

Oracle® CRM Gateway for Mobile Devices

Implementation Guide

Release 11*i* (11.5.2)

August 2000

Part No. A86127-01

ORACLE®

Part No. A86127-01

Copyright © 2000, Oracle Corporation. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information of Oracle Corporation; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. Oracle Corporation does not warrant that this document is error free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Oracle Corporation.

If the Programs are delivered to the U.S. Government or anyone licensing or using the programs on behalf of the U.S. Government, the following notice is applicable:

Restricted Rights Notice Programs delivered subject to the DOD FAR Supplement are "commercial computer software" and use, duplication, and disclosure of the Programs, including documentation, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, Programs delivered subject to the Federal Acquisition Regulations are "restricted computer software" and use, duplication, and disclosure of the Programs shall be subject to the restrictions in FAR 52.227-19, Commercial Computer Software - Restricted Rights (June, 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and Oracle Corporation disclaims liability for any damages caused by such use of the Programs.

Oracle is a registered trademark, and Oracle CRM Gateway for Mobile Devices, Oracle8i, Oracle8i Lite, Net8, PL/SQL, and SQL*Plus are trademarks or registered trademarks of Oracle Corporation. Other names may be trademarks of their respective owners.

Contents

Send Us Your Comments	v
Preface.....	vii
Intended Audience	vii
Related Documents.....	vii
Implementing Oracle CRM Gateway for Mobile Devices	
System Architecture	3
Understanding the Synchronization Process	5
Implementing Process Overview	7
Installation Requirements.....	9
Minimum Hardware Requirements	9
Minimum Software Requirements	9
Additional Requirements.....	10
Installation Worksheets.....	10
Enterprise Installation Worksheet.....	10
Oracle CRM Gateway for Mobile Devices Database Information Worksheet.	11
Preparing the Database.....	12
Enterprise and Replication Management.....	12
Installation Tasks on the Oracle Applications Database.....	13
Step 1: Enabling Replication on the Oracle Applications Database	13
Step 2: Checking for Advanced Queues	14
Step 3: Verifying the Unique Global Name.....	14
Step 4: Modifying Oracle Applications Database Parameters.....	14

Step 5: Running Snapshot Log Creation Scripts	15
Step 6: Setting System Profile Option Values.....	17
Installing the Database for the Oracle CRM Gateway for Mobile Devices	18
Pre-Installation Tasks.....	18
Configuring Net8.....	19
Installing Oracle8i Lite	21
Installing Nettech	21
Oracle8i Lite Message Generating Process (MGP) Configuration	27
Starting the Synchronization Server	27
Stopping the Synchronization Server.....	27
Enabling Logging for the Synchronization Server	27
Disabling Logging for the Synchronization Server	28
Post-Installation Tasks on the Oracle CRM Gateway for Mobile Devices	29
Setup the Oracle CRM Gateway for Mobile Devices Servlet.....	29
Setup Wireless Components	29

Administering the CRM Gateway for Mobile Devices

Maintaining Oracle CRM Gateway for Mobile Devices Servers.....	32
Creating Mobile Users.....	33
Updating User Information.....	34
Sending a Flash Message	35
Viewing the Log File.....	36
Checking Flash Message Confirmation	37
Scheduling Concurrent Programs on the Oracle Applications System	37

Send Us Your Comments

Oracle CRM Gateway for Mobile Devices Implementation Guide, Release 11*i* (11.5.2)

Part No. A86127-01

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us in the following ways:

- Electronic mail: Simone.Arts@oracle.com
- Postal service:
Oracle Corporation
Oracle CRM Gateway for Mobile Devices Documentation
500 Oracle Parkway, 6op8
Redwood Shores, CA 94065
USA

If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

If you have problems with the software, please contact your local Oracle Support Services.

Preface

Welcome to the Oracle Customer Relationship Management, Release 11*i* (11.5.2), suite of applications.

This Implementation Guide provides information and instructions to help you implement Oracle CRM Gateway for Mobile Devices effectively.

This preface explains how the Implementation Guide is organized and introduces other sources of information that can help you.

Intended Audience

This document is intended for Systems Administrators or other IT professionals who are responsible for installing, implementing, and maintaining the Oracle CRM Gateway for Mobile Devices. We recommend you have experience in database administration.

Structure

This manual contains the following chapters:

“Implementing Oracle CRM Gateway for Mobile Devices” provides overviews of the implementation and its components to perform essential business tasks, as well as the application’s relationships to other Oracle or third-party applications. It provides process-oriented, task-based procedures for setting up the application.

Related Documents

For more information, see the following manuals:

- *Installing Oracle Applications, Release 11i*
- *Oracle Applications Concepts and Procedures*
- *Oracle8i Administrator's Guide*
- *Oracle8i Installation Guide*
- *Net8 Administrator's Guide*
- *Oracle8i Lite for Handheld Devices Developer's Guide*
- *Installing Oracle Field Service/PalmTM Devices*
- *Installing Oracle Field Service/Laptop*

Implementing Oracle CRM Gateway for Mobile Devices

The document describes the implementation and administration of the Oracle CRM Gateway for Mobile Devices, release 11*i* (11.5.2), and related components.

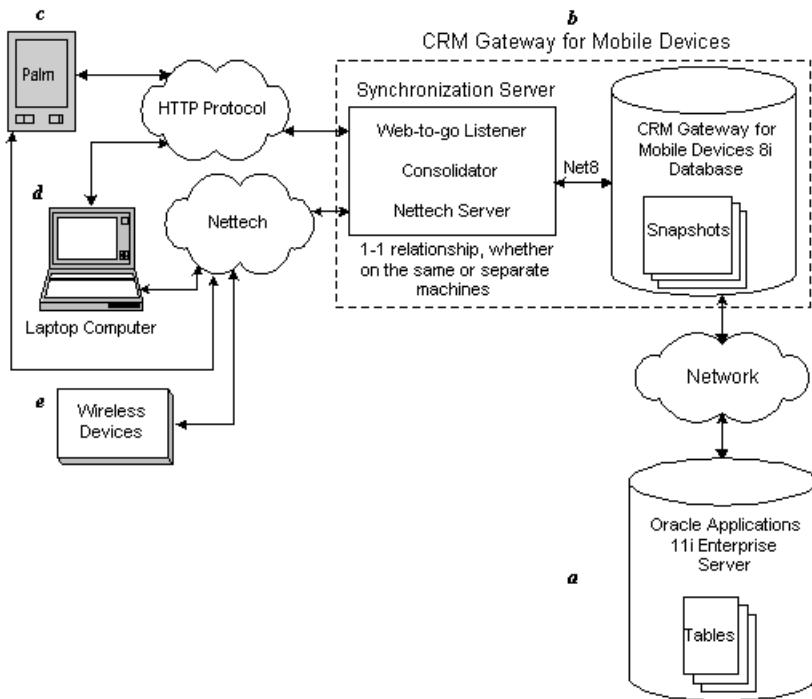
Topics include:

- [System Architecture](#)
 - [Understanding the Synchronization Process](#)
- [Implementing Process Overview](#)
- [Installation Requirements](#)
 - [Minimum Hardware Requirements](#)
 - [Minimum Software Requirements](#)
 - [Additional Requirements](#)
 - [Installation Worksheets](#)
- [Preparing the Database](#)
- [Enterprise and Replication Management](#)
- [Installation Tasks on the Oracle Applications Database](#)
 - [Step 1: Enabling Replication on the Oracle Applications Database](#)
 - [Step 2: Checking for Advanced Queues](#)
 - [Step 3: Verifying the Unique Global Name](#)
 - [Step 4: Modifying Oracle Applications Database Parameters](#)
 - [Step 5: Running Snapshot Log Creation Scripts](#)

- Step 6: Setting System Profile Option Values
- Installing the Database for the Oracle CRM Gateway for Mobile Devices
 - Pre-Installation Tasks
 - Configuring Net8
- Installing Oracle8i Lite
 - Installing Nettech
 - Oracle8i Lite Message Generating Process (MGP) Configuration
 - Starting the Synchronization Server
 - Stopping the Synchronization Server
 - Enabling Logging for the Synchronization Server
 - Disabling Logging for the Synchronization Server
- Post-Installation Tasks on the Oracle CRM Gateway for Mobile Devices
 - Setup the Oracle CRM Gateway for Mobile Devices Servlet
 - Setup Wireless Components

System Architecture

The Oracle CRM Gateway for Mobile Devices transfers changed information from your field device to Oracle Applications, and from Oracle Applications to your device. The following diagram shows the components of the Oracle CRM Gateway for Mobile Devices and their functional relationships. The letters next to the component definitions relate to the letters on the diagram.



a. Oracle Applications Enterprise Server

This is the Oracle Applications database, Release 11*i*. You set up one or more Oracle CRM Gateway for Mobile Devices and your mobile users for this server.

b. Oracle CRM Gateway for Mobile Devices

Synchronization Server: This NT server is installed with the consolidator from Oracle8*i* Lite, the Oracle Web-to-go Server listener, and the Nettech

Server. The consolidator synchronizes the data on the device with data in Oracle Applications using HTTP (wired) and Nettech (wireless). Only high priority changes are sent/received using wireless.

Database: The Oracle8*i* database may reside on the same machine as the Synchronization Server or on a different UNIX or NT box.

c. Palm Device

The hand-held Palm device. Each device is assigned a unique mobile user name during installation to identify it within the system. A URL is used to connect with the Oracle CRM Gateway for Mobile Devices.

d. Laptop Computer

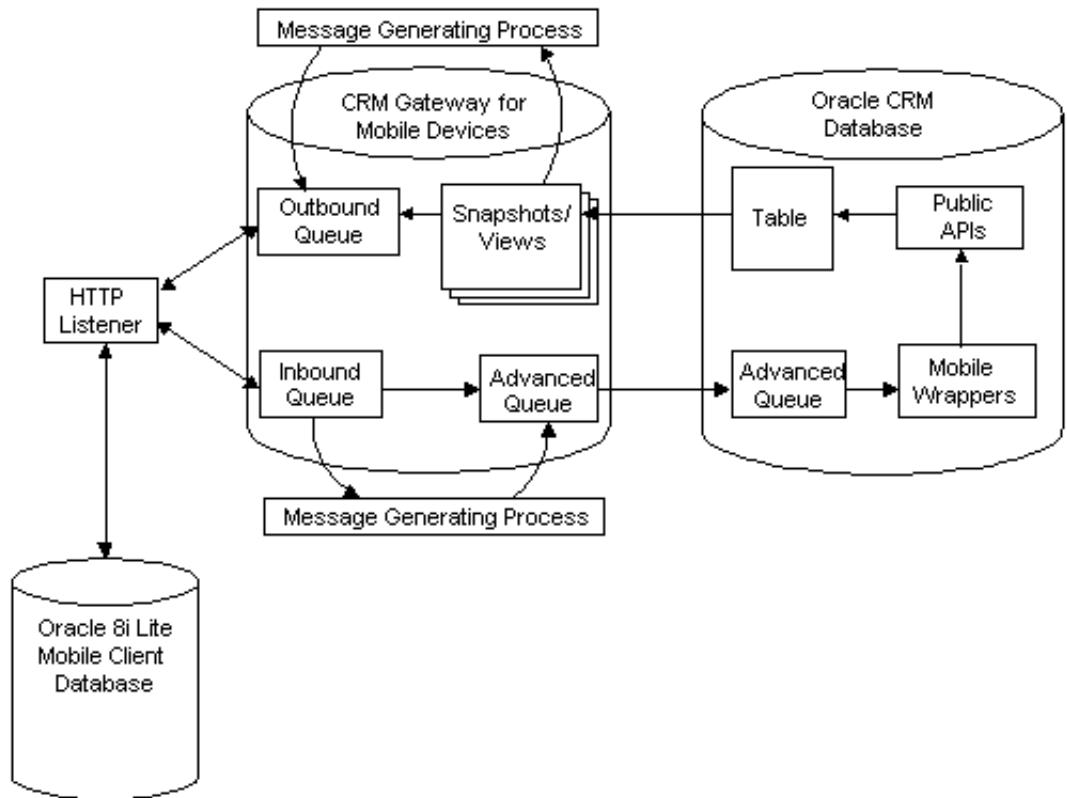
Each laptop is assigned a mobile user name during installation to identify it within the system. A URL is used to connect with the Oracle CRM Gateway for Mobile Devices.

e. Wireless Devices

Pagers and cell phones are examples of wireless devices. If the device is left on by the user, then urgent information such as flash (broadcast) messages can be automatically sent to a set of mobile users from the Release 11*i* Oracle Applications database.

Understanding the Synchronization Process

The following diagram illustrates the Oracle CRM Gateway for Mobile Devices synchronization process.



The Oracle8i Lite Mobile Client database resides on the hand-held device. The client sends its changes via the HTTP listener to the Inbound Queue. The Message Generating Process (MGP) moves the data from the Inbound Queue to the Advanced Queues which transmit the data to the CRM instance. Public application programming interfaces (APIs) are then called by the Mobile Wrappers, which are responsible for any conflict resolution.

Views map multiple snapshot tables on the Oracle CRM Gateway for Mobile Devices to one client application table. The Message Generating Process (MGP) moves the data to the Outbound Queue from where it is picked up from the HTTP Listener.

The snapshots on the Oracle CRM Gateway for Mobile Devices are of two types: Lookup and Transaction. Lookup snapshots are typically refreshed once every night while Transaction snapshots are refreshed every half an hour. These intervals are customizable. MGP is suspended when transaction snapshots are refreshed.

Implementing Process Overview

The Oracle CRM Gateway for Mobile Devices is referred to as MDG, this stands for CRM Gateway for Mobile Devices, for short. You can encounter this reference throughout the document.

Step	Action	Performed At	CD Required
1	a) Install CRM applications b) Perform post-installation steps on the enterprise server necessary for MDG: <ul style="list-style-type: none"> ▪ Set init.ora parameters ▪ Ensure Advanced Replication is installed ▪ Load required jar (asgmtran.jar) into the APPS schema of the CRM database ▪ Run snapshot log creation scripts 	Enterprise	CRM 11i CD
2	Create Oracle8i (8.1.6) Database for MDG	MDG	Oracle8i CD
3	Perform pre-installation steps for MDG: <ul style="list-style-type: none"> a) Set init.ora parameters b) Create ADMIN user and tablespaces. c) Load the asgmtran.jar file into MDG database (copied from applications file system in the Enterprise machine) 	MDG	N/A
4	Install Oracle8i Lite on MDG (Synchronization Server and Nettech): <ul style="list-style-type: none"> a) Install and Configure Nettech for wireless communications b) Install Oracle8i Lite Sync Server c) Configure and start MGP d) Start the Web-to-Go server 	MDG	Oracle8i Lite 4.0.0.3.1 CD
5	Copy MDG servlet to MDG. (Copied from applications file system in the Enterprise machine) Perform Wireless Setup (setup cons_init.ora and start wspproxy.exe)	MDG	N/A

Step	Action	Performed At	CD Required
6	Use Admin UI on Enterprise to a) Setup MDG b) Setup Mobile Users	Enterprise	N/A
7	Schedule Concurrent Programs: a) Refresh Lookup Snapshots b) Refresh Transaction Snapshots c) Purge Snapshot Logs	Enterprise	N/A
8	Send all Mobile Users an e-mail with URL		N/A

Installation Requirements

This section describes hardware, software, and other installation requirements for the Oracle CRM Gateway for Mobile Devices.

Minimum Hardware Requirements

Component	Hardware Requirements
Oracle8 <i>i</i> , release 8.1.6	<p>The PL/SQL packages and Java stored procedures for CRM Gateway for Mobile Devices can be installed on any machine that is capable of running Oracle8<i>i</i> Enterprise Edition. The machine must be on the same LAN/WAN as the Oracle Applications Release 11<i>i</i> database server.</p> <p>The CRM Gateway for Mobile Devices and Oracle Applications Release 11<i>i</i> database server must have their clocks synchronized.</p>
Oracle8 <i>i</i> Lite, release 4.0.0.3.1 Synchronization Server	<ul style="list-style-type: none"> ■ IBM-compatible, Pentium-class processor ■ CD-ROM drive ■ 256 MB of available RAM (512 MB if database is on the same machine) ■ 100 MB Hard disk space ■ 800x600 display ■ X.25 WAN Interface Card must be installed on Nettech server (S-CLASS Eicon card recommended)

Minimum Software Requirements

Component	Software Requirements
Oracle Applications release 11 <i>i</i>	At minimum, you must install Oracle Service, Release 11 <i>i</i>
Oracle CRM Gateway for Mobile Devices Database, Oracle8 <i>i</i> Enterprise Edition	<p>Oracle Corporation recommends the Oracle CRM Gateway for Mobile Devices be installed into a fresh database installation and that no other applications make use of the database.</p> <p>Please upgrade the Oracle CRM Gateway for Mobile Devices Database to Version 8.1.6.2. Advanced Replication and JServer must be installed.</p>

Component	Software Requirements
Oracle8i Lite, release 4.0.0.3.1 Synchronization Server	<ul style="list-style-type: none">Microsoft Windows NT version 4.0 (service pack 5 recommended).Java runtime 1.2.2

Additional Requirements

After installing all of the required products, you must reboot your machine in order to run the components properly. You must subscribe to BellSouth Wireless Network's MOBITEX Network for their MOBITEX wireless data. Consult your network specialist or system administrator for more information.

Installation Worksheets

Complete the installation worksheet(s) in this section before proceeding with the installation.

Enterprise Installation Worksheet

The following information will be needed to perform the Oracle Applications Release 11*i* portion of your installation. Record the schema username and password in the Oracle Applications Release 11*i* database for the following:

Schema	Username	Password
SYS schema		
SYSTEM schema		
ASG schema		
CS schema		
JTF schema		
APPLSYS schema		
HR schema		
AR schema		
CSP schema		
CSF schema		
APPS schema		

Schema	Username	Password
INV schema		
ONT schema		

Oracle CRM Gateway for Mobile Devices Database Information Worksheet

Complete the following worksheet for each Oracle CRM Gateway for Mobile Devices you want to install:

Parameter	Example	Your Value
Global Name	middle1.us.oracle.com	
SYS Password	change_on_install	
SYSTEM Password	manager	
Gateway/Admin Password to be Set	admin	
Consolidator/Mobile Admin Password	manager	
Machine Name/IP Address	middle1-pc	
TNS Listener Port Number	1521	
SID	MIDDLE1	

Preparing the Database

Global Names

Each installation of Oracle8i that is to be used as a Middle Tier must have a unique global name. The global name is used to distinguish each Oracle CRM Gateway for Mobile Devices from the other.

Note: By default, each installation of Oracle8i will have the same global name. You must manually change each of the global names. We recommend that you use a naming scheme such as middle01, middle02, etc. to ensure uniqueness.

The global name of a database can be identified by connecting to the database through SQL*Plus as any schema and running the following query:

```
SELECT * FROM GLOBAL_NAME;
```

The global name of a database can be altered by connecting as SYS or SYSTEM and running the following command:

```
ALTER DATABASE RENAME GLOBAL_NAME TO <new global name>;
```

Enterprise and Replication Management

You can use the Schema Manager from Enterprise Manager 2.0.4 or above can be used to start or stop the propagation of advanced queues at the CRM Gateway for Mobile Devices. You can use Replication Manager 2.0.0 or above to monitor the database jobs at the Oracle CRM Gateway for Mobile Devices.

Installation Tasks on the Oracle Applications Database

This section describes the following tasks:

- [Step 1: Enabling Replication on the Oracle Applications Database](#)
- [Step 2: Checking for Advanced Queues](#)
- [Step 3: Verifying the Unique Global Name](#)
- [Step 4: Modifying Oracle Applications Database Parameters](#)
- [Step 5: Running Snapshot Log Creation Scripts](#)
- [Step 6: Setting System Profile Option Values](#)

Step 1: Enabling Replication on the Oracle Applications Database

Please see Oracle8i replication documentation for further information regarding enabling replication. If you have not chosen the replication option at database creation or already installed the replication catalogs, then perform the following steps:

1. Start Server Manager at the command prompt:

```
> SVRMGR30 (NT)  
or  
$ svrmgrl (UNIX)
```

2. Connect to the database as INTERNAL with appropriate password if necessary.
3. The CATREP.SQL script is to be found in the **RDBMS80\ADMIN** (Windows NT) or **rdbms/admin** (Unix) sub-directory of your **<ORACLE_HOME>** directory. A good idea is to spool output to a log file first before running CATREP.SQL.

```
SVRMGR> SPOOL <log file name>
```

Execute the script CATREP.SQL.

Once CATREP.SQL has completed, turn off the output spooling.

```
SVRMGR> SPOOL OFF
```

The log file is created in the directory from which Server Manager is invoked. Please check this for error messages before proceeding. You can safely ignore ORA-01432, ORA-01434, and ORA-00955 errors.

4. Confirm that CATREP.SQL ran correctly by running a query on ALL_OBJECTS where STATUS = 'INVALID'. For example,

```
SVRMGR> SELECT * FROM ALL_OBJECTS WHERE STATUS = 'INVALID';
```

If you find any invalid objects, then recompile them manually. For example,

```
SVRMGR> ALTER PACKAGE <package_name> COMPILE BODY;
```

If CATREP.SQL has run successfully, then a number of replication tables are created in the SYSTEM tablespace. The Oracle Applications database is now set up for advanced replication.

Step 2: Checking for Advanced Queues

Using SQL*Plus, you must query on SYS.DBA_QUEUES to determine whether the two advanced queues, DEF\$_AQERROR and DEF\$_AQCALL, are disabled. If they are disabled, then connect to the Oracle Applications database as SYSTEM and execute the following commands to enable the queues:

```
EXECUTE SYS.DBMS_AQADM.START_QUEUE('DEF$_AQERROR', TRUE, TRUE);
EXECUTE SYS.DBMS_AQADM.START_QUEUE('DEF$_AQCALL', TRUE, TRUE);
```

Step 3: Verifying the Unique Global Name

The Applications database needs to have a unique global name for this application. The global name of a database can be identified by connecting to the database through SQL*Plus as any schema and running the following query:

```
SELECT * FROM GLOBAL_NAME;
```

The global name is typically DB_NAME + DB_DOMAIN from init<SID>.ora. It can be altered by connecting as SYS or SYSTEM and running the following command:

```
ALTER DATABASE RENAME GLOBAL_NAME to <new global name>;
```

Step 4: Modifying Oracle Applications Database Parameters

Check the following in your Oracle Applications database:

1. Edit init<SID>.ora with:

Parameter Name	Recommended Value
DB_NAME	The Release 11 <i>i</i> database name
DB_DOMAIN	The domain in which the Release 11 <i>i</i> database is located
GLOBAL_NAMES	TRUE
JOB_QUEUE_INTERVAL	10
JOB_QUEUE_PROCESSES	2 (Add 1 per additional master)
AQ_TM_PROCESSES	Add 2 to the present value

2. The following are recommended but not required:

Parameter Name	Recommended Value
COMPATIBLE	8.0.4 or later
SHARED_POOL_SIZE	32 MB (minimum)
PROCESSES	Add 9 to the default value
OPEN_LINKS	4
DISTRIBUTED_LOCK_TIMEOUT	300
DISTRIBUTED_TRANSACTIONS	5
REPLICATION_DEPENDENCY_TRACKING	TRUE
PARALLEL_MAX_SERVERS	10
PARALLEL_MIN_SERVERS	2

Note: Shut down and restart your database after the changes are made.

Step 5: Running Snapshot Log Creation Scripts

Note: Run all the following scripts as the user, using the apps schema.

1. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch/115/sql/asgaplpk.sql
```

You will be prompted to enter the applsyst schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

2. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch115/sql/asgarxpk.sql
```

You will be prompted to enter the AR schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

3. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch/115/sql/asghrpk.sql
```

You will be prompted to enter the HR schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

4. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch/115/sql/asginvpk.sql
```

You will be prompted to enter the INV schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

5. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch/115/sql/asgcspk.sql
```

You will be prompted to enter the CS, CSP, and CSP schema owner names and passwords. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

6. Execute the following command:

```
sqlplus &un_apps/&pw_apps @$ASG_TOP/patch/115/sql/asgjtfpk.sql
```

You will be prompted to enter the JTF schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

7. Execute the following command:

```
sqlplus &un_apps/&pw_apps@ $ASG_TOP/patch/115/sql/asgontpk.sql
```

You will be prompted to enter the ONT schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

8. Execute the following command:

```
sqlplus &un_apps/&pw_apps@ $ASG_TOP/patch/115/sql/asgpk.sql
```

You will be prompted to enter the ASG schema owner name and password. Use the values you recorded on the ["Enterprise Installation Worksheet"](#).

Step 6: Setting System Profile Option Values

To set profile option values:

1. Log in to Oracle Applications with the System Administrator responsibility.
2. Navigate to **Profile -> System** to bring up the Find System Profile Values dialog.
3. Click **Find** to display the System Profile Values window with a list of all values. Scroll down the list to select specific values.
4. Check if the profile option **ASG: Maximum Client Number** value is appropriate for your needs.

Note: The default value for this option is one million, which allows a maximum of one million users. With this value, each user can create a maximum of one billion records in the user's lifetime.

If the profile value is set to ten million, then each user can create a maximum of one hundred million records.

This setting cannot be modified once the system is in use.

5. When using the Oracle Field Service/Palm™ Devices application set the profile option **ASG Field Service/Palm Organization ID**.
Indicate the inventory organization used to filter data for the Oracle Field Service/Palm™ Devices users.
6. When using the Oracle Field Service/Laptop application set the profile option **ASG Field Service/Laptop Organization ID**.
Indicate the inventory organization used to filter data for the Oracle Field Service/Laptop users.

Installing the Database for the Oracle CRM Gateway for Mobile Devices

Topics in this chapter include:

- [Pre-Installation Tasks](#)
- [Configuring Net8](#)

Pre-Installation Tasks

1. Set Oracle CRM Gateway for Mobile Devices Database Parameters.

Here are the recommended initial parameter values for each Oracle8*i* installation:

Parameter Name	Recommended Value
COMPATIBLE	8.1.5 or later
SHARED_POOL_SIZE	32 MB
AQ_TM_PROCESSES	2
JOB_QUEUE_INTERVAL	1
JOB_QUEUE_PROCESSES	10
OPEN_CURSORS	500
DB_FILE_MULTIBLOCK_READ_COUNT	8
HASH_JOIN_ENABLED	TRUE
OPTIMIZER_PERCENT_PARALLEL	0
OPTIMIZER_MODE	CHOOSE or RULE
OPTIMIZER_FEATURES_ENABLE	8.1.5
CURSOR_SPACE_FOR_TIME	TRUE

2. Create Oracle CRM Gateway for Mobile Devices tablespaces:

Tablespace Name	Recommended Data File Name	Recommended Size	Purpose	Schemas Using the Tablespace
SYNC SERVER	mobile01.dbf mobile02.dbf etc.	50 MB + ((1/2 size of mobile database) * number of mobile users)	objects created by the Synchronization Server	MOBILEADMIN
CRMUSER	user01.dbf user02.dbf etc.	400 MB	snapshots at MDG	ASG, CS, JTF, APPLSYS, HR, AR, INV, CSP, CSF, ONT
CRMINDEX	index01.dbf index02.dbf etc.	100 MB	indexes for snapshots	ASG, CS, JTF, APPLSYS, HR, AR, INV, CSP, CSF
CRMADMIN	admin01.dbf admin02.dbf etc.	50 MB	source code for MDG	ADMIN

1. Connect to the SYS database schema and create a new schema named admin.

```
connect sys/<SYS_password>;
create user admin identified by admin default tablespace crmadmin;
```

2. Grant connect and session privileges.

```
connect SYS/<SYS_password>;
grant connect, resource to admin;
```

3. Execute the following command to load the jar file asgmtran.jar from the application file system into the Oracle CRM Gateway for Mobile Devices database:

```
loadjava -thin -user admin/admin@<host_name>:<port_number>:<oracle_sid>
-order -resolve -verbose -force $JAVA_TOP/oracle/apps/asg/jar/asgmtran.jar
```

Configuring Net8

You must also set up a service name on each Oracle CRM Gateway for Mobile Devices to point to the Oracle Applications, Release 11*i* database. You can do this using Net8 Easy Config or simply use your choice of text editor to edit the

tnsnames.ora file on each Oracle CRM Gateway for Mobile Devices. See the *Oracle Net8 Administrator's Guide* for more information.

Installing Oracle8i Lite

This section describes how to install and configure Oracle8i Lite components for Oracle CRM Gateway for Mobile Devices.

- [Installing Nettech](#)
- [Oracle8i Lite Message Generating Process \(MGP\) Configuration](#)
- [Starting the Synchronization Server](#)
- [Stopping the Synchronization Server](#)
- [Enabling Logging for the Synchronization Server](#)
- [Disabling Logging for the Synchronization Server](#)

Installing Nettech

Use the procedure described in this section to install the Nettech server on your Gateway for Mobile Devices system.

1. Insert the Oracle8i Lite release 4.0.0.3.1 CD into your CD-ROM drive and navigate to the root of the CD-ROM drive. Run the Install.exe file.

The Welcome to Nettech Developer Suite screen appears.

2. Click **Continue**.
3. Click **OK** after reading the License Agreement.

The Registration screen appears.

4. Type your name, company, and serial number, and click **OK**.

Note: The serial number can be found in the cpkey.txt file which is in the same directory as install.exe. The number for this release is 071499-101916.

5. Click **OK** after reviewing the Readme file.

The Product Selection screen appears.

6. From the Product Selection screen, click the **rfgate** radio button and then click **Continue**.
7. Click the **Mobitex** radio button and then click **Continue**.

8. Nettech is now ready to install. Click **Continue**.

Note: If the application installer detects previous Nettech installations, it generates a screen recommending the installation of all Nettech products under the same root directory. Click **OK** to close this screen. The Installation Directory screen appears.

9. Select the appropriate directory in which to install Nettech from the Installation Directory screen, and then click **OK**.
10. Click the appropriate **Yes/No** option if you want the installation program to create copies of all files replaced during this installation.
11. Select the appropriate backup directory and click **OK**.
12. Click **OK** after reviewing the RFgate Readme file.
The Select Program Manager Group screen appears.
13. Select the appropriate Program Manager Group for the location of rfgate for NT icons, then click **OK**.
14. Select **No** in the Internet Access for Mobitex screen.
15. Click **OK** to accept the default number of outstanding writes (4) that an Eicon card will hold.
16. Click **Yes** to use an X.25 address for the network connection.

Note: If a dialog box appears at this point in the installation, you can safely ignore the contents and click **Yes** to continue.

17. Enter your network X.25 address for the Mobitex network, then click **OK**.
18. Accept the default value (1) for the Eicon card port, then click **OK**.

Note: The actual card port depends on your system configuration.

19. Provide the local MAN number, then click **OK**.
20. Click **OK** to accept the default Netid (0) from the Network ID screen.

21. Click **OK** to accept the default Server Name (RFgMob) from the MMS Server Name screen.
22. From the Service Delay screen, enter an appropriate value in the Waiting Time field.

Note: The rfgate service depends on the X.25 card service. You should choose a value that starts the rfgate service **after** your X.25 card service starts.

23. From the AutoStart Application screen, click **OK** to accept the default value (1) to start the application agent simultaneously with rfgate.
24. Click **Yes** to install rfgate as an NT service.
25. Click **Yes** to migrate the Ram.ini parameters to the NT registry.
26. Click **OK** in the Installation Completed screen.

The Product Selection screen reappears.

Note: You must restart Windows NT to effect the changes made during this installation.

27. Configure your X.25 card.
28. Click **No** in the Product Selection screen if you do not wish to install other products.

A screen appears stating that the application has been installed.

29. Click **OK** to exit.
30. Restart Windows NT.

31. Apply two Nettech patches:

- a. In the dll directory under the root directory of the Oracle8i Lite CD-ROM, locate the rfgram.dll file. Copy this file to the location where you installed your Nettech software, overwriting the existing rfgram.dll in that directory.
- b. In the dll directory under the root directory of the Oracle8i Lite CD-ROM, locate the rfgswmob.sn.ora file. Copy rfgswmob.sn.ora to the location where the existing rfgswmob.sn file resides on your system. This should be

in the rfgate\bin directory of your Nettech installation. Rename rfgswmob.sn.ora to rfgswmob.sn to overwrite the existing file.

Installing the Synchronization Server for Handheld Devices

The Synchronization Server for Handheld Devices installation option installs the components for synchronizing data and deploying applications to the mobile device.

To install Synchronization Server for Handheld Devices on your Oracle CRM Gateway for Mobile Devices, perform the following steps:

1. Insert the Oracle8i Lite CD-ROM into your CD-ROM drive. The install program (SETUP.EXE) starts automatically when you insert the CD-ROM.

The Setup dialog appears.

2. Click **Install Oracle8i Lite**.

The Oracle Installation Settings dialog appears.

3. Enter your company name.

4. Enter the name and location of your Oracle Home directory, or accept the defaults. The directory name must be eight characters or less.

Note: If you have other Oracle products on your machine, such as Oracle8i, which were installed using the Oracle Universal Installer (OUI), you may receive an error message when installing Oracle8i Lite in the existing Oracle Home directory. If you receive an error, restart the Oracle8i Lite installer. In the Oracle Installation Settings dialog enter DEFAULT_HOME as the Oracle Home name. Then enter the desired directory location.

5. Select a language from the drop-down list in the Language field. Click the **OK** button.

The Installation Options dialog appears.

6. Choose Synchronization Server for Handheld Devices. Click the **OK** button.

The documentation dialog appears.

7. Click **Yes** to install the Oracle8i Lite documentation.

The Server Database dialog appears.

8. Enter the Host Name, Port, and Server ID (SID) for the Oracle8 server that the Synchronization Server uses to create its internal tables. Click the **OK** button. Contact your system administrator if you do not know your Host Name, Port, or SID.

The dialog for entering the password for the database user SYSTEM appears.

9. Enter a password for the user SYSTEM. Confirm the password. Click the **OK** button.

The Synchronization Server for Handheld Devices installation begins.

10. Once installation is complete, a message box appears. Click the **OK** button.

Registering the Synchronization Server as a Nettech Application

Once you have installed the Synchronization Server, register the Synchronization Server as a Nettech Application.

To register the Synchronization Server as a Nettech application, perform the following steps:

1. Copy your files. Assuming that Oracle8i Lite was installed under D:\orant on a DOS machine,

```
D:> copy
\orant\consolidator20\MobileRep\runtime\mobitex\server\win32\rfgate\*.* 
\orant\consolidator20\bin
```

2. Rfgate should already be running because it was installed as a Windows service. Navigate to the rfgate process window.

3. In the File menu, choose **System\Options\Applications**.

The Nettech Systems RFGate Application window appears.

4. Click **Add**.

The Nettech Systems RFGate Add Application window appears.

5. Enter the specified values in the Nettech Systems RFGate Add Application window:

Window Item	Value
Name	Your name for the application (suggestion: wspproxy).

Window Item	Value
Application ID	<p>The application ID identifies the application agent internally as well as externally (i.e., to applications running on other machines.) The value may be from 1 to 65535. The value zero (0) may also be used when defining the application agent causing the system to assign an ephemeral ID. Such an ID should only be used for "client" applications in a client-server environment. An application agent should always be given a fixed ID that clients can address.</p>
	<p>Set the Application ID to 1080.</p>
Application Path	<p>The path to the application agent program is used by RFgate to:</p> <ul style="list-style-type: none"> <li data-bbox="554 545 1290 631">■ allow invocation of the application agent program if an inbound message arrives targeted for an application agent that is not running. <li data-bbox="554 649 1290 701">■ allow rfgate to identify an application agent that connects to the rfgate API without specifying an application ID. <p>Note: The path is optional. If omitted the application agent cannot be launched by rfgate and must start itself and identify itself explicitly.</p>
	<p>Set the application path to:</p>
	<p style="padding-left: 40px;">%ORACLE_HOME%\consolidator20\bin\wspproxy.exe</p>
	<p>where</p>
	<p style="padding-left: 40px;">%ORACLE_HOME% is the directory in which Oracle8i Lite is installed.</p>
Default	<p>When selected this makes your newly added application the default application. Select the Default checkbox.</p>
Auto	<p>When selected this automatically launches your application on startup. Select the Auto checkbox.</p>

6. Click OK.

The Nettech server by default starts an application called *app1* (*app one*). This application can be removed or retained without affecting the system.

Note: For a complete description of the Nettech Systems RFGate Add Application window, see Nettech documentation.

Oracle8i Lite Message Generating Process (MGP) Configuration

In this section you configure Message Generating Process (MGP) on the server.

Run the `mpg.bat` file located in the following directory:

```
%ORACLE_HOME%\consolidator20
```

This batch file starts the iConnect Consolidator background process.

Starting the Synchronization Server

The Synchronization Server is installed as a Windows NT service. After you install the Synchronization Server, restart your machine. The Synchronization Server will run automatically.

Stopping the Synchronization Server

In the Windows NT Service Control window, stop the Oracle Web-to-go service:

1. Open the Windows Control Panel.
2. Double-click **Services**.
3. Select the Oracle Web-to-go service and click **Stop**.

Enabling Logging for the Synchronization Server

To enable logging for the Synchronization Server:

1. Stop the Synchronization Server as described in "[Stopping the Synchronization Server](#)".
2. Open the system file:

```
%ORACLE_HOME%\consolidator.ini
```

and set the parameter `TRACE=TRUE`

For full tracing set the parameter `TRACE_ALL=TRUE`

3. From a DOS prompt type:

```
webtogo -d0
```

The trace output is displayed.

Disabling Logging for the Synchronization Server

To disable logging for the Synchronization Server:

1. Stop the Synchronization Server as described in "[Stopping the Synchronization Server](#)".
2. Open the system file:

`%ORACLE_HOME%\consolidator.ini`

and set the parameter `TRACE=FALSE`

For full tracing set the parameter `TRACE_ALL=FALSE`

3. Restart the Synchronization Server.

Post-Installation Tasks on the Oracle CRM Gateway for Mobile Devices

This section describes post-installation tasks for Oracle Oracle CRM Gateway for Mobile Devices. Perform the following tasks in sequence:

- [Setup the Oracle CRM Gateway for Mobile Devices Servlet](#)
- [Setup Wireless Components](#)

Setup the Oracle CRM Gateway for Mobile Devices Servlet

1. Copy the jar file asg.jar from \$JAVA_TOP/oracle/apps/asg/jar to the directory %ORACLE_HOME%\webtogo\bin\ on the Oracle CRM Gateway for Mobile Devices server.

%ORACLE_HOME%\webtogo\bin\asg.jar

2. Add asg.jar to the system classpath:
 - a. Open the Windows NT Control Panel.
 - b. Click the **System** icon.
 - c. Click the **Environment** subtab in the System Properties window.
 - d. Click **CLASSPATH** variable in the System Variables scroll box. Append the file name %ORACLE_HOME%\webtogo/bin/asg.jar into the Value textbox.
 - e. Click the **Set** button followed by the **OK** button.
3. Add the following section to the webtogo.ora file in %ORACLE_HOME%\webtogo\bin:

```
[PUBLIC]
oracle.apps.asg.gateway.asgflash=/mdg
```

Setup Wireless Components

1. The cons_init.ora file in %ORACLE_HOME%\consolidator20\bin sets the parameters for the wireless server to communicate with the iConnect server and the Oracle CRM Gateway for Mobile Devices server.

Ensure the cons_init.ora file has the following parameter settings:

Parameter	Setting	Comments
ENABLE_MDG	Yes	Needs to be set if the MDG servlet is being used.
MDG_URL	130.35.88.186:7070\mdg	Points to the MDG servlet. Change the IP address to the IP address of MDG.
POLL_FREQUENCY	30	Defines the frequency of polling MDG messages (in seconds).
URL	130.35.88.186	Points to the URL for Consolidator server.
LOG_FILE	wspproxy.log	Defines the location and name of the log file
RCR	3	Sets the number of retry times when transmission fails .
RETRY_INTERVAL	120	Defines the time in seconds between each retry.
PROXY_HOST	www.proxy.us.oracle.com	Defines the host for the http proxy
PROXY_PORT	80	Defines the port for the http proxy

2. Restart the rfgate service.

Administering the CRM Gateway for Mobile Devices

Topics in this chapter include:

- [Maintaining Oracle CRM Gateway for Mobile Devices Servers](#)
- [Creating Mobile Users](#)
- [Updating User Information](#)
- [Sending a Flash Message](#)
- [Viewing the Log File](#)
- [Checking Flash Message Confirmation](#)
- [Scheduling Concurrent Programs on the Oracle Applications System](#)

Maintaining Oracle CRM Gateway for Mobile Devices Servers

You can network one or many NT servers to one installation of Oracle Applications and used as Oracle CRM Gateway for Mobile Devices servers. Use this procedure to record the availability of a server and make it accessible for mobile devices.

Prerequisites

The NT server must be installed with the software specified in your installation documentation for Oracle CRM Gateway for Mobile Devices.

Steps

1. In the Gateway Server tab, choose **Create**.

The Create Gateway Server page appears.

2. Enter the server name, address, and other information.
3. Enter passwords.
4. Click **Create**.

The server is now available and you can give mobile users access to it.

5. Choose Gateway Servers.

A list of existing servers appears. A newly created server shows a pending status until the system completes registering the new server. Then the status is confirmed.

6. Click the gateway server name.

The Gateway Server Details page for the selected server appears.

7. If you want to change server information, then enter the changes, enter the gateway system password, and click **Update**.
8. If you want to change the passwords, then perform the following steps:
 - a. Click **Reset Password**.

The Reset Password page appears.

- b. If you want to change the password for the consolidator, then select Consolidator Password, enter the passwords, and click **Update**.

The passwords are saved.

- c. If you want to change the password for the gateway server, then select **Gateway Password**, enter the passwords, and click **Update**.

The passwords are saved.

Guidelines

The gateway server name must be the global name of the Oracle CRM Gateway for Mobile Devices database.

If the Oracle application database moves, you must click **Restore Database Links** and enter information in the page for each gateway server to link it to the new database location.

Creating Mobile Users

You can set up a user to use multiple devices and multiple applications. Use this procedure to record the relationship among the user, the device, the gateway server, and the application.

Prerequisites

The gateway server must be created and have a status of **Confirmed**.

Steps

1. In the Mobile User tab, choose **Create**.

The Create Mobile User page appears.

2. Click **Go** and find the user to be set up as a mobile user.

The Create Mobile User page displays existing user information.

3. Enter the user's mobile information.

4. Click **Update**.

User information for the selected user, gateway server, and application is saved.

Guidelines

You can set up one user with multiple devices, gateway servers, applications, and mobile user names.

Updating User Information

Mobile users can reset their own passwords. The administrator can change all user information including a user's password. Use this procedure to update mobile information for a user.

Prerequisites

The user was created as a mobile user.

You must be an administrator to update user information other than your own password.

You must enter your system password before you can save changes to the gateway server detail page.

Steps

1. In the Mobile User tab, choose **Search**.

The Mobile User Search page appears.

2. Enter search criteria and click **Search**.

The Mobile User Search Results page lists mobile users, their gateway servers, and other user information.

3. If you want to delete a user, then select **Remove** and click **Update** to save.
4. If you want to change a password, then click **Reset Password**, enter your changes, and click **Submit**.
5. If you want to edit the settings for a listed gateway server, then click the server name, make your edits, and click **Update**.
6. Click the user name to be updated.

The Mobile User Details page displays the detail information for the user.

7. Edit the information.
8. Click **Update**.

The changes to user information are saved.

Guidelines

Click **Submit** in the **Require Complete Reload** column to refresh all data in the device the next time it is connected.

Sending a Flash Message

You can send immediate information to specified users through the use of a flash message. Flash messages can be delivered via e-mail, wireless devices, or other mobile devices. Use this procedure to send a flash message.

Prerequisites

Recipients must be created as mobile users and have flash message devices specified.

Steps

1. In the Flash Message tab, click **Go**.

The Recipients page lists users who are available to receive a flash message.

2. Move users to the Selected column.

3. Click **Update**.

The Flash Message page appears.

4. Type your message.

The Character Count field displays the number of characters in your message.

5. If you want to receive confirmation from recipients of your message, select Confirmation Required.

6. Click **Update**.

Your message is sent to all selected users to the devices designated as their flash message devices in their mobile user information.

References

See "[Creating Mobile Users](#)" for information about how to set up a user's flash message devices.

Viewing the Log File

You can view errors and other messages in a log file. For example, you can find information about synchronizations that did not work correctly. When you send in change information from a remote device that is in conflict with information from Oracle Applications, then the Oracle Applications information supersedes your device information and a note is placed in the log. Use this procedure to view the log file.

Prerequisites

None

Steps

1. In the Log File tab, enter search information.
2. Click **Search**.
The log information that matches your search criteria appears.
3. If you want to delete a log entry, then select **Remove** and click **Update**.

Guidelines

If you want to view error messages generated by the gateway server, then do not select a mobile user. Select only a gateway server.

Checking Flash Message Confirmation

When you send a flash message, you can request confirmation of receipt from each device. Use this procedure to view your flash message confirmation messages.

Prerequisites

None

Steps

1. In the Flash Message tab, choose **Confirmation**.

The Flash Message Confirmation page lists messages and the dates and times the messages were sent.

2. Double-click the message you want to check.

The Flash Message Confirmation Details page displays the message, every potential recipient, and the receipt status for each recipient.

Scheduling Concurrent Programs on the Oracle Applications System

Schedule the following concurrent programs in Oracle Applications for each Oracle CRM Gateway for Mobile Devices:

Concurrent Program	Schedule
Refresh Lookup Snapshots	Schedule for MDG once every night.
Refresh Transaction Snapshots	Schedule for MDG every half hour.
Purge Snapshot Logs	Schedule once or twice every week.
