you have not yet installed your data service.

Perform this procedure on one node or zone of the cluster unless a specific step indicates otherwise.

1 On a cluster member, assume a role that provides solaris.cluster.modify RBAC authorization.

2 Mount the highly available local file system.
   Perform this step from the global zone on one node of the cluster.
   - If a non-ZFS highly available local file system is being used for the Oracle E-Business Suite files, perform one of the following steps.

   Note – Ensure that the node has ownership of the disk set or disk group.

   For Solaris Volume Manager, type:

   # metaset -s disk-set -t

   - If the global zone is being used for Oracle E-Business Suite, type:
     # mount highly-available-local-filesystem

   - If a ZFS highly available local file system is being used for Oracle E-Business Suite, perform the following step.

   - If the global zone is being used for Oracle E-Business Suite, type the following command.
     # zpool import -R / HAZpool

3 Plumb the Oracle E-Business Suite logical hostname.
Note – If you are using Parallel Concurrent Processing, omit this step. Parallel Concurrent Processing requires physical hostnames.

If you are using Clustered OPMN OC4J instances, omit this step. Clustered OPMN OC4J instances require physical hostnames.

Perform this step for each logical hostname being used by Oracle E-Business Suite.

If the global zone is being used for Oracle E-Business Suite, type the following command.

```
# ifconfig interface addif logical-hostname up
```

4 Start Oracle E-Business Suite.

Note – If you installed Parallel Concurrent Processing, you installed batch services on the physical hostname. Therefore, to start the Concurrent Manager, you must specify the physical-host pathname for the `admin` scripts. To start other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the `admin` scripts.

If you installed Clustered OPMN OC4J instances, you installed on the physical hostname. Therefore, to start the Clustered OPMN OC4J instance, you must specify the physical-host pathname for the `admin` scripts. To start other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the `admin` scripts.

- For Oracle E-Business Suite Version 12, perform the following commands.

  ```
  # su - oradb-user
  $ cd db-base-directory/SID/db/tech_st/*/appsutil/scripts/SID_db-logical-hostname
  $ ./addbctl.sh start
  $ ./addlnctl.sh start SID
  $ exit
  # su - oraapp-user
  $ cd app-base-directory/inst/apps/SID_app-logical-hostname/admin/scripts
  $ ./adstrtal.sh apps/apps
  $ exit
  ```

5 Test that a client can access Oracle E-Business Suite.

- For Oracle E-Business Suite Version 12, perform the following steps.

  a. Log into Oracle E-Business Suite.

     http://ebs-logical-host.domainname:8000

  b. Verify that you can successfully log in and navigate through Oracle E-Business Suite.

6 Stop Oracle E-Business Suite.
Note – If you installed Parallel Concurrent Processing, you installed batch services on the physical hostname. Therefore, to stop the Concurrent Manager, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

If you installed Clustered OPMN OC4J instances, you installed on the physical hostname. Therefore, to stop the Clustered OPMN OC4J instance, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

- For Oracle E-Business Suite Version 12, perform the following commands.

```
# su - oraapp-user
$ cd app-base-directroy/inst/apps/SID_app-logical-hostname/admin/scripts
$ .adstpall.sh apps/apps
$ exit
# su - oradb-user
$ cd db-base-directory/SID/db/tech_st/*/appsutil/scripts/
$ ./addinctl.sh stop SID
$ ./addbctl.sh stop immediate
```

7 Unmount the highly available local file system.

Perform this step only in the global zone.

- To unmount a non-ZFS highly available local file system that is being used for Oracle E-Business Suite, perform one of the following steps.

  - If the global zone is being used for Oracle E-Business Suite, type the following command.
    `# umount highly-available-local-filesystem`

  - If a Solaris zone is being used for Oracle E-Business Suite, unmount the highly available local file system from the zone.
    `# umount /zonepath/root/highly-available-local-filesystem`

  - If a ZFS highly available file system is being used for Oracle E-Business Suite, type the following command.
    `# zpool export -f HAZpool`

8 Unplumb the Infrastructure logical IP address.

Perform this step for each logical hostname being used by Oracle E-Business Suite.

`# ifconfig interface removeif logical-hostname`
Relocate the shared storage to another node and mount the highly available local file system. Perform this step on another node of the cluster.

- If a non-ZFS highly available local file system is being used for the Oracle E-Business Suite files, perform one of the following steps.

  Note – Ensure that the node has ownership of the disk set or disk group.

  - For Solaris Volume Manager, type the following command.
    
    # metaset -s disk-set -t

  - If the global zone is being used for Oracle E-Business Suite, type the following command.
    
    # mount highly-available-local-filesystem

  - If a ZFS highly available filesystem is being used for Oracle E-Business Suite, perform the following step.

    - If the global zone is being used for Oracle E-Business Suite, type the following command.
      
      # zpool import -R / HAZpool

Plumb the Oracle E-Business Suite logical hostname. Perform this step on another node of the cluster for each logical hostname being used by Oracle E-Business Suite.

- If the global zone is being used for Oracle E-Business Suite, type the following command.

  # ifconfig interface addif logical-hostname up

Start Oracle E-Business Suite.

Note – If you installed Parallel Concurrent Processing, you installed batch services on the physical hostname. Therefore, to start the Concurrent Manager, you must specify the physical-host pathname for the admin scripts. To start other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

If you installed Clustered OPMN OC4J instances, you installed on the physical hostname. Therefore, to start the Clustered OPMN OC4J instance, you must specify the physical-host pathname for the admin scripts. To start other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

- For Oracle E-Business Suite Version 12, perform the following:

  # su - oradb-user
  $ cd db-base-directory/SID/db/tech_st/*/appsutil/scripts/SID_db.logical-hostname
  $ ./addbctl.sh start
$ ./addlnctl.sh start SID
$ exit
# su - oraapp-user
$ cd app-base-directory/inst/apps/SID_app-logical-hostname/admin/scripts
$ ./adstrtal.sh apps/apps
$ exit

12 Test that a client can access Oracle E-Business Suite.

- For Oracle E-Business Suite Version 12, perform the following:
  a. Log into Oracle E-Business Suite.
     http://ebs-logical-host.domainname:8000
  b. Verify that you can successfully log in and navigate through Oracle E-Business Suite.

13 Stop Oracle E-Business Suite.

Note – If you installed Parallel Concurrent Processing, you installed batch services on the physical hostname. Therefore, to stop the Concurrent Manager, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

If you installed Clustered OPMN OC4J instances, you installed on the physical hostname. Therefore, to stop the Clustered OPMN OC4J instance, you must specify the physical-host pathname for the admin scripts. To stop other application-tier components that you installed by using a logical host, you must use the logical-host pathname for the admin scripts.

- For Oracle E-Business Suite Version 12, perform the following commands.
  # su - oraapp-user
  $ cd app-base-directory/inst/apps/SID_app-logical-hostname/admin/scripts
  $ adstrtal.sh apps/apps
  $ exit
  # su - oradb-user
  $ cd db-base-directory/SID/db/tech_st/*/appsutil/scripts/
  $ ./addlnctl.sh stop SID
  $ ./addbctl.sh stop immediate

14 Unmount the highly available local file system.
Perform this step in the global zone only.

- To unmount a non-ZFS highly available local file system that is being used for Oracle E-Business Suite, perform the following step.

  - If the global zone is being used for Oracle E-Business Suite, type the following command.
    # umount highly-available-local-filesystem
If a ZFS highly available file system is being used for Oracle E-Business Suite, type the following command.

```
# zpool export -f HAZpool
```

Unplumb the Oracle E-Business Suite logical hostname.
Perform this step for each logical hostname being used by Oracle E-Business Suite.

```
# ifconfig interface removeif logical hostname
```

## Installing the HA for Oracle E-Business Suite Package

If you did not install the HA for Oracle E-Business Suite package during your initial Oracle Solaris Cluster installation, perform this procedure to install the package.

### How to Install the HA for Oracle E-Business Suite Package

Perform this procedure on each cluster node where you want the HA for Oracle E-Business Suite software to run.

1. **On the cluster node where you are installing the data service package, assume the root role.**

2. **Ensure that the solaris and ha-cluster publishers are valid.**

   ```
   # pkg publisher
   PUBLISHER         TYPE  STATUS            URI
   solaris           origin online solaris-repository
   ha-cluster        origin online ha-cluster-repository
   ```

   For information about setting the solaris publisher, see "Set the Publisher Origin to the File Repository URI" in *Copying and Creating Oracle Solaris 11.1 Package Repositories*.

3. **Install the HA for Oracle E-Business Suite software package.**

   ```
   # pkg install ha-cluster/data-service/oracle-ebs
   ```

4. **Verify that the package installed successfully.**

   ```
   $ pkg info ha-cluster/data-service/oracle-ebs
   ```

   Installation is successful if output shows that State is Installed.

5. **Perform any necessary updates to the Oracle Solaris Cluster software.**

   For instructions on updating single or multiple packages, see Chapter 11, "Updating Your Software," in *Oracle Solaris Cluster System Administration Guide*. 

---

*Installing and Configuring Oracle Solaris Cluster HA for Oracle E-Business Suite*
Registering and Configuring HA for Oracle E-Business Suite

This section contains the procedures you need to configure HA for Oracle E-Business Suite.

Some procedures within this section require you to use certain Oracle Solaris Cluster commands. Refer to the relevant Oracle Solaris Cluster command man page for more information about these commands and their parameters.

▼ How to Register and Configure HA for Oracle E-Business Suite

Perform this procedure on one node of the cluster only.

This procedure assumes that you installed the data service packages during your initial Oracle Solaris Cluster installation.

If you did not install the HA for Oracle E-Business Suite packages as part of your initial Oracle Solaris Cluster installation, go to “How to Install the HA for Oracle E-Business Suite Package” on page 31.

Before You Begin

Ensure that the /etc/netmasks file has IP-address subnet and netmask entries for all logical hostnames. If necessary, edit the /etc/netmasks file to add any missing entries.

1 On a cluster member, assume a role that provides solaris.cluster.modify RBAC authorization.

2 Register the following resource types.

   # clresourcetype register SUNW.HAStoragePlus
   # clresourcetype register SUNW.gds

3 (Optional) Create a scalable resource group for Parallel Concurrent Processing.

   # clresourcegroup create -S -n nodelist pcp-rg

4 (Optional) Create a scalable resource group for Clustered OPMN OC4J instances.

   # clresourcegroup create -S -n nodelist c_opmn-rg

5 Create a failover resource group for Oracle E-Business Suite.

   # clresourcegroup create -n nodelist ebs-rg

6 Create a resource for the Oracle E-Business Suite Logical Hostname.

   # clreslogicalhostname create -g ebs-rg \\n   > -h logical-hostname \\
   > logical-hostname-resource
7  Create a resource for the Oracle E-Business Suite Disk Storage.
   - If a ZFS highly available local file system is being used, perform the following command.
     ```
     # clresource create -g ebs-rg \\
     > -t SUNW.HAStoragePlus \\
     > -p Zpools=oracle-ebusiness-suite-zpool \\
     > oracle-ebusiness-suite-hastorage-resource
     ```
   - If a cluster file system or a non-ZFS highly available local file system is being used, perform the following command.
     ```
     # clresource create -g ebs-rg \\
     > -t SUNW.HAStoragePlus \\
     > -p FilesystemMountPoints=oracle-ebusiness-suite-filesystem-mountpoint \\
     > oracle-ebusiness-suite-hastorage-resource
     ```
   
   **Note** – If you installed Parallel Concurrent Processing on a cluster file system, when you create the HAStoragePlus resource, specify the scalable resource group that you created in **Step 3**.

   If you installed Clustered OPNOC4J instances, when you create the HAStoragePlus resource, specify the scalable resource group that you created in **Step 4**.

8  Enable the resource group.
   If you created a scalable resource group in **Step 3**, also enable that resource group.
   ```
   # clresourcegroup online -M ebs-rg
   If Parallel Concurrent Processing is used:
   # clresourcegroup online -M pcp-rg
   ```
   If Clustered OPNOC4J instances are used, enable that resource group,
   ```
   # clresourcegroup online -M c_opmn-rg
   ```

9  Register and enable a resource for the Oracle Database.
   For complete information about creating and registering a cluster resource for the Oracle Database, refer to *Oracle Solaris Cluster Data Service for Oracle Guide*.

   **Note** – Before creating corresponding resources, you need to register the `SUNW.oracle_server` resource type.
   ```
   # clresource create -g ebs-rg \\
   > -t SUNW.oracle_Server \\
   > -p Connect_string=apps/apps \\
   > -p ORACLE_SID=SID \\
   > -p ORACLE_HOME=oracle-home \\
   > -p Alert_log_file=oracle-home/admin/SID \\
   > _db-logical-hostname/bdump/alert_SID.log \
   ```
Registering and Configuring HA for Oracle E-Business Suite

```
> -p Restart_type=RESOURCE_GROUP_RESTART \
> -p Resource_dependencies=oracle-ebusiness-suite-hastorage-resource \
> oracle-resource
# clresource enable oracle-resource

10 Register and enable a resource for the Oracle Listener.

For complete information about creating and registering a cluster resource for the Oracle Listener, refer to *Oracle Solaris Cluster Data Service for Oracle Guide*.

---

**Note** – The `copy_env` script is used to copy and format the `sid.env` to `sid_ha.env`, which is used by the `User_env=` parameter in the following example.

---

**Note** – Before creating corresponding resources, you need to register the SUNW.oracle_listener resource type.

```
# cd /opt/SUNWscebs/cmg/util
# ./copy_env oracle-home SID_db-logical-host
# clresource create -g ebs-rg \
> -p Listener_name=SID or LISTENER_SID \
> -p ORACLE_HOME=oracle-home \
> -p User_env=oracle-home/SID_db-logical-hostname_ha.env \
> -p Resource_dependencies=oracle-ebusiness-suite-hastorage-resource \
> listener-resource
# clresource enable listener-resource

11 Create and register a resource for the Concurrent Manager Listener.
```
Note – If deploying Oracle E-Business Suite within a zone cluster, you must loopback mount the /var/cluster/logs directory within the zone-cluster node, before registering the Oracle E-Business Suite components.

On all the zone-cluster nodes, perform the following step:

```
# mkdir /var/cluster/logs
```

In the global zone where the zone-cluster node is running, perform the following step:

```
# mount -F lofs /var/cluster/logs zonenodezonepath/root/var/cluster/logs
```

After all the Oracle E-Business Suite components have been registered, /var/cluster/logs is no longer required within the zone-cluster node. To unmount the previously loopback mounted /var/cluster/logs, perform the following step from the global zone where you loopback mounted /var/cluster/logs:

```
# umount zonenodezonepath/root/var/cluster/logs
```

Edit the /opt/SUNWscebs/cmgslr/util/cmglsr_config file and follow the comments within that file. After editing the cmglsr_config file, you must register the resource.

```
# cd /opt/SUNWscebs/cmgslr/util
# vi cmglsr_config
# ./cmglsr_register
```

Note – The variable COMNTOP does not explicitly refer to the COMN_TOP or COMMON_TOP variable. Instead, different values are required depending on the version of Oracle E-Business Suite that is being deployed. See the text below for more details. If you installed Parallel Concurrent Processing, follow these additional editing instructions:

- Use COMNTOP=app-base-directory/inst/apps/.
- Specify the scalable resource group that you created in Step 3.
- Specify a null value for the LH= entry.

- For Oracle E-Business Suite Version 12, use:
  
  COMNTOP=app-base-directory/inst/apps/SID_app-logical-hostname

The following example shows edits of the cmglsr_config file.

RS=ebs-cmglsr
RG=ebs-rg
LH=ebs-lh
HAS RS=ebs-has
COMNTOP=use appropriate COMNTOP
APPSUSER=oraapp-user
APP_SID=SID
VERSION=12.1
12 Create and register a resource for the Concurrent Manager.

Note – A value for the APPS_PASSWD keyword within the /opt/SUNWscbs/cmsgslr/util/cmg_config file is optional. You can either specify the password within the /opt/SUNWscbs/cmsgslr/util/cmg_config file or within the /opt/SUNWscbs/$(APP_SID)_passwd file on each cluster node as super user. Specifying the password within the /opt/SUNWscbs/$(APP_SID)_passwd file will prevent the password from being viewed by non super users. Refer the comments within the /opt/SUNWscbs/cmsgslr/util/cmg_config file for an example.

Note – If deploying Oracle E-Business Suite within a zone cluster, you must loopback mount /var/cluster/logs with in the zone-cluster node before performing this step. See Step 11, for information to loop back mount /var/cluster/logs.

Edit the /opt/SUNWscbs/cmg/util/cmg_config file and follow the comments within that file. After you have edited the cmg_config file, you must register the resource.

# cd /opt/SUNWscbs/cmg/util
# vi cmg_config
# ./cmg_register

Note – The variable COMNTOP does not explicitly refer to the COMN_Top or COMMON_Top variable. Instead, different values are required depending on the version of Oracle E-Business Suite that is being deployed. See the text below for more details. If you installed Parallel Concurrent Processing, follow these additional editing instructions:

- Use COMNTOP=app-base-directory/inst/apps/.
- Specify the scalable resource group that you created in Step 3.
- Specify a null value for the LH= entry.

For Oracle E-Business Suite Version 12, use:

COMNTOP=app-base-directory/inst/apps/SID_app-logical-hostname

The following example shows edits of the cmg_config file.

If the Oracle Database and Listener are not located within the same global cluster or zone cluster as the Concurrent Manager, you must set an interzone offline restart dependency as follows:

- Do not enter any values for the following entries in the cmg_config file: ORASVR_RS= or ORALSR_RS=.
- From the global cluster, set the interzone offline restart dependency.

bash-3.00# clrs set -p resource_dependencies_offline_restart=ZONE:DBLSR-RS \ (any_node),ZONE:DB-RS(\any_node) -Z CM-ZC CM_RS
Use the following descriptions as a guide:

- **ZONE** – The global cluster or the zone cluster name where the Oracle Database and Listener resources reside.
- **DBLSR-RS** – The Oracle Database Listener resource.
- **DB_RS** – The Oracle Database resource.
- **CM-ZC** – The global cluster or zone cluster name where the Oracle E-Business Suite Concurrent Manager resource resides.
- **CM-RS** – The Oracle E-Business Suite Concurrent Manager resource.

```
RS=ebs-cmg
RG=ebs-rg
LH=ebs-lh
HAS_RS=ebs-has
LSR_RS=ebs-cmglsr
VERSION=12.1
COMMTOP=use appropriate COMMTOP
APP_USER=oraapp-user
APP_SID=SID
APP_PASSWD=password or empty
if using /opt/SUNWscms/.${APP_SID}_passwd to store the password.
ORACLE_HOME=oracle_home
CON_LIMIT=50
#
# Required for Oracle E-Business Suite version 11.5.10 CU2 or later
#
ORASVR_RS=ebs1-orasvr
ORALSR_RS=ebs1-oralsr
```

13 Create and register a resource for the Forms Server in Servlet Mode.

**Note** – The variable COMMTOP does not explicitly refer to the Oracle E-Business Suite COMN_TOP or COMMON_TOP variable. Instead, different values are required depending on the version of Oracle E-Business Suite that is being deployed. See the text at the end of this step for more details.

For Oracle E-Business Suite Version 12, use
COMMTOP=app-base-directory/inst/apps/SID_app-logical-hostname.

**Note** – If deploying Oracle E-Business Suite within a zone cluster, you must loopback mount /var/cluster/logs with in the zone-cluster node before performing this step. See Step 11, for information to loop back mount /var/cluster/logs.
Edit the /opt/SUNWscebs/frm/util/frm_config file and follow the comments within that file. After you have edited the frm_config file, you must register the resource.

```
# cd /opt/SUNWscebs/frm/util
# vi frm_config
#. /frm_register
```

The following example shows edits of the frm_config file.

```
RS=ebs-frmsrv
RG=ebs-rs
LH=ebs-lh
HAS_RS=ebs-has
COMMNTOP=base-directory/sid/comm
APPSUSER=oraapp-user
APP_SID=SID
VERSION=12.1
```

14 Create and register a resource for the Forms Server in Socket Mode.

This step is required only if you are using Oracle E-Business Suite Forms Server in Socket Mode.

---

**Note** – The variable COMMNTOP does not explicitly refer to the Oracle E-Business Suite COMN_TOP or COMMON_TOP variable. Instead, different values are required depending on the version of Oracle E-Business Suite that is being deployed. See the text below for more details.

For Oracle E-Business Suite Version 12, use
COMMNTOP=app-base-directory/inst/apps/SID_app-logical-hostname.

---

**Note** – If you are deploying Oracle E-Business Suite within a zone cluster, you must loopback mount the /var/cluster/logs directory within the zone-cluster node before performing this step. See Step 11 for instructions on loopback mounting the /var/cluster/logs directory.

Edit the /opt/SUNWscebs/frmsrv/util/frmsrv_config file and follow the comments within that file. After you have edited the frmsrv_config file, you must register the resource.

```
# cd /opt/SUNWscebs/frmsrv/util
# vi frmsrv_config
#. /frmsrv_register
```

The following example shows edits of the frmsrv_config file.

```
RS=ebs-frmsrv
RG=ebs-rs
LH=ebs-lh
HAS_RS=ebs-has
COMMNTOP=base-directory/sid/comm
APPSUSER=oraapp-user
```
Create and register a resource for the OPMN Server.

Note – If deploying Oracle E-Business Suite within a zone cluster, you must loopback mount /var/cluster/logs with in the zone-cluster node before performing this step. See Step 11, for information to loopback mount /var/cluster/logs.

If Clustered OPMN OC4J instances are being deployed, you must specify the OPMN_COMPONENTS=opmn/oacore/forms/oafm. If a Clustered OPMN single Web Entry Point instance is being deployed, you must specify OPMN_COMPONENTS=opmn/http_server. You may also specify OC4J services if required.

For Oracle E-Business Suite Version 12, perform the following:

Edit the /opt/SUNWsclebs/opmn/util/opmn_config file and follow the comments within that file. After you have edited the opmn_config file, you must register the resource.

```
# cd /opt/SUNWsclebs/opmn/util
# vi opmn_config
#. /opmn_register
```

The following example shows the edits of the opmn_config file.

```
RS=ebs-opmn
RG=ebs-rg
LH=ebs-lh
HAS RS=ebs-has
VERSION=12.1
COMNTOP=app-base-directory/inst/apps/SID_app-logical-host
APPUSR=oraapp-user
APP_SID=PROD
APPS_PASSWD=apps
OPMN_COMPONENTS=all
```

Enable the Oracle E-Business Suite resources.

If you created a scalable resource group in Step 3, also enable that resource group.

```
# clresource enable -g ebs-rg *
   If Parallel Concurrent Processing is used:
# clresourcegroup online -eM pcp-rg
```

If you used Clustered OPMN OC4J, enable that resource group.

```
# clresourcegroup online -eM c_opmn-rg
```
Verifying the HA for Oracle E-Business Suite Installation and Configuration

This section contains the procedure you need to verify that you installed and configured your data service correctly.

▼ How to Verify the HA for Oracle E-Business Suite Installation and Configuration

1. On a cluster member, assume a role that provides solaris.cluster.modify RBAC authorization.

2. Ensure that all the Oracle E-Business Suite resources are online.
   
   # clstatus
   
   Enable any Oracle E-Business Suite resources that are not online.

   # clresource enable oracle-ebusiness-suite-resource

3. Switch the Oracle E-Business Suite resource group to another cluster node.

   # clresourcegroup switch -n node ebs-rg

Upgrading HA for Oracle E-Business Suite

Upgrade the HA for Oracle E-Business Suite data service if the following conditions apply:

- You are upgrading from an earlier version of the HA for Oracle E-Business Suite data service.
- You need to use the new features of this data service.

▼ How to Upgrade to the New Version of HA for Oracle E-Business Suite

You must perform all the steps within this procedure.
Note – Before performing this procedure you should consider if your current Oracle E-Business Suite resources have been modified to have specific timeout values that suit your deployment. If timeout values were previously adjusted you should reapply those timeout values to your new Oracle E-Business Suite resources.

1. On a cluster member, assume a role that provides `solaris.cluster.modify` RBAC authorization.

2. Disable the Oracle E-Business Suite resources.
   
   ```
   # clresource disable oracle-ebusiness-suite-resource
   ```

3. Install the new version of HA for Oracle E-Business Suite on each cluster.
   
   Refer to "How to Install the HA for Oracle E-Business Suite Package" on page 31 for more information.

4. Delete the Oracle E-Business Suite resources.
   
   ```
   # clresource delete oracle-ebusiness-suite-resource
   ```

5. Upgrade the logical hostname interpositioning.
   
   Note – You must repeat the following steps, as the logical host interpositioning file name and variable names have changed. Change the following:
   - `LHOSTNAME` to `SC_LHOSTNAME`
   - `libloghost_32.so.1` to `libschost.so.1`

6. Repeat Step 7 from "How to Install and Configure Oracle E-Business Suite" on page 22.

7. Reregister the Oracle E-Business Suite resources.
   
   Refer to "How to Register and Configure HA for Oracle E-Business Suite" on page 32 for more information.

8. Enable the Oracle E-Business Suite resources.
   
   ```
   # clresource enable oracle-ebusiness-suite-resource
   ```
Understanding the HA for Oracle E-Business Suite Fault Monitor

This section describes the HA for Oracle E-Business Suite fault monitor probing algorithm or functionality, states the conditions, and recovery actions associated with unsuccessful probing.

For conceptual information about fault monitors, see the Oracle Solaris Cluster Concepts Guide.

Resource Properties

The HA for Oracle E-Business Suite fault monitor uses the same resource properties as resource type SUNW.gds. Refer to the SUNW.gds(5) man page for a complete list of resource properties used.

Probing Algorithm and Functionality

The HA for Oracle E-Business Suite fault monitor is controlled by the extension properties that control the probing frequency. The default values of these properties determine the preset behavior of the fault monitor. The preset behavior should be suitable for most Oracle Solaris Cluster installations. Therefore, you should tune the HA for Oracle E-Business Suite fault monitor only if you need to modify this preset behavior.

- Setting the interval between fault monitor probes (Thorough_probe_interval)
- Setting the timeout for fault monitor probes (Probe_timeout)
- Setting the number of times the fault monitor attempts to restart the resource (Retry_count)

The HA for Oracle E-Business Suite fault monitor performs a check within an infinite loop. During each cycle, the fault monitor checks the relevant component and reports either a failure or success.

If the fault monitor is successful, it returns to its infinite loop and continues the next cycle of probing and sleeping.

If the fault monitor reports a failure, a request is made to the cluster to restart the resource. If the fault monitor reports another failure, another request is made to the cluster to restart the resource. This behavior continues whenever the fault monitor reports a failure.

If successive restarts exceed the Retry_count within the Thorough_probe_interval, a request is made to fail over the resource group onto a different node or zone.
Concurrent Manager Probe

- Test whether at least one FND (Concurrent Manager) process is running. If this test fails, the probe restarts the Concurrent Manager Server resource.
- Test whether the probe can still connect to the Oracle Database. If this test fails, the probe restarts the Concurrent Manager Server resource.
- Calculate the number of concurrent processes running as a percentage of the maximum number of concurrent processes allowed. Then test whether that percentage is less than CON_LIMIT, when the Concurrent Manager Server resource was defined. If the percentage is less than CON_LIMIT, the probe restarts the Concurrent Manager Server resource.

Forms Server in Servlet Mode Probe

Test whether the f60srvm process is running. If f60srvm is found, then test whether f60webmx process is running. If f60webmx is not found, the probe retests after another iteration of the probe to determine whether f60webmx is still missing, because f60srvm usually restarts f60webmx. If after two successive probes, f60webmx is still missing or f60srvm is not found on any probe, the probe restarts the Forms Server resource.

Forms Server in Socket Mode Probe

Test whether the frmsrv process is running. If this test fails, the probe restarts the Forms Server in Socket Mode resource.

Debugging HA for Oracle E-Business Suite

How to Turn on Debugging for HA for Oracle E-Business Suite

HA for Oracle E-Business Suite can be used by multiple Oracle E-Business Suite instances. It is possible to turn debugging on for all Oracle E-Business Suite instances or a particular Oracle E-Business Suite instance.

/opt/SUNWsccebs/xxx/etc/config allows you to turn on debugging for all Oracle E-Business Suite instances or for a specific Oracle E-Business Suite instance on a particular node or zone within the cluster. If you require debugging to be turned on for HA for Oracle E-Business Suite across the whole cluster, repeat this step on all nodes within the cluster.
1  Edit the /etc/syslog.conf file.

   a. Change daemon.notice to daemon.debug.

      # grep daemon /etc/syslog.conf
      *.err;kern.debug;daemon.notice;mail.crit     /var/adm/messages
      *.alert;kern.err;daemon.err                 operator
      
      b. Change the daemon.notice file to daemon.debug and restart the syslogd command.

      Note that the following output, from grep daemon /etc/syslog.conf, shows that
      daemon.debug has been set.

      # grep daemon /etc/syslog.conf
      *.err;kern.debug;daemon.debug;mail.crit     /var/adm/messages
      *.alert;kern.err;daemon.err                 operator

   c. Restart the syslog daemon.

      # svcadm disable system-log
      # svcadm enable system-log

2  Edit the /opt/SUNWscebs/cmg/etc/config file.

   Perform this step for each component that requires debug output, on each node of Oracle
   Solaris Cluster as required.

   Edit the /opt/SUNWscebs/cmg/etc/config file and change DEBUG= to DEBUG=ALL or
   DEBUG=sun-cluster-resource.

   # cat /opt/SUNWscebs/cmg/etc/config
   #
   # Copyright 2012Oracle and/or its affiliates. All rights reserved.
   # Use is subject to license terms.
   #
   # ident "@(#)config 1.1 06/03/06"
   #
   # Usage:
   # DEBUG=<RESOURCE_NAME> or ALL
   # DEBUG=ALL

   Note – To turn off debug, reverse the previous steps.
Index

A
AutoConfig
  command, 15–21
  how to run, 15

C
  cmglsr_config file, Parallel Concurrent Processing, 35
  commands
    clreslogicalhostname, 22–25
    clresource, 22–25
    clresourcegroup, 22–25
    clresourcegroup, 22–25
    clresourcetype, 22–25
    clresourcetype command, 32
    cluster command, 40
  configuration, verifying the installation and
    configuration of Oracle E-Business Suite, 26–31
  configuration requirements, 14–21
  configuration restrictions, 11–14

F
Fault Monitoring
  Probing Algorithm and Functionality, 42–43
  Resource Properties, 42
  Understanding the HA for Oracle E-Business Suite
    Fault Monitor, 42–43

H
HA for Oracle E-Business Suite
  installing, 31
  software package, installing, 31
  help, 8

I
installation, verifying the HA for Oracle E-Business
  Suite installation and configuration, 40
  installing
    HA for Oracle E-Business Suite, 31
    Oracle E-Business Suite, 22–25

O
Oracle Solaris Cluster software, publisher, 31
Oracle Solaris software, publisher, 31
overview
  installation, 10–11
  product, 9–10

P
package, 31
Parallel Concurrent Processing
  cmglsr_config file, 35
  creating a scalable resource group, 32
  requirements, 12
Index

publisher
    Oracle Solaris Cluster software, 31
    Oracle Solaris software, 31

R
resource types, 32

S
scalable resource group, Parallel Concurrent Processing, 32
    software package, 31
    Solaris zone Type, 15

T
technical support, 8