Oracle® Configuration Controls Governor

Installation Guide

Release 5.5.1

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Part No. E25675-06

Contents

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Introduction

Oracle Configuration Controls Governor (CCG) monitors setup data in business-management applications. It can take "snapshots" that document application setups; compare snapshots with one another, to show how application setups differ; and employ change tracking to monitor changes in setups.

This document tells how to install version 5.5.1 of Configuration Controls Governor. In broad terms, you complete these steps:

- Ensure that several systems run required software. These include:

  - An installing computer, which serves as a staging environment from which the CCG installation program is run.

  - A CCG Home instance, which hosts the database used by CCG.

  - ERP instances, which host business-management applications monitored by CCG.

  - A CCG UI Server, on which CCG is installed and from which it is run.

  - User workstations, from which users access the CCG UI Server.

- Download files to the installing computer.

- Prepare the CCG UI Server for installation.

- Complete a CCG Installer Worksheet, in which you compile information you will need to provide as you install CCG.

- Run the CCG Installer from the installing computer, to place CCG software on the CCG UI Server.

- Configure the CCG UI Server to run with a web application server.

- Configure CCG. (See the *Configuration Controls Governor Administration Guide*.)

You can also upgrade to CCG version 5.5.1 from CCG version 5.5, or from any of versions 4.6 to 5.1.3 of Integra Apps. (Note that Integra Apps is an earlier name for what is now known as Configuration Controls Governor.) To upgrade from versions 4.6 to 5.1.3 of Integra Apps, however, you must meet several conditions:

- The earlier instance must include only Integra Apps. If Integra Access, Integra Transaction, or any Informia product is installed on your Integra Platform, an upgrade to version 5.5.1 is not supported.

- The CCG UI Server for the 5.5.1 instance must use a supported operating system and web application server, as specified in the *GRC Suite Certification Matrix* (Doc ID 741001.1), which is available at My Oracle Support.

- If you continue running CCG (Apps) 5.1, do not use it to snapshot or change-track the same instances as CCG 5.5.1.

- The CCG Home for the 5.5.1 instance must run version 1.7 of Java Development Kit (JDK)/Java Runtime Environment (JRE).

- The CCG Home schema must be stored in a supported Oracle database. (See the *GRC Suite Certification Matrix*.) Integra Apps supported database versions earlier than those that are supported by CCG 5.5.1. If you use an earlier database version with the instance of Integra Apps from which you are upgrading, you must export it from there and import it to a supported database for use with CCG 5.5.1. (See the procedure beginning "If you are upgrading from Integra Apps," on page 15.)

Although CCG is an application within the Oracle Governance, Risk, and Compliance Controls Suite, it is installed independently of other GRC Controls Suite components. For information on installing other GRC Controls Suite applications, see the Installation Guides for Application Access Controls Governor, Preventive Controls Governor, and Transaction Controls Governor, for the versions you intend to install.

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Before You Install

To install and use CCG 5.5.1, ensure that your systems satisfy the following requirements. All are mandatory, unless otherwise stated. Do not attempt installation until all requirements have been met. Failure to meet these requirements will lead to errors and delays.

Installing Computer

The installing computer (the one on which the CCG Installer is run) must meet the following requirements:

- One of the following operating systems:

    - Microsoft Windows

    - UNIX/Linux with X Client

- SQL*Plus and IMP (Oracle Import utility):

    Both must be part of the same Oracle client, and stored in the same directory. The Oracle client on the installing computer must support the Oracle database running on the CCG Home instance.

    Both must have SQL*Net connectivity to the CCG Home instance (which requires an entry in the Oracle client's network/admin/tnsnames.ora file for the CCG Home instance).

    UNIX/Linux users must have Read and Execute permissions for both.

- Java Development Kit (JDK), downloadable from:

    ```
    https://www.oracle.com/java/technologies/javase-
    downloads.html
    ```

- If your CCG Home instance is to reside on the same instance as the CCG UI Server and use UNIX/Linux, scp capability to transfer files from the installing computer to the CCG Home is optional, but recommended. (If the CCG Home and CCG UI Server reside on separate instances, you'll need to select a manual-copy option rather than use scp.)

    If you can use scp, we recommend that you test the scp capability by using an scp client to transfer a file (of your choice) from the installing computer to the

server that hosts the CCG Home instance. Any errors generated by the scp client must be resolved before using the CCG Installer. Work with your system administrator to find resolutions before continuing.

CCG Home Instance

The CCG Home instance can be a new or existing database instance. It can contain non-CCG schemas, but we recommend choosing an instance that does not contain ERP schemas.

Platform

Any platform that supports the database you use. For information about supported databases, see the *GRC Suite Certification Matrix*.

Software

- Database (see the *GRC Suite Certification Matrix* for supported databases), with Partitioning option enabled.
- SQL*Plus
- Oracle IMP database utility
- SQL*Net connectivity to each instance managed or used by CCG
- Verify that the following script has been run as SYS to initiate the java virtual machine (Oracle supplies this script):

  ```
  $ORACLE_HOME/javavm/install/initjvm.sql
  ```

Database

Once you choose the CCG Home instance, complete the following requirements.

- Character set: Verify that your CCG Home instance uses either the American_America.WE8ISO8859P1 character set, or a character set that is a superset of it (e.g., UTF8). The CCG Installer will use Oracle's import utility to import a .dmp file that was created using this character set. The character set must also be compatible with the set used by the instance's operating system.

- Disk space: Verify that you have adequate disk space for the following CCG tablespaces:

  – AM_DATA: 2,000 MB

  – AM_INDEX: 2,000 MB

  – AM_STAGE: 100 MB

  – APS_DATA: 2,000 MB

  – APS_INDEX: 1,400 MB

  The CCG Installer creates these tablespaces, and creates one datafile for each tablespace. If you require more than one datafile per tablespace, create the tablespaces and datafiles before running the installer. We recommend using the names shown above; in any event, note the names you use because the Installer will ask you for them.

- Free space: Verify that you have adequate free space in the tablespaces used by the following standard database tables:
    – RBS/REDO/UNDO (rollback): 2,000 MB
    – TEMP (temporary): 2,000 MB
    – SYSTEM: 2,000 MB

  We recommend enabling auto-extend on the tablespaces in which these tables reside, because the amount of space required by CCG can fluctuate significantly.

- Database parameter file: Set the following values in INIT.ora:
    – db_block_size: 8192
    – global_names: FALSE
    – job_queue_processes: 10
    – open_cursors: 500 or greater
    – open_links: 10. If you change this value, you must restart the instance.
    – remote_dependencies_mode: SIGNATURE
    – undo_retention: 10800
    – utl_file_dir: Any directory writable by Oracle

- SYS and SYSTEM passwords

- If you use Oracle Database 12*c*, set the following value in the ORACLE_HOME/network/admin/sqlnet.ora file. (This edit is not necessary if you use an earlier database version.)

  ```
  SQLNET.ALLOWED_LOGON_VERSION=8
  ```

ERP Instance

Each ERP instance that will be configured for use with CCG must meet these requirements:

Platform

Any platform that supports the required database (see the *GRC Suite Certification Matrix* for supported databases).

Software

- Business application (see the *GRC Suite Certification Matrix* for supported applications)

- Database. Partitioning option not required (see the *GRC Suite Certification Matrix* for supported databases)

- SQL*Plus

- Verify that the following script has been run as SYS to initiate the java virtual machine (Oracle supplies this script):

  ```
  $ORACLE_HOME/javavm/install/initjvm.sql
  ```

- PeopleSoft Enterprise users: In the PeopleSoft Enterprise application server psappsrv.cfg file, set the parameter EnableDBMonitoring to 1.

Database

- Disk space: Verify that you have adequate disk space for these tablespaces, which are created when you configure CCG:

Tablespace Name	Minimum Size
AM_AGENT_D	1,000 MB
AM_AGENT_X	1,000 MB
APS_AGENT_D	500 MB
APS_AGENT_X	500 MB

- Database parameter file (INIT.ora): Set the following values in INIT.ora:

  - remote_dependencies_mode: SIGNATURE

  - utl_file_dir: Any directory writeable by Oracle

  - job_queue_processes: 10

- SYSTEM password for each ERP instance

- ERP user password for each ERP instance

CCG UI Server

The server for the CCG UI must meet the following requirements:

- Operating system: See the *GRC Suite Certification Matrix* for supported operating systems.

- Web application server: See the *GRC Suite Certification Matrix* for supported servers and ancillary technologies — e.g., Java. The web application server may reside on any computer, and may be used to serve web applications other than CCG. You can use an existing server or create a new one.

- The server must run on a unique port.

User Workstations

User workstations must meet the following requirements:

- Computer with network connection

- Web browser (see the *GRC Suite Certification Matrix* for supported browsers) must have Javascript (aka "scripting") enabled and popup windows allowed.

3

Prepare the CCG UI Server

The CCG UI is served by a J2EE web application server. The server may reside on any computer, and may be used to serve web applications other than CCG. You can use an existing server or create a new one.

Complete the following steps.

1. Prepare the server. If you will use an existing server, confirm that it satisfies all requirements listed under "CCG UI Server" in the "Before You Install" chapter (page 6).

   If you will not use an existing server:

   • Create one now, using the server manufacturer's instructions.

   • The server must satisfy all requirements listed under "CCG UI Server" in the "Before You Install" chapter.

   • Verify that the server is configured to run on a unique port.

2. Verify that the server is operating correctly.

4

CCG Installer Worksheet

You will use a CCG Installer to install Configuration Controls Governor. The installer will prompt you to provide information about the environments that CCG will use. The following worksheet enables you to gather this information for a more efficient installation. Record the information in the space provided.

While using the CCG Installer, use the values you record here. If you use different values, be sure to change the values recorded here. You will need this information for post-installation steps.

To upgrade from an Integra Apps environment that already exists, check the box below and select the existing version. To create a fresh installation of CCG 5.5.1, select 5.5.1 as the version.

Installer Prompt	Record the value you will use:
Upgrade existing data and settings Select the check box to upgrade from an earlier version. Clear the check box to perform a fresh installation.	
Version If you are performing a fresh installation, select *5.5.1*. If you are upgrading existing data and settings, select the version from which you will upgrade.	

The CCG Home Schema stores all data about your CCG users, security and deployments. It must be installed in an existing database. Specify that database:

Installer Prompt	Record the value you will use:
Hostname Hostname of database that will contain the CCG Home Schema	
SID (service name) SID (aka 'service name') of database that will contain the CCG Home Schema	

Installer Prompt	Record the value you will use:
TNS entry TNS entry on the installing computer (found in the copy of tnsnames.ora described under "Installing Computer" in the "Before You Install" chapter on page 3); usually but not always same as SID	
Port Port number for accessing the database that will contain the CCG Home Schema	
SYSTEM password Password of database's SYSTEM user	
SYS password Password of database's SYS user	
Database version Version of database that will contain the CCG Home Schema	
Operating system Operating system of database server that will contain the CCG Home Schema (the CCG Home computer, not the Installing computer)	

Enter the following information about your mail server:

Installer Prompt	Record the value you will use:
SMTP server domain Domain name of the server your company uses for sending and receiving email.	
Mail port Port number used by the SMTP server to communicate with other applications.	
Admin email Email address for the admin user on the SMTP server.	

Enter the following information about the CCG Home Schema:

Installer Prompt	Record the value you will use:
Home Schema name Name of CCG Home Schema; the name *amhome* is strongly recommended	amhome
Home Schema password Password of CCG Home Schema	
Home Schema already exists Select this checkbox if CCG Home Schema is already installed in the database specified above	

If the CCG Home Schema does not yet exist, enter the following information about your company or organization:

Installer Prompt	Record the value you will use:
Company name Company or Organization name	
Temporary tablespace Name of temporary tablespace used by CCG Home Schema	
Create CCG Home Schema tablespaces **(if they were not created already)** Uncheck if tablespaces required by CCG Home Schema have been created	

If "Create CCG Home Schema tablespaces" was checked above: The installer will create three tablespaces for the CCG Home schema, and one datafile for each. Specify their details here:

Installer Prompt	Record the value you will use:
Data Tablespace name Name of Data Tablespace (you must use the default value)	AM_DATA
Data Tablespace size (MB) Size of Data Tablespace in megabytes	
Data File path and name Full path and name of Data Tablespace datafile	
Index Tablespace name Name of Index Tablespace (you must use the default value)	AM_INDEX
Index Tablespace size (MB) Size of Index Tablespace in megabytes	
Index File path and name Full path and name of Index Tablespace datafile	
Staging Tablespace name Name of Staging Tablespace (you must use the default value)	AM_STAGE
Staging Tablespace size (MB) Size of Staging Tablespace in megabytes	
Staging File path and name Full path and name of Staging Tablespace datafile	

If "Create CCG Home Schema tablespaces" was not *checked above: The CCG Home Schema requires the following tablespaces.*

Installer Prompt	Record the value you will use:
Data Tablespace name Name of the Data Tablespace (you must use the default value)	AM_DATA
Index Tablespace name Name of the Index Tablespace (you must use the default value)	AM_INDEX
Staging Tablespace name Name of the Staging Tablespace (you must use the default value)	AM_STAGE

Enter the following information about the database that houses the CCG Home Schema:

Installer Prompt	Record the value you will use:
ORACLE_HOME directory Full pathname of database's ORACLE_HOME directory (not the Oracle Client's directory)	
UTL_FILE_DIR directory Full pathname of database's UTL_FILE_DIR directory (must match the value in the database)	

If the CCG Home database's operating system (specified above) is UNIX: The installer copies files to your database's UTL_FILE_DIR directory. Enter the following information or check the "Copy files manually" checkbox:

Installer Prompt	Record the value you will use:
Login user Operating-system username of the database server. If the operating system is Linux 7, you may enter a value here to have the installer copy files; if the operating system is UNIX, you may not.	
Login password Operating-system password of the database server. If the operating system is Linux 7, you may enter a value here to have the installer copy files; if the operating system is UNIX, you may not.	
Copy files manually If the operating system is Linux 7, either: • Select this check box to copy files manually. In this case, do not enter Login user or Login password values. • Clear this check box to have the installer copy files. In this case enter Login user and Login password values. If the operating system is UNIX, you must copy files manually. Select this check box.	

If the CCG Home database operating system (specified above) is Windows: The installer copies files to your database's UTL_FILE_DIR directory. Enter the following information or check the "Copy files manually" checkbox:

Installer Prompt	Record the value you will use:
UTL_FILE_DIR directory Mapped network drive and path of the database's UTL_FILE_DIR directory	[Do not enter a value]
Copy files manually If the CCG Home instance uses Windows, you must select the "Copy files manually" check-box. Ignore the UTL_FILE_DIR directory prompt.	×

CCG uses a web server. The server does not need to be dedicated to CCG. Enter the following information:

Installer Prompt	Record the value you will use:
Install directory Directory on the CCG Home computer (not the Installing computer) where CCG web assets will be installed. If you use the Tomcat web application server, specify its webapps directory. If you use WebLogic, specify the equivalent directory.	
Web app name Name of the CCG web application (you must use the default value)	ccg
Datasource name JNDI entry for the connection to the CCG Home Schema (we recommend accepting the default value; the portion that follows the slash must match the value you set for Home schema name on page 10)	jdbc/amhome

Enter the following information about this computer:

Installer Prompt	Record the value you will use:
Oracle bin directory Directory where Oracle executables (e.g., imp, sqlplus) are installed on this computer (not the CCG UI Server or C CG Home computer)	
OS bin directory Directory where common OS executables are stored (for example, cmd for Windows or chmod for UNIX)	

The CCG application requires several tablespaces separate from those already specified for the CCG Home Schema.

Installer Prompt	Record the value you will use:
Create CCG application tablespaces Clear the check box if the tablespaces for the CCG Home Schema exist already.	

*If "Create CCG application tablespaces" is checked above: This installer will create
two tablespaces for the CCG application, and one datafile for each.*

Installer Prompt	Record the value you will use:
Data Tablespace name Name of Data Tablespace (you must use the default value)	APS_DATA
Data Tablespace size (MB) Size of Data Tablespace in megabytes	
Data File pathname Full path and name of Data Tablespace's datafile	
Index Tablespace name Name of Index Tablespace (you must use the default value)	APS_INDEX
Index Tablespace size (MB) Size of Index Tablespace in megabytes	
Index File pathname Full path and name of the Index Tablespace datafile	

If "Create CCG Application tablespaces" was not *checked above: CCG requires
the following tablespaces:*

Installer Prompt	Record the value you will use:
Data Tablespace name Name of the Data Tablespace (you must use the default value)	APS_DATA
Index Tablespace name Name of the Index Tablespace (you must use the default value)	APS_INDEX

5

Install CCG

Once you have filled in the CCG Installer Worksheet, confirm that you are prepared to run the Installer. To do so, ensure that you have met all the requirements cited in Chapter 2.

Next, if the installing computer runs on the UNIX or Linux operating system, confirm that the dos2unix command is available. Issue the command "dos2unix -h" and verify that help for the command appears. If not, either install the dos2unix command or complete the following preparatory steps on a Windows computer, zip the ccg/stage directory, and FTP the zip file (use binary mode) to the UNIX/Linux installing computer.

To prepare for installation:

1. Obtain CCG 5.5.1 (ccg_551.zip) from Oracle.

2. Create the directory *ccg* at the root level on the installing computer, if it does not exist already. The full path to this directory must not contain any spaces.

3. Place ccg_551.zip in the ccg directory.

4. Create a subdirectory of the ccg directory (hereafter called *ccg/stage*) and unzip ccg_551.zip into it.

If you are upgrading from Integra Apps, and if its Home instance uses an Oracle database whose version is no longer supported for CCG 5.5.1, complete the following procedure. Otherwise (if you are performing a fresh installation of CCG 5.5.1 or if you are upgrading from an installation whose Home instance uses a supported Oracle database), skip to the procedure that begins "To perform a fresh installation" (below).

1. Use the Oracle Export Utility to export two schemas from the existing database. One is the home schema, typically named AMHOME; the other is a schema derived from it, for which the name is the home schema name with *_PUBLIC* appended to it (for example, AMHOME_PUBLIC). In this procedure, these names are assumed to be correct for your home schema and its public derivative; if you created a home schema name other than AMHOME, substitute it as appropriate.

    The following are sample commands for an Oracle 9i database:

    ```
    exp system/"password" file=amhome.dmp log=amhome.log
    owner=amhome statistics=none
    exp system/"password" file=amhome_public.dmp
    log=amhome_public.log owner=amhome statistics=none
    ```

2. In the target database, create schemas and tablespaces to be used by CCG 5.5.1. The default names for the schemas are AMHOME and AMHOME_PUBLIC, and the default names for the tablespaces are AM_DATA, AM_INDEX, AM_STAGE, APS_DATA, and APS_INDEX. To create these objects:

   • In the ccg/stage directory, locate the file create_AMHOME_for_upgrade.sql. In it, edit the following lines to set the locations in which you want DBF files associated with the tablespaces to be created.

   ```
   /oracle/product/10.2.0/oradata/orcl/am_data.dbf  - AM_DATA
   /oracle/product/10.2.0/oradata/orcl/am_index.dbf - AM_INDEX
   /oracle/product/10.2.0/oradata/orcl/am_stage.dbf - AM_STAGE
   /oracle/product/10.2.0/oradata/orcl/aps_data.dbf - APS_DATA
   /oracle/product/10.2.0/oradata/orcl/aps_index.dbf - APS_INDEX
   ```

   Moreover if, in the database from which you are upgrading, you used schema or tablespace names other than the defaults, edit create_AMHOME_for_upgrade.sql further to replace the default names, wherever they appear, with your names. If, however, you used the default names in the database from which you are upgrading, you need make no further edits.

   • Run ccg/stage/create_AMHOME_for_upgrade.sql as system/"password".

3. Use the Oracle Import Utility to import the AMHOME and AMHOME_PUBLIC schemas into the target database. The following are sample commands for a 10g database:

   ```
   imp system/"password" file=amhome.dmp log=amhome.log
   fromuser=amhome touser=amhome
   imp system/"password" file=amhome_public.dmp log=amhome_public.log
   fromuser=amhome_public touser=amhome_public
   ```

To perform a fresh installation of CCG 5.5.1, or to complete an upgrade, execute the following steps:

1. Close all command shell windows.

2. Open a new command shell window. (In Windows, click Start, select Run, enter *cmd* in the Open field, and click OK.)

3. Set the following environment variables temporarily on the installing computer:

   • ORACLE_HOME

   Full path to the Oracle client described under "Installing Computer" (page 3). For example:

   ```
   set ORACLE_HOME=c:\oracle\oradbs10g
   ```

   • WEBAPPS_HOME

   UNIX/Linux users should issue the following command, replacing *path* with the full path to the web application executable on the CCG UI server. (For Windows users, no command is required.)

   ```
   set WEBAPPS_HOME=path; export WEBAPPS_HOME
   ```

   For example:

   ```
   set WEBAPPS_HOME=/bin/apache/apache-tomcat-#.#.#; export
   WEBAPPS_HOME
   ```

- JAVA_HOME

  Windows users: Full path to the directory in which JDK is installed (see "Installing Computer," page 3). For example:

  ```
  set JAVA_HOME=c:\Program Files\Java\#.#.#
  ```

  UNIX/Linux users: Issue the following command, replacing *path* with the full path to JDK:

  ```
  set JAVA_HOME=path; export JAVA_HOME;
  ```

  For example:

  ```
  set JAVA_HOME=/usr/opt/jdk#.#.#; export JAVA_HOME;
  ```

- PATH

  Windows users, issue the following command:

  ```
  set PATH="%JAVA_HOME%\bin";"%ORACLE_HOME%\bin";%PATH%
  ```

  UNIX/Linux users, issue the following command:

  ```
  set PATH=$WEBAPPS_HOME/bin:$JAVA_HOME/bin:$PATH;
  export PATH
  ```

- CLASSPATH

  Windows users, issue the following command:

  ```
  set CLASSPATH=%JAVA_HOME%\lib;%ORACLE_HOME%\lib;%CLASSPATH%
  ```

  UNIX/Linux users, issue the following command:

  ```
  set CLASSPATH=$JAVA_HOME/lib;$CLASSPATH
  ```

- NLS_LANG

  If the CCG Home instance uses a character set other than American_America.WE8ISO8859P1, this variable must *not* be set.

  UNIX/Linux users should issue this command:

  ```
  unset NLS_LANG
  ```

  Windows users should issue this command:

  ```
  set NLS_LANG=
  ```

4. Verify the installing computer's connection to the CCG Home instance by entering this command:

   ```
   tnsping TNS-entry
   ```

   In this command, *TNS-entry* is the value you specified in the CCG Installer Worksheet, in the section beginning "The CCG Home Schema stores all data about your CCG users, security and deployments," on page 9.

   If the command returns any error messages, you must resolve them before continuing; work with your system administrator to find resolutions.

5. Using SQLPLUS as SYSTEM, confirm that you can connect to the database.

6. Confirm that Oracle IMP is available: Issue "imp -help" and verify that the IMP help information appears.

7. If you use Integra Apps 4.*x*, remove it from each ERP instance. Use the Deployment Workbench — choose the Administrator Role and navigate to Instance Configuration: Deployment Workbench.

    If you use Integra Apps 5.1, remove both Integra Apps and the Integra Agent from each ERP instance. As an Administrator, navigate to Administrator > ERP Instances. Edit each instance: Click "Edit" to the right of Integra Apps and click the Remove button; then click "Edit" to the right of Integra Agent and click the Remove button. For each instance, be sure to remove Integra Apps before removing Integra Agent.

8. If you have used the Integra Installer or the CCG Installer on the Installing Computer, delete the file *.installer*. (Do this each time you prepare to run the Installer).

    • On a Windows Installing computer, *.installer* is located in C:\Documents and Settings*username*.

    • On a UNIX/Linux Installing computer, .installer is located in the User's home directory.

9. Go to the ccg/stage directory.

10. Launch the CCG Installer by issuing the command appropriate for the installing computer's operating system.

    • For Linux or UNIX:

        `install.sh` *`options`* `-f ccg-551-install.apf`

    • For Windows:

        `install.bat` *`options`* `-f ccg-551-install.apf`

    In this command, *options* are the following

    • `-a` runs the installer in analyze mode, which checks the destination environment without installing.

    • `-c` logs to the console as well as a log file.

    • `-d`*`level`* sets the debug level; *level* represents a number between 0 and 5. There is no space between *d* and *level*; e.g., d1

    • `-f` *`path`* is shown in the examples above, and specifies the path to the package to be installed.

    • `-h` displays a list of all flags.

    • `-l` lists the components in the package specified with the –f option.

    • `-x` has been deprecated. Do not use this option.

    For example: `install.sh -f ccg-551-install.apf`

11. Follow the Installer's step-by-step instructions; refer to your CCG Installer Worksheet (Chapter 4) to respond to its prompts. Depending on the computers and networks involved, installation can take several hours. At times, the CCG Installer may appear to be idle while lengthy behind-the-scenes operations take place. This is no cause for concern.

12. While using the CCG Installer, you are presented with a checkbox labeled *Copy files manually* on the page beginning "The installer copies files to your database's UTL_FILE_DIR directory." Refer to the CCG Installer Worksheet to find the value you chose to enter.

If you checked *Copy files manually*, copy the files now:

a. Connect to the Install directory (see above).

b. Copy the contents of the utl_file_dir directory to the CCG Home instance's UTL_FILE_DIR.

13. Proceed to the next chapter, "Configure the CCG UI Server."

6

Configure the CCG UI Server

This chapter contains two sets of instructions. Select the set of instructions that corresponds to the web application server you use:

- Tomcat
- WebLogic

Tomcat

To configure the CCG UI server to run with the Tomcat web application server:

1. Stop and restart the Tomcat web application server.

   This explodes a ccg.war file, which the CCG Installer copied to the Tomcat webapps directory. (It did so because you specified the webapps directory as your Install directory as you ran the CCG Installer; see the "Install Directory" entry in the CCG Installer Worksheet on page 13). When ccg.war is exploded, a ccg sub-directory of the webapps directory is created, and CCG files are placed in it. After the ccg.war file is exploded, stop Tomcat, delete ccg.war, and restart Tomcat.

2. Copy the file classes12.jar (which can be found on the installing computer) to the directory $WEBAPPS_HOME/common/lib.

3. Copy the file $WEBAPPS_HOME/webapps/ccg/config/applimation.xml as $WEBAPPS_HOME/conf/catalina/localhost/ccg.xml. (WEBAPPS_HOME represents the full path to the Tomcat home directory; in a Tomcat context, it's synonymous with CATALINA_HOME.)

4. Edit the ccg.xml file. Replace these defaults with values specific to your instance.

File Defaults	Replacement Values
@webserver.contextname@	ccg
@webserver.deploy.path@	Full path to the $WEBAPPS_HOME/webapps/ ccg directory
@database.amhome.jndiname@	JNDI Name you specified in the CCG Installer Worksheet (see page 13).
@database.amhome.password@	Password of the CCG Home schema
@database.amhome.username@	Username of the CCG Home schema
(Table continues on the next page)	

File Defaults	Replacement Values
@database.amhome.url@	jdbc:oracle:thin:@*hostname*:*port*:*SID*
	In this line, replace:
	• *hostname* with the domain name of the CCG Home instance host (e.g., localhost or amhome.mydomain.com)
	• *port* with the CCG Home instance port
	• *SID* with the CCG Home Instance SID
	These values should be recorded in the CCG Installer Worksheet on page 9.

Also, ensure that the driverClassName entry is set to oracle.jdbc.driver.OracleDriver.

5. Edit the file $WEBAPPS_HOME/webapps/ccg/config/amhome.conf. Replace the following defaults with values specific to your instance.

File Defaults	Replacement Values
@webserver.type@	tomcat
@database.amhome.jndiname@	JNDI Name you specified in the CCG Installer Worksheet (see page 13).

6. Edit the file $WEBAPPS_HOME/webapps /ccg/config/quartz.properties. Replace the following defaults with values specific to your instance.

File Defaults	Replacement Values
@database.amhome.url@	jdbc:oracle:thin:@*hostname*:*port*:*SID*
	In this line, replace:
	• *hostname* with the domain name of the CCG Home instance host (e.g., localhost or amhome.mydomain.com)
	• *port* with the CCG Home instance port
	• *SID* with the CCG Home Instance SID
	These values should be recorded in the CCG Installer Worksheet on page 9.
@database.amhome.username@	Username of the CCG Home schema
@database.amhome.password@	Password of the CCG Home schema

7. UNIX/Linux users: Add the following two lines just below the initial comments in the file startup.sh (enter the entire CATALINA_OPTS= statement on a single line):

```
CATALINA_OPTS="-Djava.awt.headless=true
-Djava.security.auth.login.config=web-application-path/
WEB-INF/jaas.config -XmsInitial -XmxMaximum"
export CATALINA_OPTS
```

In these commands:

• *web-application-path* is the full pathname of the $WEBAPPS_HOME/webapps/ ccg directory.

• *Initial* and *Maximum* set the initial memory pool and maximum memory pool. The initial memory pool must be set to 256 MB or greater (example: -Xms256M), and the maximum memory pool must be set to 768 MB or greater (example: -Xmx768M).

8. Windows users:

   a. In Windows, select Start > Configure Tomcat.

   b. Select the Java tab.

   c. Add the following lines under Java Options:

   ```
   -Djava.awt.headless=true
   -Djava.security.auth.login.config=web-application-
   path\WEB-INF\jaas.config
   ```

   In these commands, replace *web-application-path* with the full pathname of the $WEBAPPS_HOME/webapps/ccg directory.

   d. Verify that the initial memory pool is set to 256 MB or greater, and that maximum memory pool is set to 768 MB or greater.

9. If the directory $WEBAPPS_HOME/webapps/ccg/WEB-INF/fonts contains one or more *.ttf files, copy them to:

   • UNIX/Linux users: /usr/local/amfonts
     (create this directory if it does not already exist)

   • Windows users: C:\WINDOWS\Fonts

10. If the CCG UI Server does not have Internet access, edit the file $WEBAPPS_HOME/webapps/ccg/WEB-INF/classes/resources/AMResources.properties. Set the properties banner0, banner1, and banner2 to:

    ```
    http://server-name:port/ccg/jsp/amblank.jsp
    ```

    In this path:

    • Replace *server-name* with the domain name of your CCG UI Server.

    • Replace *port* with port CCG normally accesses on the UI Server.

11. If the following files exist in the $WEBAPPS_HOME/ webapps/ccg/WEB-INF/lib directory, delete them:

    • jasperreports-#.#.#.jar

    • itext-#.#.jar

12. Restart the Tomcat web application server.

You have configured the CCG UI Server. Proceed to the *Configuration Controls Governor Administration Guide* and configure CCG 5.5.1.

WebLogic

To configure the CCG UI server to run with the WebLogic web application server:

1. Explode the ccg.war file, which the CCG Installer has placed in the directory you specified as the installation directory (see the "Install directory" entry in the CCG Installer Worksheet on page 13). When ccg.war is exploded, a ccg subdirectory of the installation directory is created, and CCG files are placed in it. After the ccg.war file is exploded, delete it.

2. Copy the file classes12.jar (which can be found on the installing computer) to the directory $WEBAPPS_HOME/weblogic81/common/lib. (WEBAPPS_HOME represents the full path to the WebLogic home directory.)

3. Use the WebLogic Console to deploy a new web application, using *ccg* for each of the context name and deploy directory values.

4. Use the WebLogic Console to crate a Connection Pool for the new web application's domain that:

   • Connects to your CCG Home schema.

   • Uses the JNDI Name you specified in the CCG Installer (see page 13).

5. Edit the file *InstallDirectory*/ccg/config/amhome.conf, replacing the following defaults with values specific to your instance.

File Defaults	Replacement Values
@webserver.type@	Weblogic
@database.amhome.jndiname@	JNDI Name you specified in the CCG Installer Worksheet (see page 13).

6. Edit the file *InstallDirectory*/ccg/config/quartz.properties, replacing the following defaults with values specific to your instance.

File Defaults	Replacement Values
@database.amhome.url@	jdbc:oracle:thin:@*hostname*:*port*:*SID* In this line, replace: • *hostname* with the domain name of the CCG Home instance host (e.g., localhost or amhome.mydomain.com) • *port* with the CCG Home instance port • *SID* with the CCG Home Instance SID These values should be recorded in the CCG Installer Worksheet on page 9.
@database.amhome.username@	Username of the CCG Home schema
@database.amhome.password@	Password of the CCG Home schema

7. Verify that the WebLogic Initial Memory Pool is set to 256 MB or greater, and Maximum Memory Pool is set to 768 MB or greater.

8. UNIX/Linux users: In the file startup.sh, find the line that starts the WebLogic server. The line begins with *$JAVA_HOME/bin/java* and ends with *weblogic.Server*.

   Insert the following text into that line, just before *weblogic.Server*:

   ```
   -Djava.awt.headless=true
   -Djava.security.auth.login.config=web-application-path/
   WEB-INF/jaas.config -XmsInitial -XmxMaximum
   ```

   In these commands:

   • *Web-application-path* is the full pathname of the *InstallDirectory*.

   • *Initial* and *Maximum* set the initial memory pool and maximum memory pool. The initial memory pool must be set to 256 MB or greater (example: -Xms256M), and the maximum memory pool must be set to 768 MB or greater (example: -Xmx768M).

9. Windows users: In the file startWeblogic.cmd, find the line that starts the WebLobic server. The line begins with *%JAVA_HOME%\bin/java* and ends with *weblogic.Server*.

   Insert the following text into that line, just before *weblogic.Server*:

   ```
   -Djava.awt.headless=true
   -Djava.security.auth.login.config=web-application-path\
   WEB-INF\jaas.config
   ```

   In these commands, *web-application-path* is the full pathname of the *InstallDirectory*.

10. If the directory *InstallDirectory/*ccg/WEB-INF/fonts contains one or more *.ttf files, copy them to:

    • UNIX/Linux users: /usr/local/amfonts
      (create this directory if it does not already exist)

    • Windows users: C:\WINDOWS\Fonts

11. If the CCG UI Server does not have Internet access, edit the file *InstallDirectory*/ccg/WEB-INF/classes/resources/AMResources.properties. Set the properties banner0, banner1, and banner2 to:

    ```
    http://server-name:port/ccg/jst/amblank.jsp
    ```

    In this path:

    • Replace *server-name* with the domain name of your CCG UI Server.

    • Replace *port* with the port CCG normally accesses on the UI Server.

12. Restart the domain where you deployed the CCG web application.

Complete the following steps *only* if you use WebLogic Server 12.2 (12.2.1.3):

1. Stop the CCG WebLogic server (where the CCG application is running).

2. Back up the CCG application directory, for example /scratch/oradba/ccgstage/ccg.

3. Copy ojdbc8.jar from $oracle_home/jdbc/lib to <ccg-directory>/WEB-INF/lib.

4. Copy all the jar files from <ccg-directory>/WEB-INF/lib to <ccg-domain>/lib, and verify the copy.

5. In <ccg-directory>/WEB-INF/lib, delete all jar files except for the following:

classes12.jar	commons-pool-1.1.jar
collections.jar	commons-validator.jar
commons-beanutils.jar	log4j-1.2.9.jar
commons-collections.jar	mail.jar
commons-dbcp-1.1.jar	ojdbc8.jar
commons-digester-1.8.jar	quartz.jar
commons-fileupload.jar	struts.jar
commons-logging.jar	

6. Verify that the following files exist in <ccg-domain>/lib:

classess12.jar	quartz.jar
collections.jar	readme.txt
commons-beanutils.jar	struts.jar
commons-collections.jar	versioninfo.jar
commons-dbcp-1.1.jar	xdo-core.jar
commons-digester-1.8.jar	xdoparser.jar
commons-fileupload.jar	xdoparser-10.1.3.4.jar
commons-logging.jar	xdoparser11g.jar
commons-pool-1.1.jar	xdo-server.jar
commons-validator.jar	xerceslmpl.jar
i8nAPI_v3.jar	xmlparserv2.jar
log4j-1.2.9.jar	xmlparserv2-904.jar
mail.jar	xmlpserver.jar
ojdbc8.jar	xsu12.jar
orai18n-collation.jar	

7. Start the CCG WebLogic server.

You have configured the CCG UI Server. Proceed to the *Configuration Controls Governor Administration Guide* and configure CCG 5.5.1.

7

Install MetaBuilder

MetaBuilder is a developer's tool that enables you to snapshot and change-track custom objects. To install MetaBuilder, follow these steps:

1. Download ccg_551_metabuilder.zip if you have not done so already.

2. Ask all users to log out of CCG.

3. Create a directory on the client computer for the MetaBuilder UI files (e.g., c:\ccg\metabuilder)

4. Unzip ccg_551_metabuilder.zip into the directory you created in the preceding step.

   a. Navigate to the install directory contained within the directory created in step 3 (e.g., c:\ccg\metabuilder\install).

   b. Log into SQL*Plus as the CCG Home schema. Use the SQL*Plus tool available from the Program menu.

   c. At the SQL*Plus prompt, type:

      `@intmb_home.sql`

   d. You will be asked to specify the Oracle SID for your CCG Home instance, CCG Home schema name, password and your name.

5. Log into CCG as amadmin.

6. Select Administrator > Users from the menu bar.

7. Click Add User….

8. Enter the following information:

   - Full Name: MetaBuilder User
   - Department: *Any appropriate value*
   - Email: *Any appropriate value*
   - Login ID: AMDEV
   - Password: *Any appropriate value (case-sensitive)*
   - Confirm Password: *Same as Password value*
   - Valid From: *Today's date*

9. Click Save.

10. Click Add role…

11. Enter the following information:

    - Role: CCG Developer
    - Valid From: *Today's date*

12. Click Save. Do not give any other roles to this user.

13. Click Logout (in the upper right corner).

14. Install Oracle's Developer 6i Forms runtime environment on the client computer (if you have not done so already). The installer can be downloaded at:

    ```
    http://www.oracle.com/technology/software/htdocs/devlic.html?
    http://otn.oracle.com/software/products/forms/htdocs/winsoft.html
    ```

    Before you install: Make a note of the client computer's ORACLE_HOME and PATH environment variable settings. The installation process might reset those variables, which could affect other applications on the computer. If so, modify those environment variables after installation.

15. Install Patch 16 for Developer 6i on the client computer (if you have not done so already). The patch can be downloaded from Oracle's MetaLink; search for patch#3596539.

16. Add a TNS entry for the CCG Home instance entry in the Developer 6i Oracle Home tnsnames.ora file. (The file is typically found in the directory c:\dev6i\ NET80\ADMIN\.) The TNS entry and the CCG database SID should be identical.

17. Make a shortcut on your desktop to the file ifrun60.exe in the Developer 6i Oracle Home (typically c:\dev6i\bin\).

18. Right-click on the shortcut and choose Properties.

19. Click the Shortcut tab.

20. Change Traget from ifrun60.exe to:

    ```
    ifrun60.exe module=metabuilder param_gwyuid=AMHOME-USER_public/AMHOME-
    USER_public param_dbinstance=AMHOME-SID param_uid=MB-USER
    ```

    In this target value:

    - *AMHOME-USER* is the username of your CCG Home schema (usually *amhome*).
    - *AMHOME-SID* is the TNS entry for the CCG Home instance that you entered in step 16.
    - *MB-USER* is the user ID you set in step 8 (e.g., AMDEV)

21. Set Start In to the mb_ui directory contained within the directory created in step 3 (e.g., c:\ccg\metabuilder\mb_ui).

22. Click Change Icon and navigate to the directory created in step 3.

23. Highlight amwind.ico and click Ok.

24. Click Ok. The Properties window closes.

25. Rename the shortcut MetaBuilder.

26. To launch MetaBuilder, double-click the shortcut.

Always use the CCG Developer role to log into MetaBuilder.