# Oracle® CRM Gateway for Mobile Devices

Implementation Guide

Release 11*i*

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

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# Contents

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

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# Preface

Welcome to the **Oracle CRM Applications, Release 11*i***, suite of applications.

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

This preface explains how this 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

"Implementing Oracle CRM Gateway for Mobile Devices" provides overviews of the implementation and its components, 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 succesfullly.

## 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/Palm™ Devices*
- *Installing Oracle Field Service/Laptop*
- *Oracle Field Service/Palm™ Devices Implementation Guide*
- *Oracle Field Service/Laptop Implementation Guide*
- *Oracle Field Service/Palm™ Devices Concepts and Procedures*
- *Oracle Field Service/Laptop Concepts and Procedures*

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# 1

# Implementing Oracle CRM Gateway for Mobile Devices

This topic group describes the implementation and administration of the CRM Gateway for Mobile Devices, release 11*i*, and related components.

The topics include:

## 1.1 System Architecture

This section helps you to understand the function of the CRM Gateway for Mobile Devices and its relationship to other Oracle Applications.

Topics covered are:

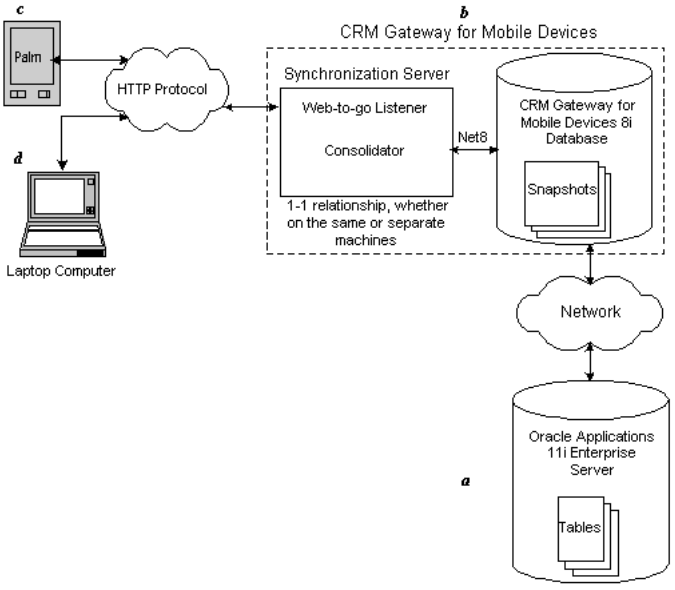
### 1.1.1 Overview

The CRM Gateway for Mobile Devices acts as the interface between the CRM enterprise database and the client palm and laptop applications. It is the middle tier in the following three-tier architecture:

- CRM Applications database
- CRM Gateway for Mobile Devices
- Mobile devices including: Oracle Field Service/Laptop, Oracle Field Service PalmTM Devices, and Oracle Field Service/WAP

This architecture allows for scalability and strategic deployment of the server for data load balancing. Gateway servers can be located in remote sales and service offices close to the mobile worker while the server communicates with the main enterprise database over a LAN or a WAN.

The CRM Gateway for Mobile Devices transfers changed information between your field device and Oracle Applications 11*i*. The following diagram shows the components of the 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 CRM Gateway for Mobile Devices and your mobile users for this server.

**b.** CRM Gateway for Mobile Devices

The CRM Gateway for Mobile Devices consists of two parts:

*The Synchronization Server:* This NT server is installed with the consolidator from Oracle8*i* Lite and the Oracle Web-to-go Server listener. The consolidator synchronizes the data on the device with data in Oracle Applications using HTTP (wired).

*The Database:* The Oracle8*i* database can 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 used by a mobile user who is assigned a unique mobile user name during installation to identify it within

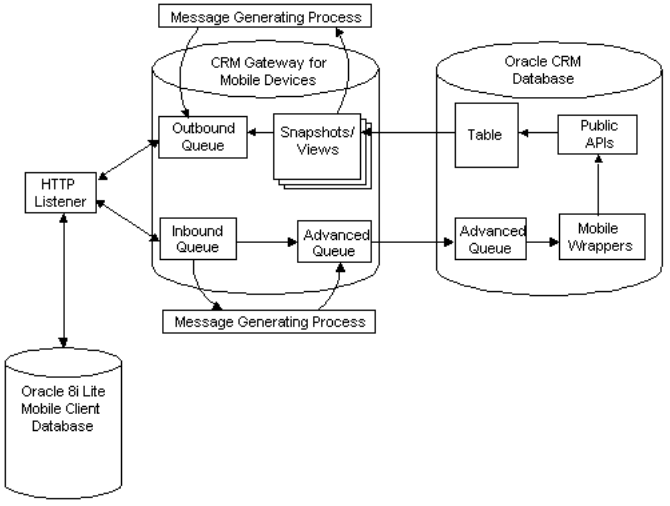
the system. The mobile user uses a URL to connect with the CRM Gateway for Mobile Devices.

**d.** Laptop Computer

Each laptop is used by a mobile user who is assigned a unique mobile user name during installation to identify it within the system. The mobile user uses a URL to connect with the CRM Gateway for Mobile Devices.

## 1.1.2 Understanding the Synchronization Process

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




The Oracle8*i* Lite Mobile Client database resides on the hand-held device. The client sends its changes through 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 applying client changes and for resolving conflicts.

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

The snapshots on the CRM Gateway for Mobile Devices are of two types:

- Lookup
- Transaction

Lookup snapshots are typically refreshed once every night while Transaction snapshots are refreshed every half an hour. These intervals can be customized.

### 1.1.3 Terminology

**Applications Database:** The Oracle 8*i* server that runs Oracle Applications 11i.

**Gateway Database:** The CRM Gateway for Mobile Devices Database that runs an Oracle 8*i* server.

**CRM Gateway for Mobile Devices Server (Gateway NT Server):** A WindowsNT Server that hosts both the Gateway Database and Oracle 8i Lite Synchronization Server.

**Oracle Lite DBMS:** A small-footprint Java-enabled database-management system built specifically for laptops, hand-held computers, PDAs, and information appliances.

**iConnect:** Integrated components that allow for the synchronization of application data and the creation of store-and-forward messaging applications with advanced-queuing functionality.

**Web-to-Go (also called the 'Synch Server'):** A collection of components and services that facilitates development, deployment, and management of mobile Web applications.

**Http Listener:** A component of Web-to-Go that services mobile devices.

**Oracle Lite Consolidator:** The Oracle Lite Consolidator allows new and existing mobile applications and data to be replicated, synchronized, and shared with the Oracle8 server.

**Message Generator And Processor (MGP):** At the heart of the Oracle Lite Consolidator is the Message Generator and Processor (MGP), a Java background process. The MGP serves two purposes:

1. Uploads transactions from the applications running on the Mobile devices.
2. Generates new updates (data) for the Mobile client devices to download.

**Inbound Queue and Out bound Queue:** Internal Oracle Lite Structures that store and forward the data from and to Mobile devices.

**Snapshots:** Tables created on the Gateway Database using Advanced Replication that are refreshed regularly with the Applications Database.

**Transaction Snapshots:** Snapshots that are refreshed very often, for example every 15 minutes.

**Lookup Snapshots:** Snapshots that are refreshed less frequently, for example once every day.

**Advanced Queues:** A queuing technology used to send and receive messages between the Gateway Database and Applications Database.

**Application Views / System Queues:** Views created on the Gateway Database that correspond to the objects created on the mobile device for each application.

**Mobile Wrappers:** Stored procedures installed at the Applications Database corresponding to Application Views that call the appropriate Public APIs.

**Applications Portal Site:** Apache website that hosts Oracle Application 11i.

## 1.2 Installation Prerequisites

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

Topics covered are:

- Minimum hardware requirements
- Minimum software requirements
- Additional requirements
- CRM applications database verification
- Scheduling concurrent programs

### 1.2.1 Minimum Hardware Requirements

The following table provides the hardware requirements to support two configurations of mobile users on the CRM Gateway for Mobile Devices.

Registered users are all mobile users of a CRM Gateway for Mobile Devices. The Gateway can potentially support more than 1000 registered users. Concurrent users refers to users who are simultaneously connected to the CRM Gateway for Mobile Devices. Both requirements and performance features are discussed using concurrent users because this is a more critical metric from an organizational standpoint. These are only baseline requirements.

| Requirements | 5- 10 Concurrent Users | 100 Concurrent Users |
|---|---|---|
| CPU | IBM Compatible Pentium Processor | IBM Compatible with 4 or more Pentium Processors |
| RAM | 512 MB | Greater than 1 GB |

## 1.2.2 Minimum Software Requirements

The following table shows the software requirements for the CRM Gateway for Mobile Devices.

| Tier | Software Requirements |
|---|---|
| Enterprise | Oracle Applications release 11*i*<br>■ At minimum, you must fully install AOL and JTF. |
| CRM Gateway for Mobile Devices Database | Oracle8*i* Enterprise Edition<br>**Note**: Oracle Corporation recommends the Oracle CRM Gateway for Mobile Devices to be installed on a fresh installation and that no other applications make use of the database.<br>■ The machine must be on the same LAN/WAN as the Oracle Applications Release 11*i* database server.<br>■ The latest patch version needs to be installed.<br>Oracle8*i* Lite, release 4.0.0.3 Synchronization Server<br>■ Microsoft Windows NT version 4.0 (service pack 5 recommended).<br>■ Java runtime 1.2.2 (can be downloaded from: http://www.javasoft.com).<br>■ The latest patch version needs to be installed (4.0.0.6.0). |

## 1.2.3 Additional Requirements

After you install all of the required products, you must reboot your machine to run the components properly. Consult your network specialist or system administrator for more information.

## 1.2.4 CRM Applications Database Verification

Before you can create a CRM Gateway for Mobile Devices, verify that these steps have been correctly completed. If they are not correct, fill in the Enterprise Installation Worksheet and follow the steps described in this section.

Verification requires that the following tasks be completed:

- Ensuring advanced replication is installed (database option)
- Checking for advanced queues
- Verifying the unique global name
- Setting init.ora parameters

### 1.2.4.1 Enterprise Installation Worksheet

The following information is 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 | | |
| INV schema | | |
| ONT schema | | |
| OSM schema | | |
| AK schema | | |

### 1.2.4.2 Ensuring Advanced Replication is Installed (Database Option)

See Oracle8*i* replication documentation for further information on how to enable replication. If you have not chosen the replication option at database creation or already installed the replication catalogs, 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. It is a good idea to spool output to a log file first before you run 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. Check this for error messages before you proceed. You can safely ignore ORA-01432, ORA-01434, and ORA-00955 errors.

4. To confirm that CATREP.SQL ran correctly, run 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.

#### 1.2.4.3 Checking for Advanced Queues

You can use SQL*Plus to query these values with this command: SELECT * FROM SYS.DBA_QUEUES. To determine whether the values for DEF$_AQERROR and DEF$_AQCALL are enabled or disabled, look at the values in the columns ENQUEUE and DEQUEUE shown after the select statement. If these values are FALSE for both columns, they are disabled. If this is the case, you need to

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);
```

#### 1.2.4.4 Verifying the Unique Global Name

The Applications database needs to have a unique global name for this application.

> **Note:** It is highly recommended that GLOBAL_NAME has a DB_DOMAIN. However, if the applications database global name does not have a domain name, do not set domain names for any of the Mobile Device Gateways.

To identify the global name of a database, connect to the database through SQL*Plus as any schema and run the following query:

```
SELECT * FROM GLOBAL_NAME;
```

The global name is typically DB_NAME + DB_DOMAIN from init<SID>.ora.

If replication was previously installed in the database, replication groups will be associated with the database. You can use the following query to find the details:

```
select sname, DBLINK from system.repcat$_repschema;
```

For example:

| SNAME | DBLINK |
|---|---|
| OSMREP_UPDATE | GlobalName |
| ASREP_UPDATE | GlobalName |
| ASGREP_UPDATE | GlobalName |

If the GlobalName returned by the query is different from the desired global name or the current global name, all the replication groups need to be dropped before you change the global name. Use the following query to drop replication groups:

connect sys/&pw_sys;

BEGIN dbms_repcat.suspend_master_activity('OSMREP_UPDATE');

END;

/

BEGIN dbms_repcat.drop_master_repgroup('OSMREP_UPDATE');

END;

/

To alter the global name, connect as SYS or SYSTEM and run the following command:

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

#### 1.2.4.5 Setting init.ora 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* database name |
| DB_DOMAIN | The domain in which the Release 11*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 (minimum should be 2) |

2. Shut down and restart your database to make the changes effective.

### 1.2.5 Scheduling Concurrent Programs

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

| Concurrent Program | Function | Schedule |
|---|---|---|
| Purge Snapshot Logs | Purges snapshot logs that have become very large. | Schedule for once every week. |

| Concurrent Program | Function | Schedule |
|---|---|---|
| Verify Advanced Queues | Verifies if queues are functional from Application databases to CRM Gateway for Mobile Devices. | Schedule for once every two hours. |

Refer to the *Oracle Application 11i Implementation Guide* for concurrent program setup detail.

## 1.3 Installation Overview

You can create multiple CRM Gateway for Mobile Devices servers for each enterprise database.

Before you set up the CRM Gateway for Mobile Devices, the following Oracle applications or components must be installed and fully implemented:

- A database with Oracle Applications 11*i*
- AOL and JTF (Foundation) components on the Oracle Applications 11*i* database

Before you begin the installation, fill out the CRM Gateway for Mobile Devices Installation Worksheet.

For information about the installation and implementation of these applications and components, see the appropriate documentation for each product.

This overview section contains the following topics:

- Important note
- CRM Gateway for Mobile Devices installation worksheet

### 1.3.1 Important Note: Do Not Change the Item Segment After Installation

Never change the SYSTEM ITEMS key flexfield definition after you have installed a CRM Gateway for Mobile Devices.

The CRM Gateway for Mobile Devices installation installs a snapshot on Oracle Applications view MTL_SYSTEM_ITEMS_B_KFV (for which there is a synonym MTL_SYSTEM_ITEMS_KFV). However, this view is created dynamically in apps and the datatype can change, for example, for the CONCATENATED_SEGMENTS column. When you first create a CRM Gateway for Mobile Devices and then change this view, the snapshot based on this view becomes invalid and you can't refresh it anymore. To fix this, you would have to recreate the whole CRM Gateway for

Mobile Devices. To avoid this situation, do not change the Item Segment after you have installed the CRM Gateway for Mobile Devices.

### 1.3.2 CRM Gateway for Mobile Devices Database Installation Worksheet

Complete the following worksheet for each of the CRM Gateway for Mobile Devices you want to install before you proceed with the installation:

| Parameter | Example | Your Value |
|---|---|---|
| Global Name | middle1.us.oracle.com<br>Usage: **name.domain**<br>e.g.:<br>myserver.mydomain | |
| 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.us.oracle.com<br>Usage: **name.domain**<br>e.g.:<br>myserver.mydomain | |
| TNS Listener Port Number | 1521 | |
| SID | MIDDLE1 | |

## 1.4 Installing the CRM Gateway for Mobile Devices

The steps given in this section describe how to install a single instance of the CRM Gateway for Mobile Devices, given that the enterprise database has been properly installed and configured as described in the previous sections. To install the CRM Gateway for Mobile Devices, perform the following steps:

## 1.4.1 Step 1. Creating the Oracle Application User

In this step you create the Oracle application user for the CRM Gateway for Mobile Devices for the web administration console.

1. Login to Oracle Applications Self Service with System Administrator responsibility.
2. Create a new Oracle Application user **ASGADM** with the following responsibility:

   Mobile Admin, Oracle CRM Gateway for Mobile Devices

## 1.4.2 Step 2. 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.

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

5. When you use 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 you use 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.

7. Setup User Level Profiles:

   a. Go to the Profile screen.

   b. Enter the following values in the Find System Profile Values screen:

| Option | Value |
|---|---|
| User | ASGADM |
| Profile | JTF% |

   c. Set the following Profile Option Values at User Level:

| Option | Value |
|---|---|
| JTF_PROFILE_DEFAULT_APPLICATION | 689 |
| JTF_PROFILE_DEFAULT_RESPONSIBILITY | 21759 |

### 1.4.3 Step 3. Installing the Gateway Database

This step is performed at the Gateway Database that requires the Oracle8*i* CD and describes the following tasks:

- Creating Oracle 8i (8.1.6.1.2) Database
- Setting init.ora parameters
- Creating ADMIN users and tablespaces
- Loading the asgmtran.jar file into the CRM Gateway for Mobile Devices database (copied from the applications file system)
- Verifying unique global name

### 1.4.3.1 Creating Oracle 8i (8.1.6.1.2) Database

1. Install the Oracle 8.1.6 (release 2) Database Server Enterprise Edition for Windows NT with Advanced Replication and JVM Options. (See Oracle Server 8.1.6 Installation Guide for detail.)

   Note : The Gateway database must be created with the same character set, or a subset of it, as the enterprise database.

2. Make sure that the version of the database is 8.1.6.1.2 or higher. If it is not, you must install Oracle Database Server 8.1.6 patches 8.1.6.1.1 and after that 8.1.6.1.2.

   **Note:** Before you apply the patches, make sure that the TNSlistener service and the Oracle Web Assistant service are running.

3. Record the details on the CRM Gateway for Mobile Devices Installation Worksheet.

### 1.4.3.2 Setting init.ora Parameters

To set the init.ora parameters, in your Gateway database, edit init<SID>.ora to read the following recommended initial parameter value for each Oracle8*i* installation.

| Parameter Name | Recommended Value |
|---|---|
| COMPATIBLE | 8.1.5 or later |
| SHARED_POOL_SIZE | 32000000 (Memory specified in bytes) |
| AQ_TM_PROCESSES | 2 or more. For enterprise server it should be 4 as long as JOB_QUEUE_PROCESSES is set to AQ_TM_PROCESSES + 2. |
| JOB_QUEUE_INTERVAL | 15 or less |
| JOB_QUEUE_PROCESSES | 4 or more |
| OPEN_CURSORS | 500 |
| DB_FILE_MULTIBLOCK_READ_COUNT | 8 |
| HASH_JOIN_ENABLED | TRUE |
| OPTIMIZER_PERCENT_PARALLEL | 0 |
| OPTIMIZER_MODE | CHOOSE |

| Parameter Name | Recommended Value |
|---|---|
| OPTIMIZER_FEATURES_ENABLE | 8.1.5 |
| CURSOR_SPACE_FOR_TIME | TRUE |
| GLOBAL_NAMES | TRUE |

### 1.4.3.3 Creating ADMIN User and Tablespaces

Use the following table to create the ADMIN user with the tablespaces shown.

| Tablespace Name | Recommended Data File Name | Recommended Size | Purpose |
|---|---|---|---|
| SYNCSERVER | mobile01.dbf<br>mobile02.dbf<br>etc. | 50 MB + ((1/2 size of mobile database) * (number of mobile users)) | Objects created by the synchronization Server (needed by Oracle 8i Lite)<br>**schemas that use the tablespace:**<br>MOBILEADMIN |
| CRMUSER | user01.dbf<br>user02.dbf<br>etc. | 1 GB in total | snapshots at CRM Gateway for Mobile Devices<br>**schemas that use the tablespace:**<br>ASG, CS, JTF, APPLSYS, HR, AR, INV, CSP, CSF, ONT |
| CRMINDEX | index01.dbf<br>index02.dbf<br>etc. | 1/5 of the size of the CRMUSER tablespace | indexes for snapshots<br>**schemas that use the tablespace:**<br>ASG, CS, JTF, APPLSYS, HR, AR, INV, CSP, CSF |
| CRMADMIN | admin01.dbf<br>admin02.dbf<br>etc. | 50 MB in total | **schemas that use the tablespace:**<br>ADMIN |

**Note:** Verify that auto-extend is turned on for all tablespaces as well as for their datafiles and make sure that the RBS tablespace is at least 500 MB.

**Note:** The rollback segments requirements for the MDG can be huge. To maintain optimal performance, do not use any rollback segment by more than four concurrent sessions.

To find the correct number of rollback segments, calculate the following:

(MAX_NUMBER_OF_CONCURRENT_USER /4) + 4

To find the size of the rollback segments, calculate the following:

((SIZE_OF_THE_MOBILE_RDBMS *3)*4)

It is also recomended that the initial size of the rollback segments be set to the result of the above formula, to avoid expensive extends during the synchronization session.

Use this procedure to create the ADMIN user:

1. Connect to the SYS database schema and create a new user 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;
```

### 1.4.3.4 Loading the asgmtran.jar File

To load the jar file asgmtran.jar from the application file system into the Gateway Database, perform the following steps:

1. Connect to your APPS environment (using rlogin or telnet).
2. Execute the following command:

```
loadjava -thin -user admin/admin@<gateway_host_name>:<port_number>:<gateway_
database_sid> -order -resolve -verbose -force $JAVA_
TOP/oracle/apps/asg/jar/asgmtran.jar
```

#### 1.4.3.5 Verifying the Unique Global Name

The gateway database needs to have a unique global name among all the databases used for Oracle Apps and Mobile Device Gateways. The global name is used to distinguish each Gateway Database from the other. To identify the global name of a database, connect to the database through SQL*Plus as any schema and run the following query:

```
SELECT * FROM GLOBAL_NAME;
```

The global name is typically DB_NAME + DB_DOMAIN from init<SID>.ora. To change it, connect as SYS or SYSTEM and run the following command:

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

> **Note:** Do not have DB_DOMAIN as part of the global name if the Applications Database does not have a domain name.

By default, each installation of Oracle8*i* has 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, and so on, to ensure uniqueness.

The global name of a database should not be altered once the system is in use. For example, when the database is being used by concurrent users, the global name of all instances should remain the same.

### 1.4.4 Step 4. Installing Oracle8*i* Lite Synchronization Server

This step is performed at the CRM Gateway for Mobile Devices NT Server. It describes how to install and configure Oracle8*i* Lite components for CRM Gateway for Mobile Devices. The Oracle8*i* Lite 4.0.0.3.1 CD, the Oracle8*i* Lite patch (Version 4.0.0.6.0), and JRE 1.2.2 are required. The following tasks are required:

- Installing Oracle8i Lite Synchronization Server 4.0.0.3.1
- Installing the Oracle8i Lite patch

#### 1.4.4.1 Installing Oracle8*i* Lite Synchronization Server 4.0.0.3.1

The Synchronization Server for Handheld Devices installation option installs the components to synchronize data and deploy applications to the mobile devices. Perform the following steps:

1. Verify that your system has a Web-to-Go connection string and that it points to the RDBMS system that you wish to install.
   - If has a Web-to-Go connection string but it does not point to the RDBMS system, either remove it or modify it to point to the Gateway database before you install the Web-to-Go.
   - If it does not have a Web-to-Go connection string, add the TNS entry webtogo and webtogo.world in $OLITE_HOME\net80\admin\tnsnames.ora.
2. Make sure the TNSListener service is running.
3. Make sure that the version of JRE (Java Runtime Environment) on the machine is 1.2.2:

   Type java -version in the command line to check JRE version.

   If the version is lower than 1.2.2, install JRE 1.2.2 or JDK 1.2.2 (the software can be downloaded from http://www.javasoft.com).
4. Insert the Oracle8*i* 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.
5. Click **Install Oracle8*i*** Lite.

   The Oracle Installation Settings dialog appears.
6. Enter your company name.
7. Enter the name and location of your Oracle Home directory. The directory name must be eight characters or less.

**Note:** Other Oracle products on your machine such as Oracle8i, that were installed using the Oracle Universal Installer (OUI), can cause an error message when you install 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.

1. Run the regedit program under WindowsNT desktop Start button Run menu item.
2. Click on **HKEY_LOCAL_MACHINE**.
3. Click on **SOFTWARE.**
4. Click on **ORACLE**.
5. Click on **ALL_HOMES**.
6. On the right hand side, click on **DEFAULT_HOME**.
7. Change the value to the appropriate Oracle Lite Home.
8. Click **OK**.
9. Exit regedit program.
10. Restart Oracle8I Lite installer.

8. Select a language from the drop-down list in the Language field and click **OK**.

   The Installation Options dialog appears.

9. Choose Synchronization Server for Handheld Devices and click **OK**.

   The documentation dialog appears.

10. Click **Yes** to install the Oracle8*i* Lite documentation.

    The Server Database dialog appears.

11. Enter the Host Name, Port, and Server ID (SID) for the Gateway Database Server that the Synchronization Server uses to create its internal tables and click **OK**.

    For details see the Mobile Device Gateway Installation Worksheet.

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

12. Enter a password for the user SYSTEM. Confirm the password.

13. Click **OK**.

    The Synchronization Server for Handheld Devices installation starts.

14. Once installation is complete, a message box appears. Click **OK**.

#### 1.4.4.2 Installing the Oracle8i Lite patch

Install the Oracle Lite patch (version 4.0.0.6.0 or above) on the CRM Gateway for Mobile Devices Gateway NT Server. See the README file in 4.0.0.6.0 patch for details.

### 1.4.5 Step 5. Creating CRM Gateway for Mobile Devices

After you have installed the CRM Gateway for Mobile Devices database and the Synchronization Server, you can create the CRM Gateway for Mobile Devices server. Do this by performing the following steps:

1. Navigate to the Oracle Applications JTF login site.
2. Login to the CRM Gateway for Mobile Devices administration console using the username ASGADM.
3. Click the Gateway Server tab.
4. In the Gateway Server tab, choose **Create.**

   The Create Gateway Server page appears.

5. Enter the gateway database global name, port number, and all the other information of the CRM Gateway for Mobile Devices machine.

   For details refer to the CRM Gateway for Mobile Devices Installation Worksheet.

6. Enter the required passwords.
7. Click **Create**. The creation process might take a long time. Check the status of creation on the Gateway Server tab by opening the creation log.

   - **Confirmed**. The CRM Gateway for Mobile Devices creation process is completed successfully.
   - **Not Confirmed**. The CRM Gateway for Mobile Devices creation process was aborted. Click **Open Logs** in the Gateway Servers screen to check the errors in the creation logs. To fix the errors and re-create the CRM Gateway for Mobile Devices, delete the CRM Gateway for Mobile Devices and create the CRM Gateway for Mobile Devices again.

- **Pending**. The CRM Gateway for Mobile Devices creation process is in progress. If the status Pending shows for a very long time, click **Open Logs** in the Gateway Servers screen to check the creation logs.

When the status shows **Confirmed**, the CRM Gateway for Mobile Devices has been successfully created. At this point you can enable synchronization, create users, and start using the CRM Gateway for Mobile Devices server as described in Administering CRM Gateway for Mobile Devices.

## 1.5 Administering CRM Gateway for Mobile Devices

This topic group provides task-based procedures required for ongoing system maintenance and includes information on administration tools and utilities. It is performed at Applications and Applications Portal Site.

Perform the following tasks:

- Starting the Synchronization Server
- Configuring Oracle8i Lite Message Generating Process (MGP)
- Creating mobile users
- Monitoring the refresh and queue jobs on the Gateway database
- Implementing mobile applications
- Setting up logs
- Using Transaction Reapply to handle errors

### 1.5.1 Starting the Synchronization Server

The Synchronization Server (Web-to-Go Server) is installed as a part of the Oracle Lite Installation as a Windows NT service. After you install the Synchronization Server, restart your machine. The Synchronization Server will run automatically.

You can also start the Synchronization Server (Web-to-Go Server) running the http.bat file located in the following directory:

%ORACLE_LITE_HOME%\consolidator20\bin

### 1.5.2 Configuring Oracle8*i* Lite Message Generating Process (MGP)

To configure Message Generating Process (MGP) on the server, run the mgp.bat file located in the following directory:

%ORACLE_HOME%\consolidator20

This batch file starts the MGP in background process, which will continue to run.

## 1.5.3 Creating Mobile Users

Before you set up the mobile user, make sure that the gateway server is created with the status of Confirmed. Also, each CRM Gateway for Mobile Devices mobile user should be based on an existing Oracle Application User that is registered as a CRM Human Resource. Refer to *Oracle Applications 11i Implementation Guide* and *Oracle CRM Foundation Implementation Guide* for setup details.

### Prerequisites

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

### Steps

1. Navigate to the Oracle Applications Portal Site.
2. Login to the CRM Gateway for Mobile Devices administration console using the username ASGADM.
3. Click the Mobile User tab.
4. In the Mobile User tab, choose **Create.**

   The Create Mobile User page appears.
5. Click **Go** and find the Oracle Application user to be set up as a mobile user.
6. Click on the Oracle Applications user and return to the Create Mobile User main page.
7. Enter all the required information for the new mobile user and click **Create**. Check the status of creation on the Mobile User tab:
   - **Confirmed**. The mobile user creation process is completed successfully.
   - **Not Confirmed**. The mobile user creation process was aborted. Click **Open Logs** in the Mobile User screen to check the errors in the creation logs. To fix the errors and re-create the user, delete the user and create it again.
   - **Pending**. The mobile user creation process is in progress. If the status Pending shows for a very long time, click **Open Logs** in the Mobile User screen to check the creation logs.

**Note:** Always wait until the status of creation of the very first user is set to **Confirmed** before you create the subsequent users for a given application. The user creation might fail if you attempt to create another user while the status of the very first user is still **Pending**.

A mobile user cannot start to synchronize unless the status has been set to **Confirmed**.

## 1.5.4 Monitoring the Refresh and Queue Jobs on the Gateway Database

The following jobs have been submitted at Mobile Device Gateway Database during creation. You can use the Replication Manager to modify the schedule of the jobs. After you log in as ADMIN using the ADMIN password (see the Mobile Device Gateway Installation Worksheet), they are shown as local jobs under Administration.

| Job | Function | Schedule |
|---|---|---|
| BEGIN ADMIN.ASG_ QUEUE_PKG.refresh_LOOK; END; | Refreshes Lookup Snapshots. | Default set to once a day. |
| BEGIN ADMIN.ASG_ QUEUE_PKG.refresh_TXN; END; | Refreshes Transaction Snapshots. | Default set to once every 20 minutes. |
| BEGIN ADMIN.ASG_ QUEUE_PKG.VERIFY_ QUEUES; END; | ▪ Verifies whether queues are functional.<br>▪ Verifies if refresh jobs are running.<br>▪ Re-starts queues if necessary and re- submits refresh jobs if they are broken. | Default set to once every 15 minutes. |

## 1.5.5 Implementing Mobile Applications

This step is performed at the Gateway NT server. Make sure that the Web-to-Go server is running before you publish the mobile applications.

#### 1.5.5.1 Publishing Mobile Applications

Refer to *Installing Field Service/Laptop*, *Installing Field Service/PalmTM Devices*, or *Installing Field Sales/Laptop* for details.

#### 1.5.5.2 Inform all Mobile Users

After all the mobile users have been successfully created, give each user the following information:

- The CRM Gateway for Mobile Devices URL to use to log in and download the application
- Username
- Password

### 1.5.6 Setting Up Logs

If you need to set up logs or trace files, follow the instructions in Troubleshooting and FAQs for Implementing CRM Gateway for Mobile Devices.

### 1.5.7 Using Transaction Reapply to Handle Errors

When a mobile user enters a new service request or enters new customer data and synchronizes, the data should get populated into the CRM enterprise application. However it could fail due to a variety of reasons. These include user defined errors such as setup issues or faulty data, system errors, and exceptions. Server Side transaction reapply allows an administrator to modify data and reapply failed service requests. The administrator can view all these incomplete actions and reapply them after any required changes. This transaction reapply mechanism handles errors and forces the reentry of the sales or service users into the process only if absolutely warranted.

The transaction reapply process works as follows: All failed transactions are thrown into a table. You can first view all failed transactions for a given gateway server. You can then change some data or system elements and reapply these transactions to the main enterprise database.

The reapplied transactions are applied as a batch. Following reapplication, the transactions are successfully reapplied or they could fail yet again. If they are successful, you will be able to view them as being successfully reapplied and you can delete them from the error tables. If they fail again, you can choose to modify them again and then reapply them. You can also choose to discard these transactions altogether and delete them from the error tables.

You can view deferred transactions on the **Deferred Transactions** screen. Theae are the four different types of transaction:

- Deferred Transactions: These are transactions that did not go through to the main tables. It is possible that they were never reapplied or it is possible that they have been reapplied more than once and failed in the reapplication each time.
- Pending Transactions : These are transactions that have been reapplied, but are waiting for the result of reapplication. Reapplication is a batch process, and not real time.
- Successful Transactions : These are transactions that have been successfully reapplied.
- Discarded Transactions: These are transactions that you are ready to discard, because the reapplication was never successful. You can purge all discarded transactions whenever the table size needs to be reduced.

#### 1.5.7.1 Viewing Deferred Transactions

You can view and edit deferred transactions, to see what may have caused the problem and correct it before you reapply the transaction.

### Steps

Use this procedure to view the deferred transactions.

1. Navigate to the **Transaction Log** tab. A table showing the four types of transactions appears. The **Count** column shows how many of each type of transaction exist.
2. To view all deferred transactions, choose **View Details** to see a list of all the deferred transactions. A table showing the details of deferred transactions appears, containing the following columns:
   - **Select**: Select any transaction to reapply it, discard it, or view its details.
   - **Deferred Transactions ID**: The ID of the deferred transaction.
   - **MDG User:** The name of the mobile user whose data had errors.
   - **Synch Time**: The time at which the user last synchronized the data.
   - **Error**: The type and nature of error.
   - **Object**: The object or package that failed and caused the error.

- **Fail Count**: This displays the count of the number of times the transaction was applied but failed. For a fresh transaction the value is 1.

3. Click **Details** to view the detailed error description.
4. Click **Discard** to discard all items that have a checkmark in the **Select** box.
5. Click **Reapply** to reapply all transactions that have a checkmark in the **Select** box.
6. Click **Select All** to select all the transactions before performing an operation on them.
7. Click **Clear All** to remove all the checkmarks from transactions that have a checkmark in the **Select** box.

### 1.5.7.2 Editing Deferred Transactions

You can edit deferred transactions to correct problems before you reapply the transaction.

#### Steps

Use this procedure to edit the deferred transactions.

1. Navigate to the **Transaction Log** tab. A table showing the four types of transactions appears.
2. Choose **View Details** in the same row as **Deferred Transactions** to see a list of all the deferred transactions.
3. Click **View** in the row of the transaction you want to edit. The **Edit Deferred Transactions** screen appears, showing the following columns:
   - **Columns:** Shows all the releveant columns of the table or view where the transaction failed.
   - **Current Values:** Shows all the present values of the transaction that failed
   - **Edit Values:** Lets you change the values of the transaction.
4. Click **Apply Cascading** to reapply not only this transaction but also all the subsequent transactions in this session.
5. Click **Reapply** to reapply selected transactions.
6. Click **Discard** to discard selected transactions.
7. Click **Quit Without Reapply** to stop the reapply.

### 1.5.7.3 Viewing Successful Transactions

You can view successful transactions, to see all the transactions that have been completed successfully.

#### Steps

Use this procedure to view the successful transactions.

1. Navigate to the **Transaction Log** tab. A table showing the four types of transactions appears. The **Count** column shows how many of each type of transaction exist.
2. To view all successful transactions, choose **View Details** of successful transactions. A table showing the details successful transactions appears, containing the following columns:
   - **Select**: Select any transaction to reapply it, discard it, or view its details.
   - **Successful Transactions ID**: The ID of the successful transaction.
   - **MDG User**: The name of the mobile user whose data had errors.
   - **Synch Time**: The time at which the user last synchronized the data.
   - **Error**: The type and nature of error.
   - **Object**: The object or package that failed and caused the error.
   - **Fail Count**: This displays the count of the number of times the transaction was applied but failed. For a fresh transaction the value is 1.
3. Click **Details** to view the detailed error description.
4. Click **Purge** to delete all the items that have a checkmark in the **Select** box.
5. Click **Select All** to select all the items before performing an operation on them.
6. Click **Clear All** to remove all the checkmarks from transactions that have a checkmark in the **Select** box.

### 1.5.7.4 Viewing Pending Transactions

You can view pending transactions to see the transactions that are waiting to be reapplied.

#### Steps

Use this procedure to view the pending transactions.

1. Navigate to the **Transaction Log** tab. A table showing the four types of transactions appears. The **Count** column shows how many of each type of transaction exist.
2. To view all pending transactions, choose **View Details** of pending transactions. A table showing the details pending transactions appears, containing the following columns:
   - **Select**: Select any transaction to reapply it, discard it, or view its details.
   - **Pending Transactions ID**: The ID of the pending transaction.
   - **MDG User**: The name of the mobile user whose data had errors.
   - **Synch Time**: The time at which the user last synchronized the data.
   - **Error**: The type and nature of error.
   - **Object**: The object or package that failed and caused the error.
   - **Fail Count**: This displays the count of the number of times the transaction was applied but failed. For a fresh transaction the value is 1.
3. Click **Details** to view the detailed error description.
4. Click **Reapply** to reapply selected transactions.
5. Click **Discard** to discard selected transactions.

#### 1.5.7.5 Viewing Discarded Transactions

You can view discarded transactions, to see the transactions that have been discarded.

### Steps

Use this procedure to view the discarded transactions.

1. Navigate to the **Transaction Log** tab. A table showing the four types of transactions appears. The **Count** column shows how many of each type of transaction exist.
2. To view all discarded transactions, choose **View Details** of discarded transactions. A table showing the details discarded transactions appears, containing the following columns:
   - **Select**: Select any transaction to reapply it, discard it, or view its details.
   - **Discarded Transactions ID**: The ID of the discarded transaction.

- **MDG User**: The name of the mobile user whose data had errors.
- **Synch Time**: The time at which the user last synchronized the data.
- **Error**: The type and nature of error.
- **Object**: The object or package that failed and caused the error.
- **Fail Count**: This displays the count of the number of times the transaction was applied but failed. For a fresh transaction the value is 1.

3. Click **Details** to view the detailed error description.
4. Click **Purge** to purge selected transactions.

# 1.6 Upgrading the CRM Gateway for Mobile Devices

The CRM Gateway for Mobile Devices Upgrade Utility is used when schema changes occur for the mobile applications, such as Oracle Field Service/Laptop or Oracle Field Service/Palm™ Devices. The upgrade utility is run after you have applied the respective patches to the CRM machine.


- How the Upgrade Utility operates
- What is upgraded
- Executing the CRM Gateway for Mobile Devices Upgrade Utility


## 1.6.1 How the Upgrade Utility Operates

This Upgrade Utility operates based on versioning. The CRM Gateway for Mobile Devices version is maintained in the asg_server table, while the applications (CRM Gateway for Mobile Devices base objects, for example, Field Service/Laptop) version is maintained in the asg_server_pubs and asg_publications tables.

The version in the asg_server_pubs table corresponds with the current version. The version in asg_publications table is the target version to which the applications on the CRM Gateway for Mobile Devices needs to be upgraded to. In turn each publication item also maintains it's own version. At any given time the max version in asg_publication_items equals the version in asg_publications.

## 1.6.2 What is Upgraded

The following objects are upgraded:

- Snapshots

- System Packages
- System Queues
- User Queues
- Sequences

No standalone upgrade is possible for User Queue dependent objects like Primary Key Hint, Parent Hint and Client Indexes. An upgrade for any of these objects requires an User Queue upgrade.

### 1.6.3 Executing the CRM Gateway for Mobile Devices Upgrade Utility

To upgrade the CRM Gateway for Mobile Devices, perform the following steps:

1. Schedule a downtime for the CRM Gateway for Mobile Devices and inform the users of the CRM Gateway for Mobile Devices about the upgrade.
2. On the CRM Gateway for Mobile Devices NT server, stop the webtogo listener and the MGP process.
3. Login to the CRM instance as a unix user, with appropriate appsenv set.
4. To execute the Upgrade utility, type the following in the unix prompt:

   ```
   java oracle.apps.asg.gateway.asgupgrade
   ```

   Enter the following information:

| Field | Value |
|---|---|
| mdg_host_name | Host Name / IP Address of CRM Gateway for Mobile Devices. |
| mdg_port_number | Port Number of Listener For CRM Gateway for Mobile Devices. |
| mdg_oracle_sid | Oracle SID of CRM Gateway for Mobile Devices Database. |
| mdg_admin_passwd | Password of Admin User on CRM Gateway for Mobile Devices. |
| crm_host_name | Host Name / IP Address of CRM Database. |
| crm_port_number | Port Number of Listener For CRM. |
| crm_oracle_sid | Oracle SID of CRM Database. |

| Field | Value |
|---|---|
| crm_apps_user | Apps User Name on CRM Database. |
| cr,_apps_passwd | Password of Apps User on CRM Database. |

**Note:** During an upgrade, the webtogo listener and MGP process need to remain shut down.

5. If the upgrade was successful, start the webtogo listener and the MGP process on the CRM Gateway for Mobile Devices NT server, and inform the users.
6. If you encounter errors during the upgrade, contact the technical support group.

## 1.7 Troubleshooting and FAQs for Implementing CRM Gateway for Mobile Devices

This topic group discusses Frequently Asked Questions (FAQs) for the implementation of the CRM Gateway for Mobile Devices. Use this for troubleshooting implementation problems. The FAQ's are divided into two sections, one for installation and the other for administration problems.

- Installation FAQs
  - FAQ 1: Software Components
  - FAQ 2: Installing Oracle8i Lite
  - FAQ 3: Olite Installer Fails
  - FAQ 4: Creating a CRM Gateway for Mobile Devices
  - FAQ 5: Reasons for Creation Process Failure
  - FAQ6: Character Set Requirements
- Administering FAQs
  - FAQ 1: Creating a Mobile User
  - FAQ 2: Common Reasons for Mobile User Creation Failure

## 1.7.1 Installation FAQs

### 1.7.1.1 FAQ 1: Software Components

What other software components do I need to implement the CRM Gateway for Mobile Devices?

**Resolution** You need the following software components:

- Oracle8i
- Oracle8i Lite

You also need the latest version of the patches corresponding to the two products.

Refer to the product availability and certification page, or to Installation Prerequisites for further details.

### 1.7.1.2 FAQ 2: Installing Oracle8*i* Lite

I cannot install Oracle8*i* Lite in the same directory as Oracle8i.

**Resolution** You cannot do this because this version of Olite installer does not support having multiple Oracle homes. Perform the following steps to resolve this problem:

1. Invoke the Olite installer again and choose a different Oracle home, for example, Olite with a directory d:\olite.

   The installer aborts with an error.

2. Exit the installer.
3. Run the Windows Registry Editor regedit32. Browse to HKEY_LOCAL_MACHINE\software\oracle\ALL_HOMES.
4. Edit the entry DEFAULT_HOME to contain the value Olite.
5. Exit the program.
6. Invoke the Olite installer again and continue with the install, in the home Olite.

#### 1.7.1.3 FAQ 3: Olite Installer Fails

The Olite installer fails with the error: `TNS:not able to resolve service name`.

**Resolution** This error occurs because the Olite installer fails to put the entry webtogo.world in the tnsnames.ora file. Perform the following steps to resolve the problem:

1. Edit the tnsnames.ora in the home Olite to contain the entry webtogo.world.
2. Use SQLPLUS to connect and verify.
3. Invoke the Olite installer again and continue with the install in home Olite.

#### 1.7.1.4 FAQ 4: Creating a CRM Gateway for Mobile Devices

How do I create a CRM Gateway for Mobile Devices? What are the related issues?

**Resolution** A CRM Gateway for Mobile Devices can be created using the Enterprise application portal with an apache login. See Step 5. Creating CRM Gateway for Mobile Devices for details. You can create more than one CRM Gateway for Mobile Devices for the same gateway server.

#### 1.7.1.5 FAQ 5: Reasons for Creation Process Failure

What are the most common reasons for the CRM Gateway for Mobile Devices creation process to fail?

**Resolution** The CRM Gateway for Mobile Devices creation is a long running process, creating many snapshots and other objects for replication. The most common reasons for the CRM Gateway for Mobile Devices creation to fail are:

- The CRM Gateway for Mobile Devices can be created with the Field Service or Field Sales applications. To create it successfully, the Field Service or Field Sales patches must be applied. Make sure you have applied all the required patches.
- The information about the Enterprise server is not correct. Check to see that the values for server, port number, and the Oracle SID are correct on the Enterprise Tab of the Admin screens.
- The CRM Gateway for Mobile Devices server name is not correct. The CRM Gateway for Mobile Devices server name must be the same as the global_name of the CRM Gateway for Mobile Devices database. Check Verifying the Unique Global Name for details. Make sure that the global_name does not contain a hyphen (-) or any other special characters. A database link cannot be created with a hyphen in the global_name.
- The information about the CRM Gateway for Mobile Devices database is not correct. Make sure that you provide the correct values for Gateway Host Name, port number, and the Oracle SID.
- The CRM Gateway for Mobile Devices creation is run as a background thread on the Apache server. This thread may be aborted when the Apache server is shutdown or is not stable. In this case the CRM Gateway for Mobile Devices server creation status remains Pending. Make sure that you resolve the problems with the Apache environment and that you re-create the CRM Gateway for Mobile Devices.
- Sometimes the CRM Gateway for Mobile Devices creation fails if Oracle8i Lite is not installed correctly. Verify and make sure that there were no errors during the installation of Oracle8i Lite.

#### 1.7.1.6 FAQ6: Character Set Requirements

What are the character set requirements for the MDG database?

**Resolution** The character set chosen for the MDG database must be either equal to or a subset of the character set chosen for enterprise database.

## 1.7.2 Administering FAQs

### 1.7.2.1 FAQ 1: Creating a Mobile User

How do I create a mobile user? What are the related issues?

**Resolution** A mobile user can be created using the Enterprise application portal with the Apache login. See Creating Mobile Users for details.

### 1.7.2.2 FAQ 2: Common Reasons for Mobile User Creation Failure

What are the most common reasons for the mobile user creation process to fail?

**Resolution** The most common reasons for the mobile user creation process to fail are:

- The creation of the very first mobile user for the application takes a long time. This is because of the instantiation of many Olite objects. The creation of the subsequent users for the same application is faster.

  **Note:** Always wait until the status of creation of the very first user is set to Confirmed, before you create the subsequent users for a given application. The user creation can fail if you attempt to create another user while the status of the very first user is still Pending.

- The profile options are not set. See Step 2. Setting System Profile Option Values for details.

### 1.7.2.3 FAQ 3: Mobile Users Cannot Synchronize

The mobile users are not able to synchronize or they get errors while they are doing a synchronize operation.

**Resolution** Check to see whether the Windows NT service Oracle Web-to-Go is running. If necessary, start it.

### 1.7.2.4 FAQ 4: Mobile Users Do Not Receive Data

The mobile users are able to synchronize successfully, but they do not receive data from the Enterprise database on their mobile devices.

**Resolution** Check the following:

- Check to see that the MSDOS batch script mgp.bat is running and that there are no errors. If necessary, start it.
- Check to see that the replication process is running.
- Start the Oracle Enterprise Manager/Replication Manager.
- Connect to the CRM Gateway for Mobile Devices database as user admin.
- Check to see that the dbms_jobs ADMIN.ASG_QUEUE_PKG.refresh_TXN and ADMIN.ASG_QUEUE_PKG.refresh_look are running.

#### 1.7.2.5 FAQ 5: Mobile Users Cannot Send Data

The mobile users are able to synchronize successfully, but data from their mobile devices is not sent to the Enterprise database.

**Resolution** Verify the following:

- Check to see that the MSDOS batch script mgp.bat is running and that there are no errors. If necessary, start it.
- Check to see that the Queue propagation is enabled:
- Start the Oracle Enterprise Manager/Schema Manager.
- Connect to the CRM Gateway for Mobile Devices database as user admin.
- Check to see that the queue table asg.asg_mtran_q is enabled and the queue is being propagated to the enterprise server.
- Check to see that the job to process the queue is running:
- Start the Oracle Enterprise Manager/Replication Manager.
- Connect to the Enterprise database as user apps.
- Check to see that the job ASG_MOBTRAN.process_queue_transaction is running.

#### 1.7.2.6 FAQ 6: Enabling the Trace for Web-to-go Server

How do I enable the trace and collect trace data for Web-to-Go server?

**Resolution** Perform these steps:

1. Stop the web-to-go server.
2. Open the consolidator.ini file and set the parameter TRACE = TRUE.

3. Start the web-to-go server. Now the trace is shown on the screen.
4. Alternatively, you can edit the http.bat file to redirect the output to a log file for example, http.log.

#### 1.7.2.7 FAQ 7: Enabling the Trace for MGP

How do I enable the trace and collect trace data for MGP?

**Resolution** Perform these steps:

1. Stop the MGP.
2. Open the consolidator.ini file and set the parameter TRACE = TRUE.
3. Start the MGP. Now the trace is shown on the screen.
4. Alternatively, you can edit the mgp.bat file to redirect the output to a log file, for example, mgp.log.

#### 1.7.2.8 FAQ 8: Poor Synchronization Performance

The synchronization performance is not very good.

**Resolution** Make sure that the queries have been optimized by following these steps:

1. Check to make sure that the database memory is properly tuned.
2. Check whether the redo log has a large size.
3. Check to make sure that the database is not checkpointed.

#### 1.7.2.9 FAQ 9: Special Characters Not Viewed Correctly

Special characters are not viewed on the device correctly after synchronization.

**Resolution** Ensure that the Oracle Lite ini file polite.ini has the following entry:

```
DbCharEncoding = NATIVE
```

#### 1.7.2.10 FAQ 10: Publishing the Palm and Laptop applications

How do you publish the Oracle Field Service/Palm and Oracle Field Service/Laptop applications on the Oracle CRM Gateway for Mobile Devices server?

**Resolution:** In order to publish the Field Service Laptop and Palm applications in the MDG server, you need to perform the following steps:

1. Create a directory on the Oracle CRM Gateway for Mobile Devices server, for example, \\CSF. Note that the name CSF is used here as an example. You can give the directory another name, but the rest of the subdirectory names are mandatory.
2. Copy the following files to the directory CSF:
   - CSFLAPTOP.ini
   - CSFPALM.ini
   - install.bat
3. In the CSF directory, create the following directories and subdirectories:
   - For Oracle Field Service/Palm, create this directory: CSFL\win32
   - For Oracle Field Service/Laptop, create this directory: CSFM\palm
4. Copy the Setup.exe of the Oracle Field Service/Laptop application to \\CSF\CSFL\win32.
5. Copy the FieldService file of the Oracle Field Service/Palm application to \\CSF\CSFM\palm. Now, the tree looks as follows:

   \\CSF\CSFLAPTOP.ini

   \\CSF\CSFPALM.ini

   \\CSF\install.bat

   \\CSF\CSFL\win32\setup.exe

   \\CSF\CSFM\palm\FieldService
6. Either run install.bat, or run the following commands from the directory CSF. Both install.bat and these commands do the same thing:

   For Oracle Field Service/Laptop:

   wsh -c CSFLAPTOP.ini mobileadmin/manager@webtogo

   For Oracle Field Service/Palm:

   wsh -c CSFPALM.ini mobileadmin/manager@webtogo
7. Go to the webtogo administrator page ( ) and check if the applications are available.

8. Check also that the access is enabled for the PUBLIC GROUP, or set the access only to the users who should receive the applications.

#### 1.7.2.11 FAQ 11: Publishing the Field Service applications

What are the troubleshooting steps to be followed while publishing the Field Service applications on the CRM Gateway for Mobile Devices server?

**Resolution** You need to make sure that you use the correct directory structure when you publish the win32 and palm clients.

The native files must be located in a subdirectory with the platform name. That is, if your applications directory in the repository is /app1, then the palm files are located in: /app1/palm and the win32 files are located in: /app1/win32.

So you could use the following application root directories:

Oracle FieldService/Palm \CSF\CSFM\

Oracle Field Service/Laptop\CSF\CSFL\

#### 1.7.2.12 FAQ 12: Changing the host or machine

What do I need to do if the host changes or if I need to restore the CRM instance in a different machine?

**Resolution** You need to edit the information about the CRM instance. Perform the following steps:

1. Log in to the Enterprise portal (apache login) in the Enterprise server.
2. Navigate to the Enterprise tab and edit the information for the following:
   - Host name
   - Port
   - Oracle server ID
3. Use the restore links utility provided to restore database links to the new database instance for every CRM Gateway for Mobile Devices you have configured.

#### 1.7.2.13 FAQ 13: Where are the MDG errors logged ?

**Resolution** The CRM Gateway for Mobile Devices Administrator Portal provides the capability to log the errors for the following operations:

- CRM Gateway for Mobile Devices creation
- Mobile user creation
- User synch
- Transaction refeshment

1. Navigate to the View Log tab to view the errors related to the CRM Gateway for Mobile Devices creation and mobile user creation operations.
2. Navigate to the Error Log tab to view the error descriptions and error messages in details related to the user synch and transaction refreshment operations.

## 1.8 Quick Reference for CRM Gateway for Mobile Devices Implementation

| Step | Action | Done (Yes/No) | Issues |
|---|---|---|---|
| CRM Applications Database Prerequisites | ■ Make sure that Advanced Replication is installed<br>■ Check Advanced Queues<br>■ Verify Unique Global Name<br>■ Set init.ora parameters<br>■ Run Snapshot Log Creation Scripts<br>■ Schedule Concurrent Programs | | |
| CRM Gateway Installation | ■ Set System Profile Option Values<br>■ Create Oracle Application User for CRM Gateway for Mobile Devices Web Administration Console | | |

| Step | Action | Done (Yes/No) | Issues |
|---|---|---|---|
| CRM Gateway Installation. (Oracle 8i database Installation) | ■ Create the Oracle8i (8.1.6.1.2) Database for CRM Gateway for Mobile Devices<br>■ Install all relevant patches<br>■ Set init.ora parameters<br>■ Create ADMIN users and tablespaces<br>■ Load the asgmtran.jar file into the CRM Gateway for Mobile Devices database (copied from the applications file system)·<br>■ Verify Unique Global Name | | |
| CRM Gateway Installation. (Oracle Lite Installation) | ■ Install Oracle 8i Lite Synchronization Server 4.0.0.3.1<br>■ Install the Oracle 8i Lite patch (Version 4.0.0.6.0 or above) | | |
| CRM Gateway Installation (Creation) | ■ Use all relevant passwords<br>■ Start Creation<br>■ View Creation Logs | | |
| CRM Gateway Administration | ■ Enable Synchronization<br>■ Create mobile users<br>■ Publish Mobile Applications<br>■ Enable and disable logging for the Synchronization Server<br>■ Configure Oracle 8i Lite MGP<br>■ Monitor the refresh and queue jobs on the Gateway database<br>■ Use the CRM gateway upgrade utility | | |