Veritas™ High Availability Agent for Oracle e-Business Concurrent Manager Installation and Configuration Guide

AIX, HP-UX, Linux, Solaris

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Veritas High Availability Agent for Oracle e-Business Concurrent Manager Installation and Configuration Guide

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Contents

Chapter 1

Introducing the Veritas High Availability Agent for Oracle e-Business Concurrent Manager

This chapter includes the following topics:

About the Veritas agent for Oracle e-Business Concurrent Manager

The Veritas High Availability agents monitor specific resources within an enterprise application. They determine the status of resources and start or stop them according to external events.

The Veritas agent for Oracle e-Business Concurrent Manager provides high availability for Oracle e-Business Concurrent Manager in a cluster. The agent for Oracle e-Business Concurrent Manager controls and manages the function of the Concurrent Manager only.

See the following Technical Support TechNote for the latest updates or software issues for this agent:

http://seer.entsupport.symantec.com/docs/282004.htm

The agent for Oracle e-Business Concurrent Manager brings Concurrent Manager instances online, monitor the instances, and bring the instances offline. The agent monitors the system processes and server states, and can shutdown the Oracle e-Business Concurrent Manager instance in case of a failover. It supports both, 11i and R12 releases of Oracle e-Business Component.

The Oracle e-Business Concurrent Manager is responsible for picking up the requests in the database server, and processing the requests.

The Concurrent Managers are of the following types:

- Internal Concurrent Manager
  Controls all Concurrent Managers. Can start, stop, and cleans up all other Concurrent Managers.
- Conflict Resolution Manager (CRM)
  Avoids conflicts such that incompatible requests do not run in the same domain.
- Standard Manager
  Executes the user requests.
- Transaction Manager
  Supports synchronous request processing.

Supported software

The Veritas agent for Oracle e-Business Concurrent Manager supports the following software versions:

Veritas Cluster Server	■ AIX—VCS 4.0, 5.0 ■ HP-UX—VCS 4.1, 5.0 ■ Linux—VCS 4.0, 4.1, 5.0 ■ Solaris—VCS 4.0, 4.1, 5.0
ACC Library	5.1 and later
Operating Systems	■ AIX 5.3, OSlevel 5 ■ HP-UX 11i v2 on PA-RISC ■ Red Hat Enterprise Linux 3.0, 4.0 on i386 and x86_64 ■ Solaris 8, 9, 10 on SPARC
Oracle e-Business Suite	11i (11.5.7, 11.5.8, 11.5.9, and 11.5.10) R12 (12 and 12.0.4) on Solaris platform

Oracle e-Business Concurrent Manager agent functions

The agent consists of resource type declarations and agent executables. The agent executables are organized into online, offline, monitor, and clean functions.

The following sections elaborate the steps that each agent function performs.

Online

The online function performs the following tasks:

- Performs a preliminary check to ensure that the Concurrent Manager instance is not running already on the specified node in the cluster.
- If any Concurrent Manager processes are running, the function performs a clean operation to end these processes.
- Start the Concurrent Manager instance using the Oracle supplied startup script:

  ```
  adcmctl.sh <start>
  ```

- Waits for the instance to become online successfully.
  The online function exits after either the instance becomes online, or after the timeout period specified in the OnlineTimeout attribute expires.

Offline

The offline function performs the following tasks:

- Performs a preliminary check to ensure that the Concurrent Manager instance is not already offline on the specified node in the cluster.
- Brings the instance offline using the Oracle supplied stop script:

  ```
  adcmctl.sh <stop>
  ```

- Waits for the instance to become successfully offline.
  The offline function exits after either the instance becomes offline, or after the timeout period specified in the OfflineTimeout attribute expires.

Monitor

The monitor function monitors the state of the Concurrent Manager instance on all nodes in the cluster. The monitor function performs the following tasks:

- Conducts a first level check on the Concurrent Manager instance as follows:
  - The function ensures that the critical processes such as Internal Concurrent Manager, Service Manager, Conflict Resolution Manager, a Concurrent Manager worker process, and the JDBC process for database connection are running smoothly.
  - Apart from the Internal Concurrent Manager process, if any other processes are missing, the function waits for the Internal Concurrent Manager process to start the missing processes. If the Internal Concurrent Manager process starts the missing processes, the monitor function continues to complete the first level check.
    If the Internal Concurrent Manager process is missing, the first level check fails, and the function brings the Concurrent Manager instance offline.
- If the SecondLevelMonitor attribute is equal to 1, the monitor function performs a more thorough check of the Concurrent Manager instance.
  The monitor function executes the Oracle supplied afimchk.sql script to check the state of the Concurrent Manager instance.
- Depending upon the MonitorProgram attribute, the monitor function can perform a customized check using a user-supplied monitoring utility.
  review the details about executing a custom monitor program.
  See "Executing a customized monitoring program" on page 26.

Clean

The clean function performs the following tasks:

- Checks the reason why the clean function was invoked.
- If the function was invoked because of a failed offline operation, the clean function looks for all the processes running for the Concurrent Manager instance, and cleans the processes.
- In all other cases, the clean function attempts to gracefully shut down the Concurrent Manager instance.
  If a graceful shutdown fails, the clean function looks for all the processes running for the Concurrent Manager instance, and cleans the processes.

Chapter 2

Installing, upgrading, and removing the agent for Oracle e-Business Concurrent Manager

This chapter includes the following topics:

Before you install the Veritas agent for Oracle e-Business Concurrent Manager

You must install the Veritas agent for Oracle e-Business Concurrent Manager on all the systems that will host a Oracle e-Business Concurrent Manager service group.

Ensure that you meet the following prerequisites to install the agent for Oracle e-Business Concurrent Manager.

- Install and configure Veritas Cluster Server.

- Remove any previous version of this agent.
- Install the latest version of ACC Library.
  To install or update the ACC Library package, locate the library and related documentation on the agentpack disc.
  See "About ACC Library" on page 14.

Prerequisites for installing the agent to support Solaris zones

Ensure that you meet the following prerequisites to install the agent for Oracle e-Business Concurrent Manager:

- Install Oracle e-Business Concurrent Manager inside the Solaris zones.
- Install and configure the VCS 5.0 environment to support Solaris zones. Refer to the VCS user documentation for details.
- Install the required version of ACC Library.
- Remove any previous version of this agent.

About ACC Library

The operations for the Veritas agent for Oracle e-Business Concurrent Manager depend on a set of Perl modules known as the ACC library. The library must be installed on each system in the cluster that will run the agent for Oracle e-Business Concurrent Manager. The ACC library contains common, reusable functions that perform tasks, such as process identification, logging, and system calls.

Installing the ACC library

Install the ACC library on each system in the cluster that runs an agent that depends on the ACC library.

To install the ACC library

1. Log in as superuser.
2. Navigate to the pkgs directory (the pkgs directory on the CD).

AIX	*cd_mount*/aix/application/acc_library/vcs/*version*_library/pkgs
HP-UX	*cd_mount*/hpux/generic/application/acc_library/vcs/*version*_library/pkgs
Linux	*cd_mount*/linux/generic/application/acc_library/vcs/*version*_library/rpms
Solaris	*cd_mount*/solaris/*dist_arch*/application/acc_library/vcs/*version*_library/pkgs where *dist_arch* is sparc or sol_x64.

3. Install the package. Enter **Yes** if asked to confirm overwriting of files in the existing package.

AIX	`# installp -ac -d VRTSacclib.rte.bff VRTSacclib.rte`
HP-UX	`# swinstall -s 'pwd' VRTSacclib`
Linux	`# rpm -i \` `VRTSacclib-VersionNumber-GA_GENERIC.noarch.rpm`
Solaris	`# pkgadd -d . VRTSacclib`

4. For HP-UX, install the HP-UX patch PHCO_29042 if it is not already installed.

Installing the agent in a VCS environment

Install the agent for Oracle e-Business Concurrent Manager on each node in the cluster.

To install the agent

1. Log in as superuser.
2. Navigate to the directory containing the package for the platform running in your environment.

   AIX `cd_mount/aix/application/oracleapps_agent/vcs_version/version_agent/pkgs`

   HP-UX `cd_mount/hpux/generic/application/oracleapps_agent/vcs_version/version_agent/pkgs`

   Linux `cd_mount/linux/generic/application/oracleapps_agent/vcs_version/version_agent/rpms`

   Solaris `cd_mount/solaris/dist_arch/application/oracleapps_agent/vcs_version/version_agent/pkgs`

3. Install the package.

   AIX
   ```
   # installp -ac -d VRTSvcsoc11.rte.bff VRTSvcsoc11.rte
   ```

   HP-UX
   ```
   # swinstall -s ‘pwd‘ VRTSvcsoc11
   ```

   Linux
   ```
   # rpm -ihv \
   VRTSvcsoc11-AgentVersion-GA_GENERIC.noarch.rpm
   ```

   Solaris
   ```
   # pkgadd -d . VRTSvcsoc11
   ```

Removing the agent in a VCS environment

You must uninstall the agent for Oracle e-Business Concurrent Manager from a cluster while the cluster is active.

To uninstall the agent in a VCS environment

1. Log in as a superuser.
2. Set the cluster configuration mode to read/write by typing the following command from any node in the cluster:

   ```
   # haconf -makerw
   ```

3. Remove all Oracle e-Business Concurrent Manager resources from the cluster. Use the following command to verify that all resources have been removed:

   ```
   # hares -list Type=OracleAppsCM
   ```

4. Remove the agent type from the cluster configuration by typing the following command from any node in the cluster:

   ```
   # hatype -delete OracleAppsCM
   ```

   Removing the agent's type file from the cluster removes the include statement for the agent from the main.cf file, but the agent's type file is not removed from the cluster configuration directory. You can remove the agent's type file later from the cluster configuration directory.
5. Save these changes. Then set the cluster configuration mode to read-only by typing the following command from any node in the cluster:

   ```
   # haconf -dump -makero
   ```

6. Use the platform's native software management program to remove the agent for Oracle e-Business Concurrent Manager from each node in the cluster.

   Execute the following command to uninstall the agent:

AIX	`# installp -u VRTSvcsoc11.rte`
HP-UX	`# swremove VRTSvcsoc11`
Linux	`# rpm -e VRTSvcsoc11`
Solaris	`# pkgrm VRTSvcsoc11`

Removing the ACC library

Perform the following steps to remove the ACC library.

To remove the ACC library

1. Ensure that all agents that use ACC library are removed.
2. Run the following command to remove the ACC library package.

AIX	`# installp -u VRTSacclib.rte`
HP-UX	`# swremove VRTSacclib`
Linux	`# rpm -e VRTSacclib`
Solaris	`# pkgrm VRTSacclib`

Upgrading the agent for Oracle e-Business Concurrent Manager

To upgrade the agent, first remove the older version of the agent.

See "Removing the agent in a VCS environment" on page 16.

Then, follow the instructions to install the new agent software.

See "Installing the agent in a VCS environment" on page 15.

Chapter 3

Preparing to configure the agent for Oracle e-Business Concurrent Manager

This chapter includes the following topics:

About configuring the Veritas agent for Oracle e-Business Concurrent Manager

After installing the Veritas agent for Oracle e-Business Concurrent Manager, you must import the agent type configuration file. After importing this file, you can create and configure a Oracle e-Business Concurrent Manager resource. Before you configure a resource, review the attributes table that describes the resource type and its attributes.

To view the sample agent type definition and service groups configuration.

See "About sample configurations for the agent for Oracle e-Business Concurrent Manager" on page 43.

Importing the agent types files for VCS

To use the agent for Oracle e-Business Concurrent Manager, you must import the agent types file into the cluster.

To import the agent types file using the Veritas Cluster Server graphical user interface

1. Start the Veritas Cluster Manager and connect to the cluster on which the agent is installed.
2. Click **File > Import Types**.
3. In the Import Types dialog box, select the following file:

VCS 4.x	/etc/VRTSvcs/conf/sample_OracleAppsCM/OracleAppsCMTypes.cf
VCS 5.0	/etc/VRTSagents/ha/conf/OracleAppsCM/OracleAppsCMTypes.cf
VCS 4.x with Solaris zone support	/etc/VRTSvcs/conf/sample_OracleAppsCM/OracleAppsCMTypes_zones.cf
VCS 5.0 with Solaris zone support	/etc/VRTSagents/ha/conf/OracleAppsCM/OracleAppsCMTypes_zones.cf

4. Click **Import**.
5. Save the VCS configuration.

   The Oracle e-Business Concurrent Manager agent type is now imported to the VCS engine.

   You can now create Oracle e-Business Concurrent Manager resources. For additional information about using the VCS GUI, refer to the *Veritas Cluster Server User's Guide*.

Oracle e-Business Concurrent Manager agent attributes

Table 3-1 lists the attributes required for configuring Concurrent Manager.

Table 3-1 Required attributes

Required attributes	Description
ProcMon	This attribute is used by the monitor function to determine the processes to be observed during the process-level check. The monitor function uses the elements of the vector to build a list of processes to be monitored and verifies that all processes listed in the vector are running. **Note:** Each Oracle Application module starts different Concurrent Manager processes, each with its own unique signature. The number and type of processes vary depending on the Oracle e-Business Application installed. Type and dimension: string-vector Default: "FNDLIBR, FNDSM" Example: FNDLIBR, FNDSM
ProcClean	This attribute is used by the clean function to identify the processes to be observed, during a clean function. The clean function uses the vector elements and ProcMon elements to build a list of Concurrent Manager processes to be cleaned, if the normal shutdown process fails. **Note:** Each Oracle Application module starts different Concurrent Manager processes, each with its own unique signature. The number and type of processes vary depending on the Oracle e-Business Application installed. Type and dimension: string-vector Default: "FNDLIBR, FNDSM" Example: FNDLIBR, FNDSM
DB_USER	The user name of the Concurrent Manager database administrator. This user name is used to construct the start-up command for the online function: ScriptHome/adcmctl.sh start <DB_USER>/<DB_Password> Type and dimension: string-scalar Default: "" Example: APPS

Table 3-1 Required attributes *(continued)*

Required attributes	Description
DB_Password	The encrypted password to the Concurrent Manager database account. This password is used to construct the start-up command for the online function. Encrypt this password using `vcsencrypt -agent <cleartext password>` The output of this command is an encrypted password. DB_Password must be set to the encrypted value. Type and dimension: string-scalar Default: "" Example: APPS
EnvFile	The directory path of the file that must be sourced with the UNIX shell. You must source this file to set the environment before executing agent scripts for online, offline, monitor, and clean functions. Type and dimension: string-scalar Default: "" Example for 11i: /ebiz/visappl/APPSVIS_ebiz.env Example for R12: /ebiz/oracle/VIS/apps/apps_st/appl/APPSVIS_ebiz.env
ORACLE_HOME	The directory path to the file that contains the Oracle Database client binaries. These binaries are exclusive to a particular Concurrent Manager instance, and are located in the Oracle e-Business Concurrent Manager software directory. This attribute is used in the monitor and clean functions to locate the environment setup file, and the Oracle client binaries that are used in second-level monitoring and clean functions. Type and dimension: string-scalar Default: "" Example for 11i: /ebiz/visora/8.0.6 Example for R12: /oracle/VIS/apps/tech_st/10.1.2

Table 3-1 Required attributes *(continued)*

Required attributes	Description
ResLogLevel	The logging detail performed by the agent for the resource. Valid values are: ERROR: Only logs error messages. WARN : Logs above plus warning messages. INFO: Logs above plus informational messages. TRACE: Logs above plus trace messages. TRACE is very verbose and should only be used during initial configuration or for troubleshooting and diagnostic functions. Type and dimension: string-scalar Default: INFO Example: TRACE
ScriptHome	The absolute path of the Oracle e-Business scripts directory. This directory contains the scripts to start and stop a Concurrent Manager instance. Type and dimension: string-scalar Example for 11i: /ebiz/viscomn/admin/scripts/VIS_ebiz Example for R12: /ebiz/oracle/inst/apps/VIS_ebiz1/admin/scripts Default: ""
SQLDIR	The absolute path of the Oracle e-Business sql scripts directory. This directory contains the afimchk.sql script that is used during second-level monitor function. Type and dimension: string-scalar Example for 11i: /ebiz/visappl/fnd/11.5.10/sql Example for R12: /ebiz/oracle/VIS/apps/apps_st/appl/fnd/12.0.0/sql Default: ""

Table 3-1 Required attributes *(continued)*

Required attributes	Description
User	UNIX user name used to start and stop a Concurrent Manager instance. The clean function also uses this user name to kill residual processes. Review the information about setting UNIX user names. See "Uniquely identifying Oracle e-Business Concurrent Manager server instances" on page 25. Type and dimension: string-scalar Default: "" Example: oracle
VirtualHostname	Virtual hostname that is associated with a Concurrent Manager instance. Type and dimension: string-scalar Default: "" Example: con_mgr_01

Table 3-2 lists the optional attributes for configuring Concurrent Manager.

Table 3-2 Optional attributes

Optional attributes	Description
MonitorProgram	The full pathname and command-line arguments for an externally provided monitor program. Review the information about setting this attribute. See "Executing a customized monitoring program" on page 26. Type and dimension: string-scalar Default: "" Example 1: /usr/ebiz/visappl/work/myMonitor.sh Example 2: /usr/sap/ebiz/visappl/work/myMonitor.sh arg1 arg2

Table 3-2 Optional attributes *(continued)*

Optional attributes	Description
SecondLevelMonitor	Used to enable second-level monitoring. Second-level monitoring is a deeper, more thorough state check of the Concurrent Manager instance. The numeric value specifies how often the monitoring routines must run. 0 means never run the second-level monitoring routines, 1 means run routines every monitor interval, 2 means run routines every second monitor interval, and so on. **Note:** Exercise caution while setting SecondLevelMonitor to large numbers. For example, if the MonitorInterval is set to 60 seconds and the SecondLevelMonitor is set to 100, then the agent executes a process check every 100 minutes, which may not be as often as intended. For maximum flexibility, no upper limit is defined for SecondLevelMonitor. Type and dimension: integer-scalar Example: 1 Default: 0

Uniquely identifying Oracle e-Business Concurrent Manager server instances

To support identification, independence, and mobility of Oracle e-Business Concurrent Manager units, create a unique UNIX User account for each Concurrent Manager unit.

Note: Do not use the `root` account as a UNIX user of a Concurrent Manager component. The agent for Oracle e-Business Concurrent Manager uses the UNIX account information to isolate the processes running for a particular instance, before executing a `kill` command. If an instance is configured using a `root` account, the clean function may attempt to kill the processes that `root` owns.

For example, if you deploy separate instances of an Oracle e-Business Concurrent Manager, you can create dedicated separate UNIX users accounts to each of these units.

Note: A UNIX user account is unique for all components of a working Oracle e-Business Suite, that also comprises a Concurrent Manager instance.

If you provide such dedicated UNIX user accounts, the following holds true:

- The online function can start multiple Concurrent Manager instances on the same machine, with different user accounts.
- The monitor function can differentiate between two identical instances on the same machine using their UNIX user accounts.
  For example, if two Concurrent Manager instances are running on the same machine, the monitor function can use their user accounts to differentiate the processes and resources belonging to individual resource instances.
- If multiple instances are running on a machine, the clean function can use the UNIX user accounts to filter out the processes running for a particular instance. Therefore, the operation can selectively kill the processes running for an instance, while not adversely affecting the working of other instances on the same machine.

Table 3-3 illustrates the relation between a UNIX user account, UNIX group user account, and a set of Concurrent Manager instances.

Table 3-3 Relation between CM instances and UNIX accounts

Concurrent Manager instances	UNIX user account	UNIX group account
Concurrent Mgr 1, that includes: ■ Concurrent Mgr Server ■ Concurrent Mgr Listener ■ Reports Server	oraccms1	dba
Concurrent Mgr 2, that includes: ■ Concurrent Mgr Server ■ Concurrent Mgr Listener ■ Reports Server	oraccms2	dba
Oracle 8.1.7 Instance	oracle	dba

Executing a customized monitoring program

The monitor function executes a custom monitor program to perform a user-defined Oracle e-Business Concurrent Manager instance server state check.

The monitor function executes the utility specified in the MonitorProgram attribute if the following conditions are satisfied:

- The MonitorProgram attribute value is set to a valid executable program.

- The first level process check indicates that the Oracle e-Business Concurrent Manager instance is online.
- The SecondLevelMonitor attribute is either set to 0 (false), or SecondLevelMonitor is set to 1 (true) and the second level check indicates that the Oracle e-Business Concurrent Manager instance is online.
  This feature allows cluster administrators to define custom programs that can further determine the state of the Oracle e-Business Concurrent Manager instance.

The monitor function interprets the utility exit code as follows:

110 or 0	Oracle e-Business Concurrent Manager server instance is online
100 or 1	Oracle e-Business Concurrent Manager server instance is offline
99	Oracle e-Business Concurrent Manager server instance is unknown
Any other value	Oracle e-Business Concurrent Manager server instance is unknown

To ensure that the custom monitor program is always available to the agent application, Symantec recommends storing the file in a shared directory that is available on an online Oracle system.

Creating soft links to JDBC properties file

Each Oracle application component attempts to connect to the Oracle database for configuration information, for example, instance metadata. For a successful database session, the application accesses the JDBC properties file to obtain the correct database session properties' information. The JDBC file name must be VirtualName_DBNAME, where VirtualName is the virtual name of the Oracle application database resource and DBNAME is the name of the database that is specified during installation.

To avoid problems while accessing the JDBC properties file, Symantec recommends creating a soft link to the JDBC properties file for each node in the cluster.

For example, consider a cluster that has four nodes, oranode1, oranode2, oranode3, and oranode4. The virtual name of the Oracle application database resource is ORADB. The DBNAME is vis. The resource is an Oracle 9iAS instance, where $APPL_TOP is equal to /ora_apps/web/visappl. The 9iAS UNIX user ID is oraweb.

To create a soft link for each node of the cluster, login as oraweb user and run the following commands:

```
$ cd /ora_apps/web/visappl/fnd/11.5.0/secure
$ ln -s  ORADB_vis.dbc oranode1_vis.dbc
```

```
$ ln -s  ORADB_vis.dbc oranode2_vis.dbc
$ ln -s  ORADB_vis.dbc oranode3_vis.dbc
$ ln -s  ORADB_vis.dbc oranode4_vis.dbc
```

If you configure a Concurrent Manager instance in a clustered environment, you must create a soft link to the virtual hostname of the CM instance. For example, if the virtual hostname running the CM instance is oraccms, run this command to create a soft link:

```
$ ln -s  ORADB_vis.dbc oraccms_vis.dbc
```

Note: Oracle Apps R12 has inbuilt and separate instance homes for each instance. Additionally, the DB_TOP, APPL_TOP and COMMON_TOP instances are shared by all separate instances. Thus, in case of Oracle Apps R12, you are not required to create the soft links to JDBC properties file.

Configuring Oracle e-Business Concurrent Manager resources for Solaris zones support

To enable the agent for Oracle e-Business Concurrent Manager to support Solaris zones, ensure that you perform the following configuration steps:

- Install Oracle e-Business Concurrent Manager on dedicated Solaris zones.
- Preferrably, follow the Symantec recommendation of installing zones on a shared disk for convenient configuration, failover, and maintenance.
- Make sure that the name of the Solaris zone is the same as the virtual host name that you use to install and configure the Oracle e-Business Concurrent Manager.

Chapter 4

Configuring the service groups for Oracle e-Business Concurrent Manager

This chapter includes the following topics:

Installing Oracle e-Business Concurrent Manager for clustering purposes

Perform the following procedure to install the Oracle e-Business Concurrent Manager on a node, and prepare the node for clustering.

Configure a disk group and a file system

Configure a disk group and file system that is large enough to hold the Oracle e-Business Concurrent Manager component.

Refer to the Oracle e-Business installation documentation for details about space requirements for a Concurrent Manager component.

Obtain virtual IP addresses for the node

Configure a virtual IP address for the Concurrent Manager instance, and resolve the address by adding the address to the local files or to the DNS system.

Install the Oracle e-Business Concurrent Manager component

Perform the following steps to install the Oracle e-Business Concurrent Manager component.

To install the Oracle e-Business Concurrent Manager component

1. Mount the file system.
2. Enable the IP address assigned to the Concurrent Manager component.
3. Run the Oracle supplied installer:

   ```
   $ rapidwiz -servername <virtual hostname>
   ```

   where:

   <virtual hostname> is the virtual host name of the CM instance.
4. Follow the instructions in the installation GUI, and complete the component installation.

Preparing to configure a resource for Concurrent Manager instance

An Oracle e-Business Concurrent Manager instance is configured on a node in the cluster. This node has a physical host name, and the Concurrent Manager instance has a virtual host name.

Before configuring the resource for the Concurrent Manager instance, you must ensure that the VCS environment recognizes the virtual host name of Concurrent Manager instance, and not the physical host name of the server.

Perform the following steps before you configure a resource for the Concurrent Manager instance.

To prepare to configure a resource for Concurrent Manager instance

1. Stop the listener process of the Concurrent Manager instance using the following commands for 11i and R12 respectively:

   ```
   $COMMON_TOP/admin/scripts/<CONTEXT_NAME>/adalnctl.sh stop
   ```

   ```
   $INST_TOP/admin/scripts/adalnctl.sh stop
   ```

   where, <CONTEXT_NAME> is a variable that refers to <SID>_<hostname>.

2. Stop all other processes of the Concurrent Manager instance using the following commands for 11i and R12 respectively:

   ```
   $COMMON_TOP/admin/scripts/<CONTEXT_NAME>/adcmctl.sh stop APPS/APPS
   ```

   ```
   $INST_TOP/admin/scripts/adalnctl.sh stop APPS/APPS
   ```

3. To check which listener file the Concurrent Manager instance is using, do the following:

   - Run the command.

     ```
     $ grep ORA_ENVFILE adalnctl.sh
     ```

   - Run the command using the file that the preceeding command returned.

     ```
     $ grep TNS_ADMIN <file>
     ```

   - Go to the TNS_ADMIN directory.

     ```
     $ cd $TNS_ADMIN
     ```

   - Open the listener.ora file.

     ```
     $ vi listener.ora
     ```

4 Add the following lines in the listener.ora file:

AIX For VCS 4.0

```
LDR_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
VHOSTNAME=<virtual hostname>
```

For VCS 5.0

```
LDR_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.so
VHOSTNAME=<virtual hostname>
```

HP-UX For VCS 4.1

```
LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.sl
VHOSTNAME=<virtual hostname>
```

For VCS 5.0

```
LD_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.sl
VHOSTNAME=<virtual hostname>
```

Linux For VCS 4.1

```
LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
VHOSTNAME=<virtual hostname>
```

For VCS 5.0

```
LD_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.so
VHOSTNAME=<virtual hostname>
```

Solaris

```
LD_PRELOAD_32=/usr/lib/secure/libvuname.so
VHOSTNAME=<virtual hostname>
```

where, <virtual hostname> is the virtual host name of the Concurrent Manager instance.

An example of how the listener.ora file looks in an HP-UX system is shown as follows.

```
APPS_VIS =
   (ADDRESS_LIST =
     (ADDRESS= (PROTOCOL= TCP)(Host= ebiz)(Port= 1626))
```

```
   )
SID_LIST_APPS_VIS =
  (SID_LIST =
    ( SID_DESC = ( SID_NAME = FNDSM )
                 ( ORACLE_HOME = /ebiz/visora/8.0.6 )
                ( PROGRAM = /ebiz/visappl/fnd/11.5.0/bin/FNDSM )
                 ( envs='MYAPPSORA=/ebiz/visappl/APPSVIS_ebiz.env,PATH=/usr/bin:/usr/
                   ccs/bin:/bin,FNDSM_SCRIPT=/ebiz/v
iscomn/admin/scripts/VIS_ebiz/gsmstart.sh,LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/
                 libvuname.sl,VHOSTNAME=ebiz' )
    )
    ( SID_DESC = ( SID_NAME = FNDFS )
                 ( ORACLE_HOME = /ebiz/visora/8.0.6 )
                ( PROGRAM = /ebiz/visappl/fnd/11.5.0/bin/FNDFS )
                 ( envs='EPC_DISABLED=TRUE,NLS_LANG=American_America.UTF8,
  LD_LIBRARY_PATH=/usr/dt/lib:/usr/openwin/lib
:/ebiz/visora/8.0.6/lib,SHLIB_PATH=/usr/lib:/usr/dt/lib:/usr/openwin/lib:/
  ebiz/visora/8.0.6/lib,LIBPATH=/usr/dt/lib:/usr/openwin/lib:/ebiz/visora/
  8.0.6/lib,APPLFSTT=VIS_BALANCE;VIS_806_BALANCE;VIS;VIS_FO,APPLFSWD=/ebiz/
  visappl/admin;/ebiz/viscomn/temp;/ebiz/viscomn/html/oam/nonUix/launchMode/
  restricted,LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.sl,VHOSTNA
ME=ebiz' )
    )
  )
STARTUP_WAIT_TIME_APPS_VIS = 0
CONNECT_TIMEOUT_APPS_VIS = 10
TRACE_LEVEL_APPS_VIS = OFF
LOG_DIRECTORY_APPS_VIS = /ebiz/visora/8.0.6/network/admin
LOG_FILE_APPS_VIS = APPS_VIS
TRACE_DIRECTORY_APPS_VIS = /ebiz/visora/8.0.6/network/admin
TRACE_FILE_APPS_VIS = APPS_VIS
IFILE =
/ebiz/visora/8.0.6/network/admin/VIS_ebiz/VIS_ebiz_listener_ifi
le.ora
```

5 Navigate to the following directory for 11i and R12 respectively:

```
cd $COMMON_TOP/admin/scripts/<CONTEXT_NAME>

cd $INST_TOP/admin/scripts
```

6 Add these lines in the adalnctl.sh and adcmctl.sh files:

AIX

For VCS 4.0

```
LDR_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
VHOSTNAME=<virtual hostname>
export LDR_PRELOAD VHOSTNAME
```

For VCS 5.0

```
LDR_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.so
VHOSTNAME=<virtual hostname>
export LDR_PRELOAD VHOSTNAME
```

HP-UX

For VCS 4.1

```
LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.sl
VHOSTNAME=<virtual hostname>
export LD_PRELOAD VHOSTNAME
```

For VCS 5.0

```
LD_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.sl
VHOSTNAME=<virtual hostname>
export LD_PRELOAD VHOSTNAME
```

Linux

For VCS 4.1

```
LD_PRELOAD=/opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
VHOSTNAME=<virtual hostname>
export LD_PRELOAD VHOSTNAME
```

For VCS 5.0

```
LD_PRELOAD=/opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.so
VHOSTNAME=<virtual hostname>
export LD_PRELOAD VHOSTNAME
```

Solaris

```
LD_PRELOAD_32=/usr/lib/secure/libvuname.so
VHOSTNAME=<virtual hostname>
export LD_PRELOAD_32 VHOSTNAME
```

7 On Solaris, create the symbolic links as follows:

For VCS 4.1

- $ ln -s /opt/VRTSvcs/bin/OracleAppsCM/libvuname.so /usr/lib/libvuname.so
- $ ln -s /opt/VRTSvcs/bin/OracleAppsCM/libvuname.so /usr/lib/secure/libvuname.so

For VCS 5.0

- $ ln -s /opt/VRTSagents/ha/bin/OracleAppsCM/libvuname.so /usr/lib/libvuname.so

- $ ln -s /opt/VRTSagents/ha/bin/OracleAppsCM/libvuname.so /usr/lib/secure/libvuname.so

8 Manually change the permission of the library files.

AIX For VCS 4.0

```
$ chmod 555 /opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
```

For VCS 5.0

```
$ chmod 555 /opt/VRTSagents/ha/bin/OracleAppsCM/libvuname.so
```

HP-UX For VCS 4.1

```
$ chmod 555 /opt/VRTSvcs/bin/OracleAppsCM/libvuname.sl
```

For VCS 5.0

```
$ chmod 555 /opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.sl
```

Linux For VCS 4.1

```
$ chmod 555 /opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
```

For VCS 5.0

```
$ chmod 555 /opt/VRTSagents/ha/bin/OracleAppsCM/ \
libvuname.so
```

Solaris For VCS 4.1

```
$ chmod 555 /opt/VRTSvcs/bin/OracleAppsCM/libvuname.so
```

For VCS 5.0

```
$ chmod 555 /opt/VRTSagents/ha/bin/OracleAppsCM/libvuname.so
```

Configuring a Concurrent Manager instance for clustering

After installing the Oracle e-Business Concurrent Manager component, you must create a resource for the instance. To create a resource, define the properties of the instance in the VCS environment.

For example, you can create a resource of type OracleAppsCM for a Concurrent Manager instance with the following configuration details.

For OracleAppsCM 11i:

```
OracleAppsCM oraappsCM
(
  Critical = 0
  User = ebiz
  OracleHome = "/ebiz/visora/8.0.6"
  ScriptHome = "/ebiz/viscomn/admin/scripts/VIS_ebiz"
  SQLDIR = "/ebiz/visappl/fnd/11.5.0/sql"
  EnvFile = "/ebiz/visappl/APPSVIS_ebiz.env"
  DB_USER = APPS
  DB_Password = APPS
  VirtualHostname = ebiz
)
```

For OracleAppsCM R12:

```
OracleAppsCM oraappsCM
(
  Critical = 1
  User = applmgr
  OracleHome = "/ebiz/oracle/VIS/apps/tech_st/10.1.2"
  ScriptHome = "/ebiz/oracle/inst/apps/VIS_ebiz1/admin/scripts/""
  SQLDIR = "/ebiz/oracle/VIS/apps/apps_st/appl/fnd/12.0.0/sql"
  EnvFile = "/ebiz/oracle/VIS/apps/apps_st/appl/APPSVIS_ebiz1.env"
  DB_USER = apps
  DB_Password = apps
  User = applmgr
  SecondLevelMonitor = 5
  VirtualHostname = ebiz
)
```

Ensure that the value of VirtualHostname is equal to the value of <*virtual hostname*>.

See "Installing Oracle e-Business Concurrent Manager for clustering purposes" on page 29.

Chapter 5

Troubleshooting the agent for Oracle e-Business Concurrent Manager

This chapter includes the following topics:

Using correct software and operating system versions

Ensure that no issues arise due to incorrect software and operating system versions. For the correct versions of operating system and software to be installed on the resource systems:

See "Supported software" on page 10.

Meeting prerequisites

Before installing the agent for Oracle e-Business Concurrent Manager, double check that you meet the prerequisites.

For example, you must install the ACC library on VCS before installing the agent for Oracle e-Business Concurrent Manager.

See "Before you install the Veritas agent for Oracle e-Business Concurrent Manager" on page 13.

Configuring Oracle e-Business Concurrent Manager resources

Before using an e-Business component resource, ensure that you configure the resource properly.

Refer to the agent attributes for the list of resource types with which you can configure the component resource.

For information about setting the agent attributes review the following:

- About sample configurations for the agent for Oracle e-Business Concurrent Manager

Starting the Oracle e-Business Concurrent Manager instance outside a cluster

If you face problems while working with a resource, you must disable the resource within the cluster framework. A disabled resource is not under the control of the cluster framework, and so you can test the Oracle e-Business Concurrent Manager instance independent of the cluster framework. Refer to the cluster documentation for information about disabling a resource.

To restart the resource outside the framework

1. Ensure that you freeze the service group, so that the cluster does not take control of the resource running the CM component instance.
2. Start the component using the Oracle supplied script:

   ```
   # adcmctl.sh start dbuser/dbpassword
   ```

   where:

   dbuser and *dbpassword* are the values specified in the DB_USER and DB_Password attributes.

   Ensure that the CM component instance starts successfully. To check the status of the CM resource, you can run the `afimchk.sql` command manually. For example:

   ```
   # sqlplus dbuser/dbpassword @afimchk.sql
   ```

   If the instance works properly outside the cluster framework, you can attempt to implement the instance within the framework.

To stop the resource outside the framework

1. Ensure that you freeze the service group, so that the cluster does not take control of the resource running the CM component instance.
2. Stop the component using the Oracle supplied script:

   ```
   # adcmctl.sh stop dbuser/dbpassword
   ```

   where:

   dbuser and *dbpassword* are the values specified in the DB_USER and DB_Password attributes.

   Ensure that the CM component instance stops successfully. To check the status of the CM resource, you can run the `afimchk.sql` command manually. For example:

   ```
   # sqlplus dbuser/dbpassword @afimchk.sql
   ```

   If the instance works properly outside the cluster framework, you can attempt to implement the instance within the framework.

Reviewing error log files

If you face problems while using Oracle e-Business Concurrent Manager or the agent for Oracle e-Business Concurrent Manager, use the log files described in this section to investigate the problems.

Reviewing the screen output

While starting or stopping the Oracle e-Business CM instance, you can review the command output displayed on the screen to analyze the problem.

Using trace level logging

If you set ResLogLevel to TRACE, a very high volume of messages are produced. Symantec recommends that you localize the ResLogLevel attribute for a particular resource.

Note: Starting with version 5.1.1.0 of the ACC library, the TRACE level logs for any ACCLib based agent are generated locally at the location /var/VRTSvcs/log/*Agent*_A.log.

Appendix A

Sample Configurations

This appendix includes the following topics:

About sample configurations for the agent for Oracle e-Business Concurrent Manager

The sample configuration graphically depicts the resource types, resources, and resource dependencies within the service group. Review these dependencies carefully before configuring the agent for Oracle e-Business Concurrent Manager. For more information about these resource types, see the *Veritas Cluster Server Bundled Agents Reference Guide*.

Sample agent type definition

The sample agent type definition for Oracle e-Business Concurrent Manager is as follows:

For VCS 4.x

```
type OracleAppsCM
(
static str ArgList[] = { ResLogLevel, State, IState,
```

```
                User, OracleHome,
                ScriptHome, SQLDIR, EnvFile,
                DB_USER, DB_Password, VirtualHostname,
                SecondLevelMonitor, MonitorProgram,
                ProcMon, Proclean }
    str ResLogLevel = INFO
    str User
    str OracleHome
    str ScriptHome
    str SQLDIR
    str EnvFile
    str DB_USER
    str DB_Password
    str VirtualHostname
    int SecondLevelMonitor = 0
    str MonitorProgram
    str ProcMon[] = {FNDLIBR, FNDSM}
    str ProClean[] = {}
)
```

Sample Oracle e-Business Concurrent Manager instance

An excerpt of the main.cf file for an Oracle e-Business Concurrent Manager 11i instance is as follows.

```
OracleAppsCM oraccms_cm (
  ResLogLevel        = TRACE
  ScriptHome         = "/ora_apps/ccms/viscomn/admin/scripts/VIS"
  DB_USER            = apps
  DB_Password        = apps
  User               = oraccms
  SecondLevelMonitor = 1
  ORACLE_HOME        = "/ora_apps/ccms/visora/8.0.6"
  EnvFile            = "VIS.env"
  SQLDIR             = "/ora_apps/ccms/visappl/fnd/11.5.0/sql"
)
```

An excerpt of the main.cf file for an Oracle e-Business Concurrent Manager R12 instance is as follows.

```
OracleAppsCM oraccms_cm (
 ResLogLevel     = TRACE
 ScriptHome      = "/ebiz/oracle/inst/apps/VIS_ebiz1/admin/scripts/"
 DB_USER         = apps
```

```
 DB_Password     = apps
 User            = applmgr
 SecondLevelMonitor = 5
 ORACLE_HOME     = "/ebiz/oracle/VIS/apps/tech_st/10.1.2"
 EnvFile         = "/ebiz/oracle/VIS/apps/apps_st/appl/APPSVIS_ebiz1.env"
 SQLDIR          = "/ebiz/oracle/VIS/apps/apps_st/appl/fnd/12.0.0/sql"
 VirtualHostName = "ebiz"
)
```

Sample agent type definition with Solaris zone support

The sample agent type definition for Oracle e-Business Concurrent Manager with Solaris zone support is as follows:

For VCS 4.x

```
type OracleAppsCM (
        static str ContainerType = Zone
        static str ArgList[] = { ResLogLevel, State, IState, User,
        OracleHome, ScriptHome, SQLDIR, EnvFile, DB_USER,
        DB_Password, VirtualHostname , SecondLevelMonitor,
        MonitorProgram, ProcMon, ProcClean}
        str ResLogLevel = INFO
        str User
        str OracleHome
        str ScriptHome
        str SQLDIR
        str EnvFile
        str DB_USER
        str DB_Password
        str VirtualHostname
        int SecondLevelMonitor = 0
        str MonitorProgram
        str ProcMon[] = {FNDLIBR, FNDSM}
        str ProcClean[] = {}
        str ContainerName
)
```

For VCS 5.0

```
type OracleAppsCM (
        static str AgentFile = "/opt/VRTSvcs/bin/Script50Agent"
```

```
        static str AgentDirectory = "/opt/VRTSagents/ha/bin/OracleAppsCM"
        static str ArgList[] = { ResLogLevel, State, IState,  User,
        OracleHome, ScriptHome, SQLDIR, EnvFile, DB_USER, DB_Password,
        VirtualHostname , SecondLevelMonitor, MonitorProgram, ProcMon,
        ProcClean}
        str ResLogLevel = INFO
        str User
        str OracleHome
        str ScriptHome
        str SQLDIR
        str EnvFile
        str DB_USER
        str DB_Password
        str VirtualHostname
        int SecondLevelMonitor = 0
        str MonitorProgram
        str ProcMon[] = {FNDLIBR, FNDSM}
        str ProcClean[] = {}
)
```

Sample service group configuration

A service group is composed of different resources, that are related to each other and are formed along traditional Oracle e-Business functional lines. You can independently start, stop, and monitor each resource within a service group.

You can group a Concurrent Manager Server, a Listener, and a Reports Server within a service group. You cannot create another such group within the same service group.

Symantec recommends that a service group must be configured using a virtual IP address and shared disk storage. All resources in a service group share the same virtual IP address, disk storage, and UNIX User account. In event of a failure, an application resource can run on any node in the cluster without being tied to a node specific IP address or to local disk resources.

Figure A-1 describes a sample service group configuration for the Oracle e-Business Concurrent Manager 11i.

The figure depicts a service group containing an Oracle Applications Report Server resource, a Concurrent Manager Listener resource, and a Concurrent Manager Server resource.

The Concurrent Manager Server cannot start successfully unless the Listener is running.

Figure A-1 Sample service group configuration for the Oracle e-Business Concurrent Manager 11i

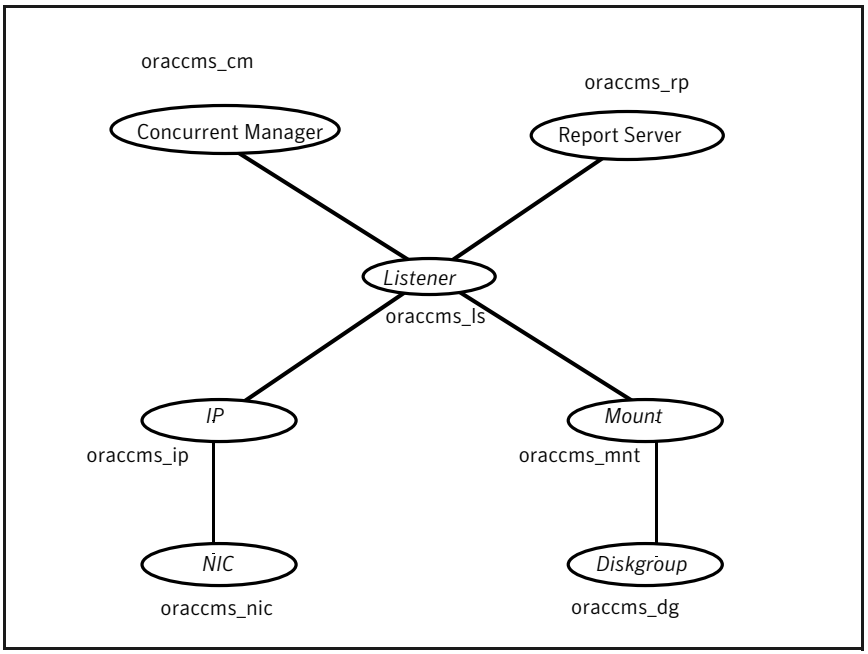
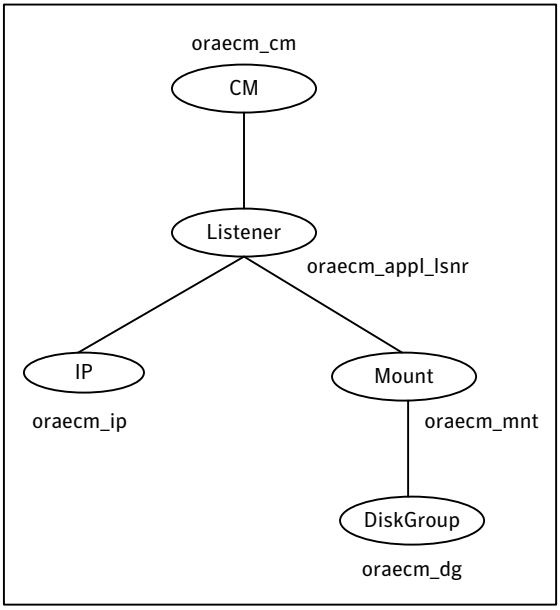


Figure A-2 describes a sample service group configuration for the Oracle e-Business Concurrent Manager R12.

Figure A-2 Sample service group configuration for the Oracle e-Business Concurrent Manager R12

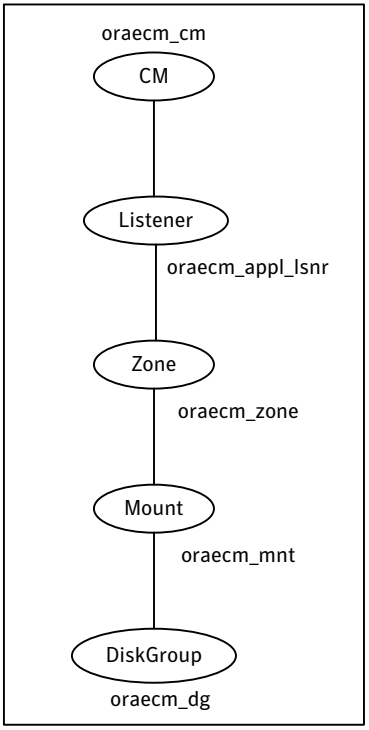


Sample service group configuration with Solaris zone support

The sample service group configuration for Oracle e-Business Concurrent Manager with Solaris zone support is as follows:

Figure A-3 depicts the sample service group configuration with Solaris zone support for Oracle e-Business Concurrent Manager R12.

Figure A-3 Sample service group configuration with Solaris zone support for Oracle e-Business Concurrent Manager R12



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