Installation Guide

QAD Customer Relationship Management

Overview
Installation
Post-Installation Configuration
Upgrade

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QAD CRM 6.6.1
April 2013

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Change Summary

The following table summarizes significant differences between this document and the last published version.

Date/Version	Description	Reference
April 2013/6.6.1 Rev1	Updated some steps in Installing QAD CRM on the Deployment Server	page 18
	Updated the steps of Performing Additional Configurations for Integration with QAD Enterprise Applications	page 39
	Updated the steps of Generating and Copying QAD CRM WebClient Files	page 42
	Added supplementary information to Installing QAD CRM on End User PC	page 70
	Added information about the dump and load utility	page 85
March 2013/6.6.1	Updated information about upgrading CRM 6.4.4 to CRM 6.5.1	page 106
	Updated information about upgrading CRM 6.5.1 to CRM 6.6.1	page 107
	Updated information about integrating CRM with QAD SE	page 115
November 2012/6.6	Updated information about upgrading CRM 6.5.1 to CRM 6.6	page 107
September 2012/6.6	Rebranded for version 6.6	--
September 2012/6.6	Updated information about support for Exchange Server 2010	--
April 2012/6.5.1-Rev1	Updated information about QAD CRM WebClient configuration	--
March 2012/6.5.1	Revamped the whole book for QAD CRM WebClient in numerous places	--
September 2011/6.4.4	Added a reminder for completing further configuration steps required for sales order integration documented in the QAD CRM Administration Guide	--

Chapter 1

Overview

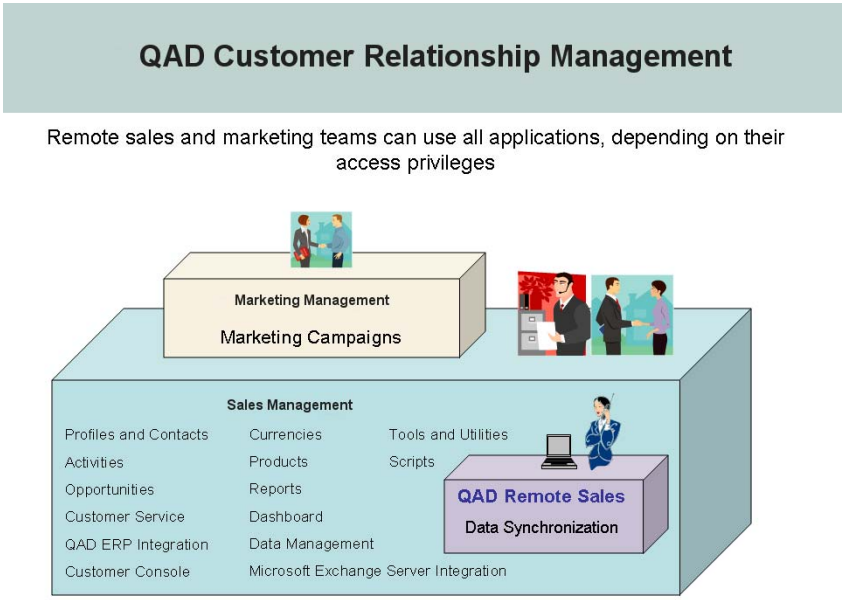
This chapter provides an overview of QAD Customer Relationship Management (QAD CRM) and its enterprise-wide deployment. It discusses the following topics:

Overview

QAD CRM is a comprehensive business-generating system that consists of several applications:

- QAD Sales Force Automation (QAD SFA). This is the core of the system that is designed to help you streamline sales efforts by managing your contacts, activities, business opportunities, product details, and so on.
- QAD Remote Sales. This is an optional stand-alone version of QAD CRM that lets remote sales personnel synchronize their data with the host database.
- QAD Marketing Automation. This optional application provides comprehensive campaign management features designed to streamline marketing efforts. All modules available in QAD Sales Force Automation are included in QAD Marketing Automation.

Fig. 1.1
QAD CRM Functional Areas



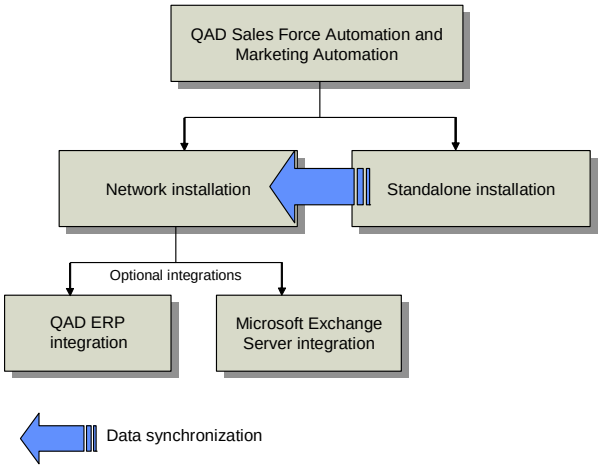
QAD CRM applications can communicate with each other to share information. For example, sales and marketing departments can share details of customers, prospects, partners, and suppliers through the application they use. The system ensures organizational and departmental data security by selectively restricting user access to data.

The system can integrate and synchronize data with different versions of QAD EE and QAD SE, as well as Microsoft Exchange Server 2007 and 2010.

When remote users synchronize data in their personal database with the host databases, they indirectly synchronize data with the integrated system.

You can install QAD CRM as a thin client application. QAD Remote Sales is installed on remote computers as a stand-alone application.

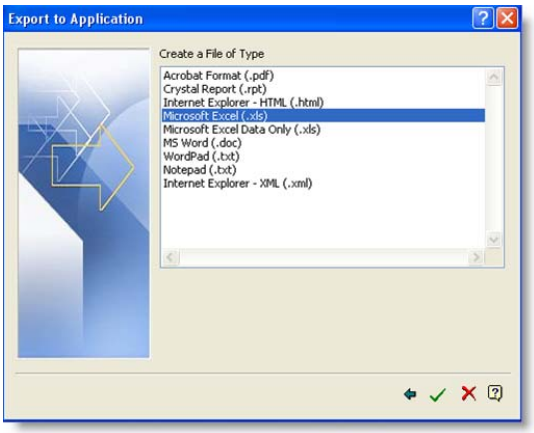
Fig. 1.2
Installation Overview



The system also integrates with other third-party applications—Microsoft Word 2007/2010, Microsoft Excel 2007/2010, Crystal Report XI, and Phone Dialer—to support various functions. For example, you can create business letters using Microsoft Word templates registered in the system.

Microsoft Word is required if you want to use the mail merge feature to create letters to contacts, send marketing literature to your targeted audience, or print quotes. One specific report—installed base report—requires Microsoft Excel integration. Both Word and Excel are required for integration with Crystal reports, which lets you export reports to a number of standard Microsoft Office document formats supported by QAD CRM.

Fig. 1.3
Crystal Report Export



The architecture, features, and functionality of the system meet enterprise requirements of reliability, scalability, flexibility, and maintainability.

Installation

You can install QAD CRM across the enterprise network as a thin client using the Progress WebClient technology. QAD Remote Sales is installed on remote computers as a stand-alone application.

To install the system you should be familiar with the following technologies and products:

- Progress
- TCP/IP networking
- QAD CRM
- QAD EE/SE
- Microsoft Exchange Server 2007 or 2010
- UNIX or Linux
- Text editors

Installing QAD CRM on a Network

1. Ensure that your hardware and software infrastructure meets the minimum requirement criteria for installation.
2. Plan the network installation.
3. Ensure that all required Progress components are installed.
4. Set up the system on the deployment and database servers:
   a. Install and configure program components on the deployment server.
   b. Set up the database server.
   c. Set up the delivery server (a Tomcat Web server) to host the QAD CRM Webapps.
   d. Configure the servers to communicate with CRM WebClient.
   e. Set up the system installation environment to integrate with QAD Enterprise Applications.
   f. Prepare the AppServer environment to support Microsoft Exchange Server 2007 or 2010 integration, QAD Enterprise Applications (Enterprise Edition) integration, and Remote Sales data synchronization.
5. Set up the clients.

   The CRM client can be easily configured on a computer by just clicking on a URL once the system has been configured by the administrator for use in WebClient mode.
6. Make sure that the database application server and delivery servers are up and running. The CRM client can be launched by just clicking the icon created by the CRM WebClient installation.

Installing QAD Remote Sales

1 From QAD CRM:

   a Create remote or regional nodes.

   b Enable data synchronization.

   c Create host database subset.

2 On the remote computer(s):

   a Ensure that the hardware and software configuration of remote computers meet the minimum requirement criteria for installation.

   b Install Progress Personal Database.

   c Install QAD Remote Sales.

   d Load the host node subset onto the Progress Personal Database.

   e Enable data synchronization.

Configuration

You must configure QAD CRM according to the requirements of your company. Configuration tasks can be categorized as mandatory or functional.

- Mandatory tasks include setting up the system for enterprise-wide use by configuring business unit details, administrator profile, base currency, and so on. When you start the system after installation, you can configure it with mandatory information by using the Configuration Wizard.
- Functional tasks include configuring user profiles, teams, menus, reports, templates, system settings, and so on by using the system setup modules.

Integration

You can integrate the system with your QAD Enterprise Applications and Microsoft Exchange Server 2007 or 2010 to enhance its scope.

Integration with QAD Enterprise Applications

Various modules of your QAD Enterprise Applications can be integrated with QAD CRM through CIM, QXtend, database, and session triggers to provide efficient and fast online integration. QAD CRM supports integration with multiple domains of QAD Enterprise Applications.

For integration purposes the databases must run in multi-user mode and must always be available. The file server that holds QAD Enterprise Applications programs must include certain QAD CRM programs. Similarly, the file server that holds QAD CRM programs must contain certain QAD Enterprise Applications programs.

After configuring the applications you can enable and configure the integration as required. You can then perform the initial data transfer between the integrated systems.

Integration with Microsoft Exchange Server

By integrating the system with Microsoft Exchange Server 2007 or 2010 you can:

- Send e-mail messages from the system using the Microsoft Outlook client.
- Maintain references to e-mail messages stored in Microsoft Outlook in the system.
- Synchronize activity and contact details between the system and Microsoft Exchange Server.
- Synchronize data sent using e-mail messages between the stand-alone version and network version of the system.

For the integration you must install QAD AdminService, which communicates with Microsoft Exchange Server and its components for the integration. You must also install various components on the QAD CRM deployment server and the QAD CRM client and register custom forms in the Exchange organization library to enable integration with Exchange Server.

Chapter 2

Installation

This chapter describes how to install QAD Customer Relationship Management (QAD CRM). It discusses the following topics:

Planning an Installation

This section describes topics you should understand before installing QAD CRM.

If you have experience installing QAD CRM from previous versions, numerous changes have occurred to the installation process.

A QAD CRM installation can be one of three types:

- A new installation.
- A Service Pack installation.
- An installation to support a conversion from an earlier QAD CRM version to the current release (upgrade).

This section only describes how to perform a new installation. To perform a new install, you must plan for the following:

1. An installation addressing:
   - Test and production databases
   - QAD Enterprise Applications integration (optional)
   - Exchange Server integration (optional)
   - QAD Remote Sales (optional)
2. QAD CRM database configuration, including any custom and other side databases.
3. The resulting network, disk, and client layouts.

Security Plan

A successful QAD CRM installation requires a complete security plan. During installation, full permissions are required for system and application tools that are used to load, edit or delete data. In addition, to install the system on a network, you require administrator privileges as installation programs create registry entries and may update some system files that require administrator rights.

In addition, to integrate Exchange Server, you need to create one user; for example, a user with userid `qadsfama` (it could be any user-defined userid), in Active directories with full administrative access.

A security plan typically consists of:

1. Operating-system-level security for tools such as:
   - Progress Editor
   - Progress Data Administrator
   - Progress Application Compiler
2. Operating-system login security.
3. Operating-system permissions and ownership set appropriately for:
   - Database files
   - Log files

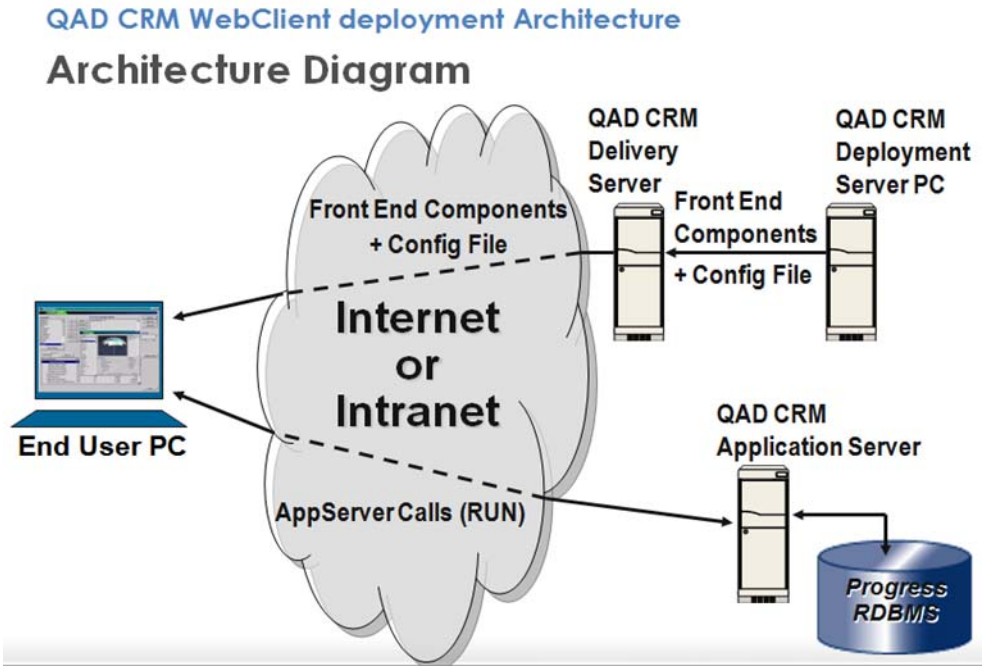
- Application source and compiled source files
- Application startup and shutdown scripts
- Registry

Deployment

You can install QAD CRM on UNIX/Linux and Windows servers. QAD CRM has five components:

- Database server
- Application server
- Deployment server (file server)
- Delivery server (Web server)
- QAD CRM clients (a WebClient/Remote Sales)

Fig. 2.1
QAD CRM Deployment with QAD Enterprise Applications



Database Server

The database server consists of the QAD CRM databases. You build these databases as part of the installation. You first create empty databases, then use the empty databases as a template to build test, production, training, development and other databases. CRM WebClient accesses these databases through an Appserver directly or through a deployment server. QAD CRM stores information in the `bisgen`, `bisgmenu`, and `dataexch` databases.

Application Server

The application server contains Progress AppServer and compiled QAD CRM application code. Application server components can reside on the same machine as the database server.

Deployment Server

The deployment server is the location of the QAD CRM encrypted code, compiled specifically for this machine type. The `.r` code is used to generate cab files that are hosted on the delivery server.

Delivery Server

The delivery server hosts:

- Codebase: QAD CRM files (`.r`, `.ocx`, `.pl`, and so on) that go onto the end user machine; the files may have been installed and updated.
- QAD CRM configuration file.
- Progress WebClient software.

Note Application/Database deployment servers can all reside on same machine.

QAD CRM Clients

QAD CRM has two types of clients:

- WebClient: A CRM WebClient can be configured by clicking on a hyperlink provided by a administartor or a person doing the configuration of CRM at a given site. This link will vary from configuration to configuration but in essence it points to a `qadcrm.prowcapc` file on a Webserver that can be invoked by the client machine, and QAD CRM installation is done automatically. No separate files need to be configured on the client.
- QAD Remote Sales: This is an optional stand-alone version of QAD CRM that lets remote sales personnel use the system in an offline mode and synchronize data with the host database. A client setup is required to install QAD Remote Sales and perform data synchronization.

QAD Enterprise Applications Integration

You can integrate various modules of QAD Enterprise Applications with QAD CRM through QAD QXtend (in the case of QAD EE), CIM through Progress AppServer (sales order transfer), database and session triggers.

For the integration, QAD Enterprise Applications and QAD CRM databases must run in multi-user mode and always be available. The deployment server that holds QAD Enterprise Applications programs must include certain QAD CRM programs. Similarly, the deployment server that holds QAD CRM programs must contain certain QAD Enterprise Applications programs.

QAD recommends that you deploy:

- QAD CRM and QAD Enterprise Applications databases on the same database server.
- The Progress AppServer on the database server.

Exchange Server Integration

You can integrate various modules of Microsoft Exchange Server 2007 or 2010 (e-mails, appointments, tasks, and contacts) with QAD CRM. For integration you must install QAD AdminService. The QAD AdminService is a Windows service that communicates with Microsoft Exchange Server and QAD CRM using Progress AppServer. QAD CRM runs QAD AdminService on the deployment server machine.

QAD recommends deployment of Progress AppServer on the database server.

Network, Disk, and Client Layout

The databases and program files can reside on the same Windows server. Using the same server enhances system performance. However, if there are many clients, you should use separate servers for resource sharing.

The servers must be easily accessible by clients running on workstations across the network. They must have sufficient free hard disk space to accommodate operations performed by system users.

At a machine level, QAD recommends deployment of QAD CRM databases on a database server and software on a file server separate from the database server.

System Requirements

This section describes hardware and software requirements for deploying QAD CRM.

General Requirements

The system administrator must be an experienced Progress database administrator with experience managing Progress client processes. Before installing QAD CRM, Progress must be installed following the instructions in the Progress installation guide. The Progress install for each platform may include UNIX kernel changes and patches.

Database Server

The database server contains QAD CRM and Progress server software, as well as your production data. You should estimate the final size of your production database and the demands placed on different components of the database before starting an installation so that you can lay out your disks appropriately.

Table 2.1
Hardware Requirements for Database Server

Hardware Component	Minimum Requirement
Processor	Pentium 4 2.80 GHz, dual processor or above
RAM	4 GB For better performance, use 8 GB or more of RAM .

Hardware Component	Minimum Requirement
Hard disk	8 GB The hard disk requirement may be more, depending on the number of: • Environments you want to create. The environments are compilation, test, and production. • Users that will connect to the server.
Others	SVGA color monitor High-speed 100MB Ethernet card CD-ROM drive

Table 2.2
Software Requirements for Database Server

Software Component	License Type	Version
Progress	Enterprise Database Server	10.1C03, 10.2A02, 10.2B01, 10.2B02, 10.2B05, 10.2B06
Progress	AppServer Enterprise	10.1C03, 10.2A02, 10.2B01, 10.2B02, 10.2B05, 10.2B06
Progress	4GL (1 user)	10.1C03, 10.2A02, 10.2B01, 10.2B02,10.2B05, 10.2B06
Operating System		UNIX/Linux/Windows 2008/Windows 2003

Deployment Server

Table 2.3
Hardware Requirements for Deployment Server

Hardware Component	Minimum Requirement
Processor	Pentium 4 2.80 GHz, dual processor or above
RAM	4 GB For better performance, use 8 GB or more of RAM .
Hard disk	8 GB The hard disk requirement may be more, depending on the number of: • Environments you want to create. The environments are compilation, test, and production. • Users that will connect to the server.
Others	SVGA color monitor High-speed 100MB Ethernet card CD-ROM drive

Table 2.4
Software Requirements for Deployment Server

Software Component	License Type	Version
Progress	OE Studio (1 user)	10.1C03, 10.2A02, 10.2B01, 10.2B02, 10.2B05, 10.2B06
Operating System		Windows 2008/Windows 2003

Delivery Server

Table 2.5
Hardware Requirements for Delivery Server

Hardware Component	Minimum Requirement
Processor	Pentium 4 2.80 GHz, dual processor or above
RAM	4 GB For better performance, use 8 GB or more of RAM .
Hard disk	8 GB The hard disk requirement may be more, depending on the number of: • Environments you want to create. The environments are compilation, test, and production. • Users that will connect to the server.
Others	SVGA color monitor High-speed 100 MB Ethernet card CD-ROM drive

Table 2.6
Software Requirements for Delivery Server

Technology Component	Server
Web Server	Apache Tomcat 6.0
Operating System	UNIX/Linux/Windows 2008/Windows 2003

QAD CRM WebClient

Table 2.7
Hardware Requirements for Client

Hardware Component	Minimum Requirement
Processor	Pentium 4 3.00 GHz processor
RAM	1 GB
Hard disk	2 GB
Others	SVGA color monitor Network card Ethernet connection running TCP/IP protocol In case of QAD CRM configuration over a WAN, following additional requirements must be met: • Minimum latency between end user PC and Application Server should be less than 200 ms

Table 2.8
Software Requirements for Client

Software Component	License Type	Version
Operating System		Windows 2003/XP/Vista/2008/7

Software Component	License Type	Version
Progress WebClient		10.1C03/10.2A02/ 10.2B01/10.2B02/10.2B05, 10.2B06
Internet Explorer		V7.0 / V8.0

QAD Enterprise Applications Integration

Table 2.9
Requirements for QAD Enterprise Applications Integration

Technology Component	Server	Client
QAD Enterprise Applications	QAD 2007.1 SE, QAD 2008 SE, QAD 2008.1 SE, QAD 2009 SE, QAD 2009 EE, QAD 2009.1 EE, QAD 2010 SE, QAD 2010 EE, QAD 2010.1 EE, QAD 2011 EE, QAD 2011.1 EE, QAD 2012 EE, QAD 2013 EE	QAD 2007.1 SE, QAD 2008 SE, QAD 2008.1 SE, QAD 2009 SE, QAD 2009 EE, QAD 2009.1 EE, QAD 2010 SE, QAD 2010 EE, QAD 2010.1 EE, QAD 2011 EE, QAD 2011.1 EE, QAD 2012 EE, QAD 2013 EE

Technology Component	License Type	Version
QXtend		1.8, 1.7.1, 1.7.0.15, 1.6.3 NOTE: QXtend is required only if QAD CRM is to be integrated with QAD EE. It is NOT required for integration with QAD SE.

Technology Component	License Type	Version
AIM		3.0.6

Microsoft Exchange Integration

Table 2.10
Requirements for Microsoft Exchange Server 2007 Integration

Technology Component	Server	Client
Microsoft	Microsoft Exchange 2007	Microsoft Outlook 2007 Microsoft Outlook 2010

Table 2.11
Requirements for Microsoft Exchange Server 2010 Integration

Technology Component	Server	Client
Microsoft	Microsoft Exchange 2010	Microsoft Outlook 2007 Microsoft Outlook 2010 Microsoft Outlook WebApp Microsoft Outlook Web Access ActiveSync (from SmartPhone)

QAD Remote Sales

Table 2.12
Hardware Requirements for QAD Remote Sales

Hardware Component	Minimum Requirement
Processor	Pentium 4 3.00 GHz processor
RAM	1 GB For better performance, use 1 GB RAM or more.
Hard disk	4 GB
Others	SVGA color monitor Network card Ethernet connection running TCP/IP protocol CD-ROM drive

Table 2.13
Software Requirements for QAD Remote Sales

Technology Component	License Type	Version
Progress	Personal database	10.1C03, 10.2A02, 10.2B01, 10.2B02, 10.2B05, 10.2B06
Operating System		Windows Vista/XP/7

Users can synchronize data in QAD Remote Sales with data in the host database using Progress AppServer. VPN access to office network is required.

Table 2.14
Progress AppServer Synchronization Requirements

Method	Technology	Server	QAD Remote Sales Client
Progress AppServer	Progress	QAD CRM	VPN Client

Table 2.15
Microsoft Office Integration

Technology Component	License Type	Version
Microsoft Office		2007/2010

MS Office needs to be installed on CRM remote nodes and connected CRM clients. If you want to run CRM directly from the file server using Citrix or RDP, you need to install MS Office on the CRM file server as well. MS Word is used in CRM for sending letters, printing opportunity quotes,

and so on; MS Excel is used to display CRM browser data in various modules and as an output channel for reporting purposes. MS Excel is also used by one specific report—Installed Base Report.

Network

Set up your network to support the Progress specifications. The minimum requirement is a 10 Megabit (Mb) Ethernet or faster network. For better maintenance and performance, QAD recommends the following:

- Install Progress Database and AppServer components on the database server.
- Install all Progress client components (OpenEdge Studio) on the deployment server.
- If you are integrating or planning to integrate with QAD Enterprise Applications, use the same database server and Progress database and AppServer components used by QAD Enterprise Applications.
- 100 Megabit (Mb) Ethernet or faster network.

Deploying QAD CRM

Here are the general steps for deploying QAD CRM:

1. Installing Progress on the Database Server
2. Installing Progress on the Deployment Server
3. Installing QAD CRM on the Deployment Server
4. Setting Up the Database Server
5. Configuring QAD CRM on Deployment Server
6. Configuring the Delivery Server
7. Splitting UI and Backend Programs on the Deployment Server
8. Copying QAD Backend Programs on the Application Server
9. Configuring Application Server
10. A file called `appsrvtt.d` has now been updated to record the AppServer information you have set up. Copy this newly updated `appsrvtt.d` file from the folder *`QADCRMInstallDir`*`\` to the folder *`QADCRMInstallDir`*`\webclient\frontend\` before proceeding to the generation of the CRM cab files in the next section.
11. Integrating QAD CRM with QAD SE or Integrating QAD CRM with QAD EE
12. Configuring QXtend for Integration
13. Configuring the Environment for Sales Order Integration
14. Installing QAD CRM on End User PC
15. Creating Separate QAD CRM Environment
16. Implementing QAD Remote Sales (Optional)

Installing Progress on the Database Server

Make sure the following Progress components are installed on the database server:

- Progress Enterprise database server
- Progress AppServer
- Progress 4GL

QAD recommends deployment of Progress AppServer on the database server.

For information about installing Progress components, refer to the Progress software installation guides.

Installing Progress on the Deployment Server

You must have local administrator access to perform the required Progress and QAD CRM installation on the deployment server.

For information about installing Progress components, refer to the Progress software installation guides.

Installing QAD CRM on the Deployment Server

After planning the deployment and installing all Progress components, you can install the system from the installation CD. You can also download QAD CRM from QAD web site.

The first step is to set up the deployment server. The deployment server:

- Contains all program files
- Manages file sharing
- Manages system security
- Coordinates communication between workstations

To load the installation media, you must have Administrator privileges on the deployment server machine. Close all other applications before beginning the installation process.

Other applications or tasks might interfere with the installation or use files that CRM needs to complete the installation. Shut down any processes where the executable itself, or a file used by the executable, is located in the directory where you intend to install CRM.

Use the following steps to install QAD CRM components on the deployment server:

1 Launch the installation program from the installation medium you plan to use as described in the following table:

For this Installation medium...	**Do the following...**
CD	Insert the CD into the drive. If it does not run automatically, double-click `setup.exe` in the root directory of the CD to start the installation.
DVD	Double-click the `setup.exe` in the root directory to start the installation.
Software Distribution download	Download all the files to a folder (for example, `c:\qadcrmmedia`), then double-click `setup.exe` to start the installation.

2 On the QAD CRM Setup Wizard Welcome screen, click Next.

If QAD CRM 6.1, CRM 6.2, CRM 6.3, CRM 6.4b2, CRM 6.4b6, or CRM6.4b8 is found on the system, a warning prompts you to continue with the installation. Click Yes to proceed or No to abort the setup.

Note QAD recommends that you uninstall any previous versions of QAD CRM prior to installing the latest release. However, this warning message only appears when CRM 6.1, CRM 6.2, CRM 6.3, CRM 6.4b2, CRM 6.4b6, or CRM 6.4b8 is installed on your computer.

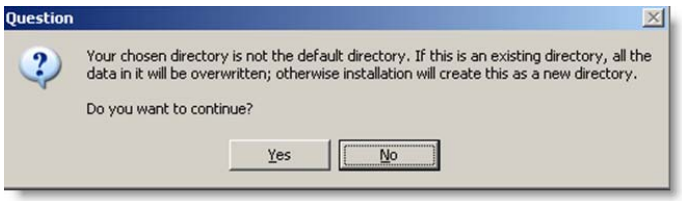
3 Setup checks for supported versions of Progress on the computer.

- If no compatible Progress version is found, Setup displays an error message and aborts the installation.
- If more than one Progress version is installed on the computer, Setup locates the highest version of Progress supported by CRM that is available for use.

4 Setup checks for Microsoft .NET Framework 4.0 on the system.

- If Microsoft .NET Framework 4.0 is already installed, skip to the next step.
- If Microsoft .NET Framework 4.0 is not installed, Setup prompts you to install the component. Click Yes to install .NET Framework 4.0. Setup Wizard installs the component.

5 The Destination Location screen appears. Accept the default installation directory and click Next. If you specify another directory other than the default location, you will see the following message:



6 In the Program Folder Name screen, specify the program folder name for QAD CRM and click Next.

7 In the QAD CRM Setup Confirmation screen, review the selected setup options. To change the options, click Back; click Install to start the installation process.

8 If the Crystal Distribution package is not installed on the computer, the Crystal Distribution Setup Wizard screen appears. Follow the on-screen instructions to complete the installation of this component.

a On the Crystal Distribution Setup Wizard Welcome screen, click Next.

b On the Select Installation Folder screen, click Next.

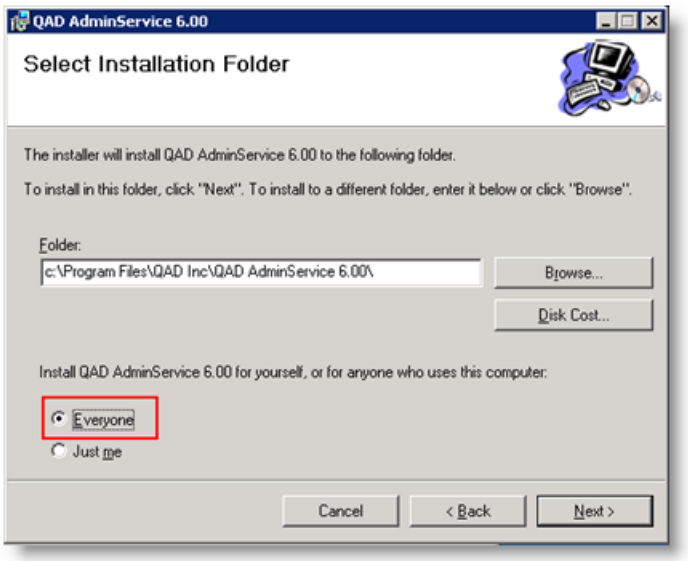
c On the Confirm Installation screen, click Next.

d When installation is complete, click Close.

9 If QAD AdminService is not installed, the AdminService Setup Wizard screen appears. Follow the on-screen instructions to complete the installation of this component.

a On the QAD AdminService Setup Wizard Welcome screen, click Next.

b On the Select Installation Folder screen, check the installation folder and change if required. Select “Everyone” from the installation option and click Next.



c On the Confirm Installation screen, click Next.

d Select English (United States) from the language list and then click OK.

e When Installation is complete, click Close. The Installation Log screen appears.

f Select the “I would like to view the Installation Log file” check box and then click Finish. The log file is opened in Microsoft Windows Notepad.

g Check the log file for errors. Errors begin with two asterisks (**) in the log file. Contact QAD Support if errors are found.

10 When QAD CRM installation is complete, Setup creates the following QAD CRM shortcut icons in the QAD CRM program folder.

- QAD CRM Help: Launches QAD CRM online help.
- QAD CRM Demo: Launches the QAD CRM demo environment. To log in to the demo environment, use the username demo and leave the password blank.
- QAD CRM Deployment Utility: A control center for configuring, compiling upgrading or setting up CRM for WebClient mode or setting up the QAD CRM Remote Sales environment.

Note It is useful to understand how files are organized in the installation directory for administration tasks, such as the system to integrate with QAD Enterprise Applications.

Testing the System

To test the installation on the deployment server:

1. Choose Start|All Programs|QAD CRM 6.6.1|QAD CRM Demo.
2. In the User ID field, type `demo`. Leave the Password field blank.
3. Test the system functionality.

   If you encounter any errors, contact QAD Support.

Setting Up the Database Server

QAD CRM is a multi-database application that requires a minimum of three databases connected concurrently to a single session. Each QAD CRM session connects to, at minimum, a main database (`bisgen`), an administration database (`bisgmenu`) and a data synchronization database (`dataexch`). If you plan to integrate with QAD Enterprise Applications, you need to connect to other databases.

Working QAD CRM databases are created in two stages. You first create empty databases, then use them as a template to build test, production, training, development and other databases.

To set up databases in a UNIX/Linux server, you must have experience creating databases and loading data definition files in Progress. You must also know how to modify system files such as service and startup scripts for databases, and have the appropriate write permission to make the required file and folder updates.

QAD CRM supports the following code pages:

- Unicode (UTF-8)
- ISO (ISO8859-1)

For non-iso languages, CRM databases should be configured to run in Unicode.

Important Languages requiring Unicode character sets must be able to access Unicode components in the `DLC/prolang/utf` directory on the server.

Before creating the database, determine the following:

1. The directory where you want to create the QAD CRM databases, referred to as *`QADCRMInstallDirDatabaseServer`*`/db`
2. The Progress directory
3. The host name of the database server

QAD recommends that you deploy QAD CRM and QAD Enterprise Applications databases on the same database server.

Set the Progress `DLC` variable correctly and ensure that the `$DLC\bin` directory is included in the `PATH` environment variable. `DLC` is the directory where Progress is installed, and `bin` is a subdirectory of `DLC` where the most often used Progress executables reside.

Setting Up Databases in a UNIX/Linux Server

Creating Non-Unicode Databases

To create empty databases in a UNIX/Linux server:

1. Go to *QADCRMInstallDirDatabaseServer*/db.
2. Transfer all the data definition (.df) and structure (.st) files from *QADCRMInstallDirDatabaseServer*/db/df to QADCRMInstallDirDatabaseServer/db using an FTP or WinSCP program.
3. Enter the following:

```
prostrct create bisgen bisgen.st –blocksize 8192
prostrct create bisgmenu bisgmenu.st –blocksize 8192
prostrct create dataexch dataexch.st –blocksize 8192
procopy $DLC/empty8 bisgen
procopy $DLC/empty8 bisgmenu
procopy $DLC/empty8 dataexch
```

4. Start the Progress data dictionary using the command:

```
_progres -p _admin.p
```

5. Connect bisgen, bisgmenu, and dataexch databases and load data definitions into it that define each table, field, and index in the database.
6. The database schema (.df file) consists of the sequences, tables, fields and indexes in the database. In this task, you load the schema into the empty bisgen, bisgmenu, and dataexch databases using data definition files bisgen.df, bisgmenu.df and dataexch.df. Load the data definition files using the Progress data dictionary tool.
7. The resulting empty databases are used to build all your main and support databases such as bisgenprod, bisgentest, and bisgentrain. Create copies of the databases for backup and testing purposes.

Creating Unicode Databases

1. Go to *QADCRMInstallDirDatabaseServer*/db.
2. Transfer all the data definition (.df) and structure (.st) files from QADCRMInstallDirDatabaseServer/db/df to *QADCRMInstallDirDatabaseServer*/db using an FTP or WinSCP program.
3. Type the following:

```
prostrct create bisgen bisgen.st -blocksize 8192
prostrct create bisgmenu bisgmenu.st -blocksize 8192
prostrct create dataexch dataexch.st -blocksize 8192
procopy $DLC/prolang/utf/empty8 bisgen
procopy $DLC/prolang/utf/empty8 bisgmenu
procopy $DLC/prolang/utf/empty8 dataexch
```

4 Load the ICU-UCA collation table.

a Start the Progress data dictionary using the following command:

```
_progres -p _admin.p
```

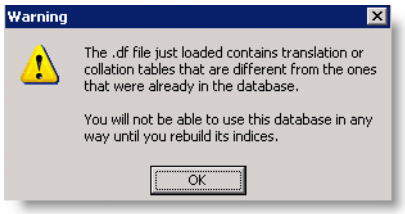
b Connect to the database you want to load the ICU-UCA collation table into by choosing Database|Connect from the menu.

c Choose Admin|Load Data and Definitions|Data Definitions (.df file). Locate the file `ICU-UCA.df` in *$DLC*`/prolang/utf/` and load it into the database.

Ignore the following error and warning messages:

```
Error: Collation tables for database DBName have been changed. You must
rebuild all the indexes in order to reconnect to this database. (2609)
```

Fig. 2.2
Warning Message



d Disconnect from the database by choosing Database|Disconnect from the menu.

Note Repeat steps b through d for each of the three CRM databases—bisgen, bisgmenu, and dataexch.

Note Whenever you use Progress tools such as Data Dictionary or Data Administration for setting up Unicode databases, make sure that the `.pf` file used by the Progress session specifies the following parameters:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

5 Rebuild indexes. Execute the following command to rebuild index for the new ICU-UCA collation:

```
proutil DBPath/bisgen -C idxbuild all -cpinternal UTF-8
proutil DBPath/bisgmenu -C idxbuild all -cpinternal UTF-8
proutil DBPath/dataexch -C idxbuild all -cpinternal UTF-8
```

6 Load your .df files.

Start the Progress data dictionary using the following command:

```
_progres -p _admin.p
```

Connect to the bisgen, bisgmenu, and dataexch databases and load into them data definitions that define tables, fields, and indexes in the databases.

Note For the bisgen Unicode database, you should skip loading `bisgen.df` and load `bisgen_utf.df` instead.

7 Use the empty databases to build your main and support databases such as bisgenprod, bisgentest, and bisgentrain. Create copies of the databases for backup and testing purposes.

Setting Up Databases on a Windows Server

The QAD CRM installation uses or creates several directories. If you use the default directories and they do not exist at the time of installation, they are created automatically. This applies the ownership and appropriate permissions. However if you create or use the other directories outside installation, make sure that permissions are set properly.

The QAD CRM Installation environment has a db folder. QAD recommends that you keep the databases in this folder. For example, you can keep test databases by creating a new *QADCRMInstallDir*\db\test folder.

Before creating the database, determine the following:

1. The directory where you want to create the QAD CRM databases
2. The Progress directory
3. The host name of the database server

Set the Progress DLC variable correctly and ensure that the %DLC%\bin directory is included in the PATH environment variable. DLC is the directory where Progress is installed, and bin is a subdirectory of DLC where the most often used Progress executables reside.

To add DLC and PATH to user environment variables:

1. From the Desktop, choose Start|Settings|Control Panel.
2. Double-click the System icon and select the Advanced tab.
3. Click the Environment Variable button.
4. Click New under the User variables for <*user name*> listbox. The New User Variable dialog box appears.
5. In the Variable name field, type DLC.
6. In the Variable value field, type the Progress installation path. Then click OK.
7. Repeat Step 4 to create a PATH environment variable. In the Variable value field, type the following:

```
%PATH%;%DLC%;%DLC%\bin
```

When you have added the DLC and PATH environment variables, use the DOS command prompt to run all the Progress commands.

Creating Non-Unicode Databases

1. Create two folders test and prod to hold the test and production databases under *QADCRMInstallDir*\db respectively.
2. Using Windows Explorer, copy all the database structure (.st) and data definition (.df) files from *QADCRMInstallDir*\db\df to *QADCRMInstallDir*\db\test—assuming that you want to place your newly created databases in the *QADCRMInstallDir*\db\test folder.
3. From the desktop, choose Start|Run. The Run dialog box appears. Enter cmd in the Open field. Then click OK.
4. Change to the *QADCRMInstallDir*\db\test directory.
5. Enter the following:

```
prostrct create bisgen bisgen.st -blocksize 8192
prostrct create bisgmenu bisgmenu.st -blocksize 8192
prostrct create dataexch dataexch.st -blocksize 8192
procopy %DLC%/empty8 bisgen
procopy %DLC%/empty8 bisgmenu
procopy %DLC%/empty8 dataexch
```

6. Start the Progress data dictionary using the command:

```
_progres -p _admin.p
```

7. Connect the bisgen, bisgmenu, and dataexch databases and load data definitions that define each table, field, and index in the database.
8. The database schema (.df file) consists of the sequences, tables, fields, and indexes in the database. You load the schema into the empty bisgen, bisgmenu, and dataexch databases using the data definition files bisgen.df, bisgmenu.df and dataexch.df. Load the data definition files using Progress data dictionary tool.

   The resulting empty databases are used to build all your main and support databases such as bisgenprod and bisgentrain. Create copies of the databases for backup and testing purposes.

Creating Unicode Databases

To create Unicode databases on the Windows Server:

1. Create two directories—test and prod—for the test and production databases under *QADCRMInstallDir*\db respectively.
2. Copy all the database structure (.st) and data definition (.df) files from *QADCRMInstallDir*\db\df to *QADCRMInstallDir*\db\test.
3. From the Windows Start menu, choose Run; then enter cmd and click OK to open the command window.
4. Change to the *QADCRMInstallDir*\db\test directory.

5 Enter the following:

```
prostrct create bisgen bisgen.st -blocksize 8192
prostrct create bisgmenu bisgmenu.st -blocksize 8192
prostrct create dataexch dataexch.st -blocksize 8192
procopy %DLC%\prolang\utf\empty8 bisgen
procopy %DLC%\prolang\utf\empty8 bisgmenu
procopy %DLC%\prolang\utf\empty8 dataexch
```

6 Load the ICU-UCA collation table.

a Start the Progress data dictionary using the following command:

```
_progres -p _admin.p
```

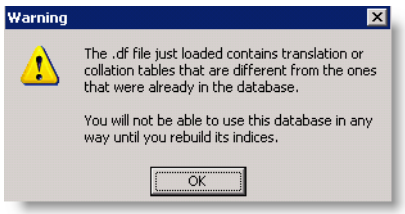
b Connect to the database you want to load ICU-UCA collation table into by choosing Database|Connect from the menu.

c Choose Admin|Load Data and Definitions|Data Definitions (.df file). Locate the file `ICU-UCA.df` in `%DLC%\prolang\utf\` and load it into the selected database.

Ignore the following error and warning messages:

```
Error: Collation tables for database DBName have been changed. You must
rebuild all the indexes in order to reconnect to this database. (2609)
```

Fig. 2.3
Warning Message



d Disconnect from the database by choosing Database|Disconnect from the menu.

Note Repeat steps b through d for each of the three CRM databases—bisgen, bisgmenu, and dataexch. Whenever you use Progress tools such as Data Dictionary or Data Administration for setting up Unicode databases, make sure that the .pf file used by the Progress session specifies the following parameters:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

7 Rebuild indexes. Execute the following command to rebuild indexes for the new ICU-UCA collation:

```
proutil DBPath/bisgen -C idxbuild all -cpinternal UTF-8
proutil DBPath/bisgmenu -C idxbuild all -cpinternal UTF-8
proutil DBPath/dataexch -C idxbuild all -cpinternal UTF-8
```

8 Load your .df files.

Connect to the bisgen, bisgmenu, and dataexch databases and load into them data definitions that define tables, fields, and indexes in the databases.

Note For the bisgen Unicode database, you should load `bisgen_utf.df` instead of `bisgen.df`.

9 Use the Progress Data Dictionary tool to load the data definition files `bisgen.df`, `bisgmenu.df`, and `dataexch.df` into the empty bisgen, bisgmenu, and dataexch databases.

10 Use the empty databases to build your main and support databases such as bisgenprod, bisgentest, and bisgentrain. Create copies of the databases for backup and testing purposes.

Starting Databases in Multi-User Mode

To enable clients to communicate with the databases, you need to start databases in multi-user mode.

1 On the database server machine, tailor your services file. All services names, host names, and port numbers must match in the services files of each client and each database server on the network. The location of the UNIX/Linux services file on the server is typically the `/etc` directory. On Windows, it is located in `C:\windows\system32\drivers\etc`.

Note The more users you expect to have, the more numbers you should leave open between port numbers.

2 If your Database server and Appserver process reside on different machines, you must start the Database in client server mode with the following instructions.

Add the names of your database services to your services file. Add one for each main database and any other databases you plan to connect to. Limit the service name to 16 characters. You can use any unused port numbers.

The database service names and suggested port numbers are described below. If these port numbers conflict with your existing setup, you must specify appropriate numbers.

Service Name	Port #/Protocol	Comment
`bisgentest`	2030/tcp	`# test bisgen`
`bisgmenutest`	2040/tcp	`# test bisgmenu`
`dataexchtest`	2050/tcp	`# test dataexch`
`bisgenprod`	2060/tcp	`# Production bisgen`
`bisgmenuprod`	2070/tcp	`# Production bisgmenu`
`dataexchprod`	2080/tcp	`# Production dataexch`

3 Start the databases in multi-user mode using one of the following:

- Progress Explorer (Windows only)
- Batch files

The installation technician is responsible for supplying and customizing the batch files.

If you plan to integrate with QAD Enterprise Applications, QAD recommends that you use QAD Enterprise Applications startup and shutdown scripts.

4 Make sure that the databases are running properly. In case of errors, check Progress help and database startup parameters.

Configuring QAD CRM on Deployment Server

Compiling Encrypted Files

QAD CRM supports the following three scenarios:

- QAD CRM Without Integration with QAD Enterprise Applications
- QAD CRM Integrated with QAD Enterprise Applications (Standard Edition)
- QAD CRM Integrated with QAD Enterprise Applications (Enterprise Edition)

QAD CRM Without Integration with QAD Enterprise Applications

Compiled programs with ISO databases (`.r` code) are shipped with the product. If you are using QAD CRM with OE10.2B06 and an ISO database in a standalone configuration, then you can skip directly to the section “Configuring Application Server”. Otherwise, go to the section “Compilation Procedure” and implement the steps.

QAD CRM Integrated with QAD Enterprise Applications (Standard Edition)

1. Rename the file *`QADCRMInstallDir`*`\system\psys0101.i`; for example, you can rename the file to `psys0101.i.org`.
2. Copy `psys0101.i` from *`QADCRMInstallDir`*`\integration\eb21` to the folder *`QADCRMInstallDir`*`\system`.
3. Create a folder called `xrc` under *`QADCRMInstallDir`* and then copy all programs and subdirectories from *`QADERPInstallDir`*`/xrc` to *`QADCRMInstallDir`*`\xrc`.
4. Go to the section “Compilation Procedure”.

QAD CRM Integrated with QAD Enterprise Applications (Enterprise Edition)

1. Rename the file *`QADCRMInstallDir`*`\system\psys0101.i`; for example, you can rename the file to `psys0101.i.org`.
2. Copy `psys0101.i` from *`QADCRMInstallDir`*`\integration\eb3` to the folder *`QADCRMInstallDir`*`\system`.
3. Create a folder called `xrc` under *`QADCRMInstallDir`* and then copy all programs and subfolders from *`QADERPInstallDir`*`/xrc` to *`QADCRMInstallDir`*`\xrc`.
4. Copy `proxy.pl` from *`QADERPInstallDir`*`/fin` to *`QADCRMInstallDir`*`\mfgsrv`.

   If Progress installed on the QAD Enterprise Applications server machine is 64 bit and Progress installed on the QAD CRM deployment server machine is 32 bit, copy the Progress 32-bit version of the `proxy.pl` file from the QAD Enterprise Applications (EE) installation media. From the installation media, extract the `mfgproap32/mfgproap32.zip` file, which contains 32-bit `proxy.pl`, to *`QADCRMInstallDir`*`\mfgsrv`.
5. Open `cbserver.xml` under *`QADCRMInstallDir`*`\integration\mfgpro` in Notepad and modify `appServiceURL` with QAD Enterprise Applications Financials AppServer details. In the following example, col45 is the AppServer host name, 42398 is the NameServer port number, and QADFdevsfm93app is the QAD EE Financial AppServer broker name.

6 Go to the section “Compilation Procedure”.

Compilation Procedure

1 Create a word break rule file for the CRM Unicode databases (Unicode Environment only).

a Start a command window (`cmd.exe`) and set the DLC and PATH variables.

```
set DLC=ProgressInstallDir
set PATH=%PATH%;%DLC%;%DLC%\bin
```

b Change the current directory to the Progress installation directory.

```
cd %DLC%
```

c Compile the new word break rule file using the following command.

```
proutil -C wbreak-compiler %DLC%\prolang\convmap\utf8-bas.wbt 1
```

d Double check that the file created in the previous step named `proword.1` now exists in the `%DLC%` folder.

2 Modify the .pf file.

In case QAD CRM is integrated with QAD Enterprise Applications, modify *`QADCRMInstallDir`*`\qadsfamaupgrade.pf` to additionally connect all QAD Enterprise Applications databases.

Note Make sure that you have included the parameter `-ld qaddb` to set the logical database name of the main QAD Enterprise Applications database as qaddb.

For a Unicode environment, you must perform the following additional steps:

a Update or add the following parameter values in *`QADCRMInstallDir`*`\qadsfamaupgrade.pf`:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

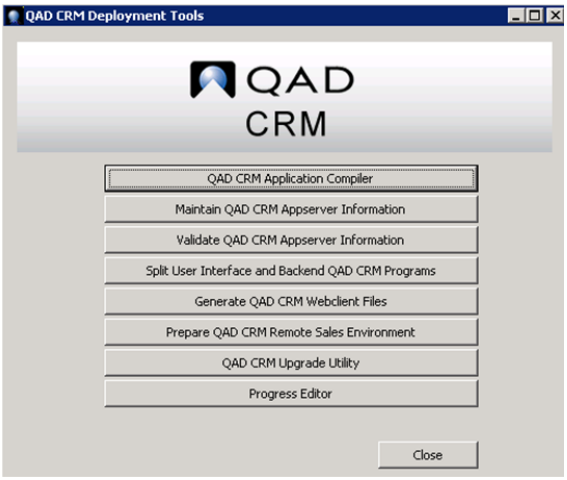
b For Unicode compilation, modify `qadsfamaupgrade.pf` to connect to the Unicode databases in the *`QADCRMInstallDir`*`\db\demo\unicode` folder; for example:

```
-db db\demo\unicode\bisgmenu -1
-db db\demo\unicode\bisgen -1
-db db\demo\unicode\dataexch -1
```

3 Compile QAD CRM programs.

A full compile of the server code is required after installation. Compiling a source file creates an object file with the same name and `.r` extension.

a Choose Start|All Programs|QAD CRM 6.6.1|QAD CRM Deployment Utility. The following screen appears.

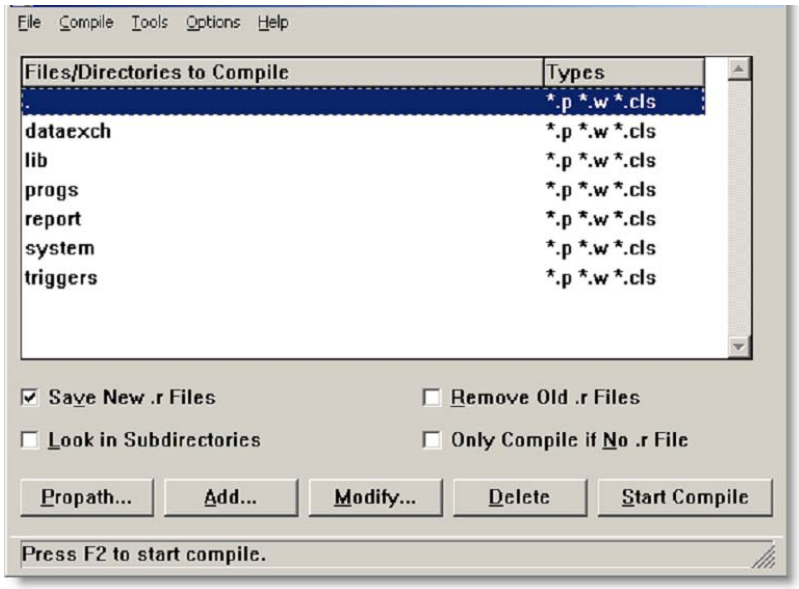


b Compile all the programs (`*.p`, `*.w`, `*.cls`) in the following directories:

- *QADCRMInstallDir*`\dataexch`
- *QADCRMInstallDir*`\lib`
- *QADCRMInstallDir*`\progs`
- *QADCRMInstallDir*`\report`
- *QADCRMInstallDir*`\system`
- *QADCRMInstallDir*`\triggers`

To do this, click on the QAD CRM Application Compiler button in the QAD CRM Deployment utility screen. The following application compiler screen appears.

Note If you are using QAD CRM integrated with QAD Enterprise Applications, click Add to include the folder *QADCRMInstallDir*`\integration\mfgpro`. If you want to add the `integration\mfgpro` folder to the Application Compiler Screen, click Add, enter the folder name in the pop-up window, and click OK.

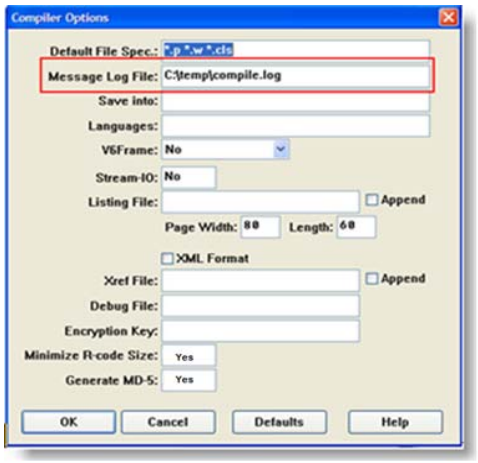


c Clear the Look in Subdirectories check box.

d Click Start Compile to start the compilation.

e The application compiler generates a log file during compilation. Check the log file to ensure that there are no errors. Errors begin with two asterisk characters (**). Contact QAD Support in case of any errors.

Note If you are unsure about the location of the log file, check Options|Compiler and view the log file to check for errors.



Configuring the Delivery Server

QAD CRM ships with a Web archive file named `qadcrmwebclient.war`, which resides in the folder `QADCRMInstall\Webclient\backend`. The file must be copied in the delivery server's Tomcat webapps folder; note that CRM only supports Apache Tomcat. After copied, the `.war` file is extracted automatically by Tomcat within a few seconds. However, in case you find the file is

not extracted automatically, you must restart Tomcat for QAD CRM Webapp named qadcrmwebclient to be installed. If you cannot restart Tomcat—as it might be used by another applicaiton, you can run the following command to manually extract the .war file:

`jar-xvf yourWARfileName.war`.

Note If you have already setup a Tomcat server as part of your QAD Enterprise Applications system, then you can consider using the same Tomcat server as your CRM Delivery Server.

Once the CRM Webapp gets created on Tomcat, you will get a directory structure similar to the one shown below:

- `qadcrmwebclient/qadcrm`: QAD CRM 6.6.1 Webapp folder

  Note This is user-defined and can be named as per user's own choice. However, note that all the references to this folder in the links specified in this document must be changed accordingly once you change the name of this folder.

  This holds the CRM Webclient application image (including subfolders and components).
- `qadcrm.prowcapc` and other component cab files including the `main.cab` files
- `qadcrmwebclient/images`: contains supporting image files
- `qadcrmwebclient/WEB-INF`: contains supporting files for Webapp
- `qadcrmwebclient/META-INF`
- `qadcrmwebclient/web_image`: Initially empty but created to hold the Progress software WebClient image, which must be copied in this folder so that client machines can download it automatically, if required.

  Contents in this directory must be copied from the following CRM installation directory:

  `QADCRMInstalldir\webclient\backend\progresswebclient\<Progress Webclient Version>\web_image`

  Where `<Progress Webclient Version>` is the Progress version with which you plan to use CRM 6.6.1. If you are using Progress OE10.1C03 for your CRM installation, copy the content of the `10C04\web_image` folder.

Once you have copied the software on the Tomcat webapp folder, two files must be modified in `web_image` folder to reflect the correct path of CRM software and Progress WebClient software as per your configuration. These two files are:

- `bootstrap.htm`
- `webclient.htm`

Modifying the `bootstrap.htm` File

To modify `bootstrap.htm` file, do the following:

1. Open the `bootstrap.htm` file and search for the string `qaddemo`.
2. Find the following line:

   ```
   document.location.href =
   "http://qaddemo.qad.com:8080/qadcrmwebclient/qadcrm/qadcrm.prowcapc"
   ```
3. Replace the string "`qaddemo.qad.com:8080`" in the above line with "`<Tomcat Hostname>:<Tomcat Port number>`" based on your own server and Tomcat setup.

Now the line is:

```
document.location.href =
"http://<Tomcat Hostname>:<Tomcat Port
number>/qadcrmwebclient/qadcrm/qadcrm.prowcapc"
```

Note The name of the `prowcapc` file is case-sensitive.

- The `qadcrmwebclient` folder refers to the Tomcat webapps folder where the QAD CRM WebClient will be deployed.
- The URL "`http://<Tomcat hostname>:<Tomcat Port Number>/qadcrmwebclient/qadcrm`" is an example of a configuration file URL, that is, the Tomcat location where the Webclient configuration files for this particular CRM system are stored. This configuration URL information will be required later when you generate the QAD CRM Webclient cab files using the QAD CRM Deployment Utility.
- The file `qadcrm.prowcapc` is a Progress WebClient file that you must copy from the CRM deployment server to the delivery server (where Tomcat is installed) in later steps.

4 Find the following line:

```
window.location =
"http://qaddemo.qad.com:8080/qadcrmwebclient/web_image/webclient.htm"
```

5 Modify the URL in the above line to reflect the path of the `web-client.htm` file as per your configuration.

Modifying the `webclient.htm` File

In the `webclient.htm` file, search for the string qaddemo. You will find the following reference that must be changed:

```
ether.SetProperty("ProwcappURL",
"http://qaddemo.qad.com:8080/qadcrmwebclient/qadcrm/qadcrm.prowcapc");
```

Modify the URL in the above line to reflect the correct path of the `qadcrm.prowcapc` file in your configuration.

Modifying the `web.xml` file

This step is required to associate the Progress WebClient application with the `.prowcapc` file extension, so that the CRM WebClient installation will launch correctly on the client PC:

1 Locate the `<Tomcat_install_dir>/conf/web.xml` file.

2 Locate <mime-mapping> in the <web-app> section.

3 As the last mime mapping, add the following:

```
<mime-mapping>
    <extension>prowcapc</extension>
    <mime-type>application/progress-wcappcab</mime-type>
</mime-mapping>
```

4 Save `web.xml`.

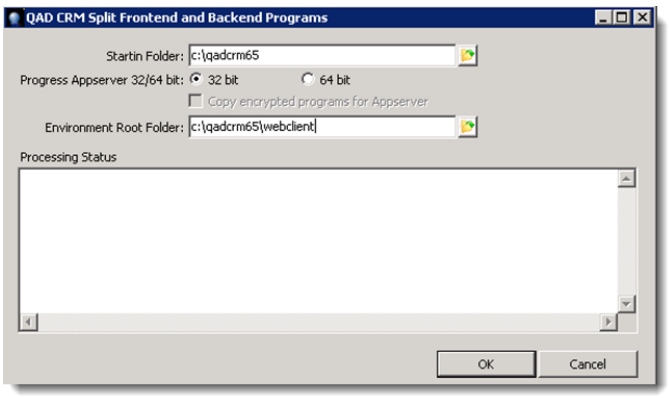
Splitting UI and Backend Programs on the Deployment Server

Perform the following steps on the CRM deployment server:

1 If you are using a Unicode database, update the file named *QADCRMInstallDir*/qadcrmparam_wc.pf with the following parameters:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

2 From QAD CRM deployment utility screen, select the button Split User Interface and Backend QAD CRM programs. A screen similar to the one shown below appears.



At this point, you might encounter the following warning messages:

```
Remote Appserver connection could not be established. Validate QAD
CRM Appserver Information using QAD CRM Deployment tool.
```

```
You must only generate.cab file for CRM Webclient only when AppServer
connection is established successfully. Do you still wish to proceed?
```

Answer Yes to continue with the file splitting; the Appserver setup will be carried out in later steps, before the generation of the CRM Webclient cab files.

3 Select the `Startin` folder as *QADCRMInstallDir*; for example: `c:\qadcrm661\`. This is selected by default.

4 Progress Appserver 32/64 bit : select 32 bit option (default). Copy Encrypted programs for Appserver is disabled in this case.

Note If you have the Appserver configured on a 64-bit machine, you must recompile all the CRM backend programs on the Appserver machine. In that case, select the Progress Appserver 64-bit option and also select the check box labeled Copy Encrypted programs for Appserver.

All CRM programs that require recompilation on the backend in that case are copied under *QADCRMInstallDir*`\webclient\backend` folder; for example: *c:\qadcrm661\webclient\backend*

Select the environment root folder as *QADCRMInstallDir*`\webclient`; for example: *c:\qadcrm661\webclient*

5 Click OK to start processing

- A log file will be generated in the *QADCRMInstallDir*\log folder that contains error information. After you have run the above utility, it will create various subfolders under *QADCRMInstallDir*\webclient\frontend (in this example, *c:\qadcrm661\webclient\frontend*): contains CRM code and other files required to make the CRM cab file.
- *QADCRMInstallDir*\webclient\backend (in this example, *c:\qadcrm661\webclient\backend*): contains all the code that is required on the backend server. With a 64-bit Appserver, this will contain the source code of programs that need to be copied to 64-bit Appserver machine and recompiled there.

Copying QAD Backend Programs on the Application Server

1 On the QAD CRM AppServer machine, create the folder *<QADERPInstallDir>/qadcrm/<environment name>*; for example: */qadea/qadcrm/prod*

2 Create the following subdirectories under *qadcrm/<environment name>*:

- system
- dataexch
- progs
- report
- triggers
- integration\mfgpro (create this folder only if you are using QAD CRM integrated with QAD Enterprise Applications)

3 Copy programs to respective folders on your CRM Appserver environment that you have just created:

With a 32-bit Appserver, you must copy the .r files, which are copied in *QADCRMInstallDir*\Webclient\backend folder as a result of splitting the CRM frontend and backend code in the previous section, to respective folders on your CRM Appserver environment. For example:

Copy .r files from this directory ...	**... to this directory**
QADCRMInstallDir\webclient\backend\dataexch	qadcrm/prod/dataexch
QADCRMInstallDir\webclient\backend\integration\mfgpro	qadcrm/prod/integration/mfgpro
QADCRMInstallDir\webclient\backend\progs	qadcrm/prod/progs
QADCRMInstallDir\webclient\backend\report	qadcrm/prod/report
QADCRMInstallDir\webclient\backend\system	qadcrm/prod/system
QADCRMInstallDir\webclient\backend\triggers	qadcrm/prod/triggers
QADCRMInstallDir\webclient\backend\integration\mfgpro	qadcrm/prod/integration/mfgpro

Copy `cbserver.xml` from this directory ...	... to this directory
`QADCRMInstallDir\webclient\backend\integration\mfgpro`	`qadcrm/prod/integration/mfgpro`

With a 64-bit Appserver, you must copy the source code files, which are copied in *`QADCRMInstallDir`*`\Webclient\backend` folder as a result of splitting the CRM frontend and backend code in the previous section, to respective folders on your CRM Appserver environment. For example:

Copy source code files from the directory...	... to this directory
`QADCRMInstallDir``\Webclient\backend\dataexch`	`qadcrm/prod/dataexch`
`QADCRMInstallDir``\Webclient\backend\integration\mfgpro`	`qadcrm/prod/integration/mfgpro`
`QADCRMInstallDir``\Webclient\backend\progs`	`qadcrm/prod/progs`
`QADCRMInstallDir``\Webclient\backend\report`	`qadcrm/prod/report`
`QADCRMInstallDir``\Webclient\backend\system`	`qadcrm/prod/system`
`QADCRMInstallDir``\Webclient\backend\si`	`qadcrm/prod/si`
`QADCRMInstallDir``\Webclient\backend\triggers`	`qadcrm/prod/triggers`

For a 64-bit AppServer, you must copy *`QADCRMInstallDir\Webclient\backend\si`* to your QAD CRM si folder in your Appserver 64-bit environment. You do not need to compile the files in this QAD CRM si folder; these files are only required to support compilation of some other CRM backend programs.

Note If the Appserver is installed on UNIX/Linux, use FTP or WinSCP to copy the programs.

For a 64-bit Progress AppServer, after you copy the source program files, compile them in your 64-bit AppServer environment; see “Compiling QAD CRM Backend Programs on the Application Server”.

Compiling QAD CRM Backend Programs on the Application Server

1. Create a copy of your QAD CRM AppServer parameter file (`.pf`) file `qadcrmparam_as.pf`; for example, name it `qadcrmcompile64.pf`.

   Note If you are integrating QAD Enterprise Applications with QAD CRM, you need to modify the `qadcrmcompile64.pf` file to include connections to all the QAD Enterprise Applications databases.

2. Specify the following additional parameters in this file:

   ```
   -p _comp.p -inp 32000
   ```

3. Create a compile script file to start the CRM application compiler with the above `.pf` file and the parameters below:

   a. Set following environmental variables:

   ```
   DLC=ProgressInstallDir;export DLC
   PATH=$DLC/bin:$PATH;export PATH
   PROMSGS=$DLC/promsgs;export PROMSGS
   PROTERMCAP=$DLC/protermcap;export PROTERMCAP
   ```

```
PS1='$$ ';export PS1
```

b Include the following in the PROPATH, and make sure you include the command `Export PROPATH` in your script:

```
QADERPInstallDir/xrc
QADERPInstallDir/qadcrm/prod/si/xrc
QADERPInstallDir/qadcrm/prod
QADERPInstallDir/qadcrm/prod/system
QADERPInstallDir/qadcrm/prod/dataexch
QADERPInstallDir/qadcrm/prod/progs
QADERPInstallDir/qadcrm/prod/report
QADERPInstallDir/qadcrm/prod/triggers
QADERPInstallDir/qadcrm/prod/integration/mfgpro
```

Note The suggested PROPATH assumes that you are integrating QAD Enterprise Applications with QAD CRM. If you are installing QAD CRM as a stand-alone system that runs on a Linux 64-bit Appserver backend, you can omit the following two PROPATH values:

```
QADERPInstallDir/xrc
QADERPInstalldir/qadcrm/prod/integration/mfgpro
```

c If you are using QAD 2011 EE above, add the following directories to the PROPATH:

```
QADERPInstallDir/xrc/us/bbi
QADERPInstallDir/xrc/us/so
QADERPInstallDir/xrc/us/px
QADERPInstallDir/xrc/validation
QADERPInstallDir/xrc/us/mf
QADERPInstallDir/xrc/us/fs
QADERPInstallDir/xrc/us/pp
QADERPInstallDir/xrc/us/gp
```

d Set Terminal type as per your environment.

e Start PROGRESS client with `.pf` file:

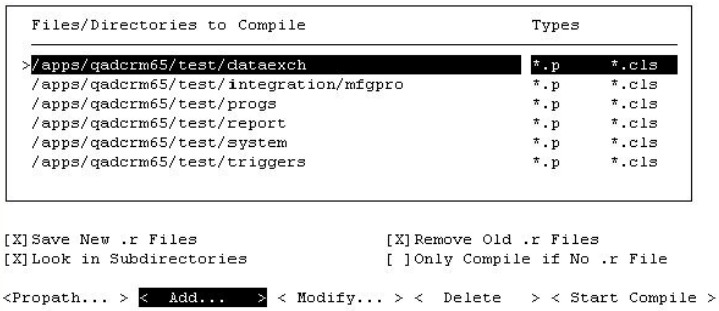
```
<progress path>/bin/_progres -s 128 -pf <compile>.pf -cpinternal <codepage> -
cpstream <codepage stream>
```

Example:

```
/dr01/progress/dlc/bin/_progres -s 128 -pf
QADERPInstallDir/qadcrm/qadcrmcompile64.pf -cpinternal ISO8859-1 -cpstream ISO8859-
1
```

4 Select the following directories to compile with program types `*.p`, `*.cls`,`*.w` :

- *QADERPInstallDir*/qadcrm/prod/system
- *QADERPInstallDir*/qadcrm/prod/dataexch
- *QADERPInstallDir*/qadcrm/prod/progs
- *QADERPInstallDir*/qadcrm/prod/report
- *QADERPInstallDir*/qadcrm/prod/triggers
- *QADERPInstallDir*/qadcrm/prod/integration/mfgpro



Note You do not need to compile the files in this QAD CRM `si` folder. You can also leave out the directories *`QADERPInstallDir`*`/qadcrm/prod/integration/mfgpro` if you are not about to integrate QAD CRM with QAD Enterprise Applications.

5 Choose the Start Compile option. When compilation is complete, check the compilation log to make sure all the programs are compiled correctly.

Configuring Application Server

Configuring the AppServer environment is a must.

To prepare the AppServer environment:

1 Define the QAD CRM AppServer broker in the `ubroker.properties` file. Use the Progress *`$DLC`*`/bin/genuuid` utility to generate a new unique UUID for the new Progress AppServer definition.

For your reference, here is a sample of QAD CRM AppServer broker definition. Your actual broker definition can vary depending on your environment.

```
[UBroker.AS.QADCRM_AS]
appserviceNameList=QADCRM_AS
autoStart=0
brkrLoggingLevel=2
brkrLogThreshold=500000
brkrNumLogFiles=2
brokerLogFile=/qad/local/sandbox/team/crm2012ee/build/work/logs/QADCRM_AS.broker.log
collectStatsData=0
controllingNameServer=NS1
defaultService=0
infoVersion=9010
initialSrvrInstance=2
maxSrvrInstance=5
minSrvrInstance=2
noSessionCache=0
operatingMode=Stateless
portNumber=18683
PROPATH=
/qad/local/sandbox/team/crm2012ee/crm/src/integration/mfgpro,/qad/local/sandbox/team/c
rm2012ee/build/work/pro/com/mfgpro,/qad/local/sandbox/team/crm2012ee/build/work/pro,/q
ad/local/sandbox/team/crm2012ee/build/work/qxtend/qxtadapter,/qad/local/sandbox/team/c
rm2012ee/build/work/config,/qad/local/sandbox/team/crm2012ee/build/work/dist,/qad/loca
l/sandbox/team/crm2012ee/build/work/dist/us/bbi,/qad/local/sandbox/team/crm2012ee/buil
d/work/dist/us,/qad/local/sandbox/team/crm2012ee/build/work/dist/us/bbi,/qad/local/san
dbox/team/crm2012ee/build/work/dist/us/sq,/qad/local/sandbox/team/crm2012ee/build/work
/dist/us/bbi,/qad/local/sandbox/team/crm2012ee/build/work/dist/us/tx,/qad/local/sandbo
x/team/crm2012ee/build/work/dist/us/bbi,/qad/local/sandbox/team/crm2012ee/build/work/d
ist/us/bbi,/qad/local/sandbox/team/crm2012ee/build/work/qra/qra.pl,/qad/mfgpro/93/qadf
in_cache/2012.0.80.13/proxyobj/proxy.pl,/qad/local/sandbox/team/crm2012ee/crm/src/si/x
rc,/qad/local/sandbox/team/crm2012ee/crm/src,/qad/local/sandbox/team/crm2012ee/crm/src
```

```
/dataexch,/qad/local/sandbox/team/crm2012ee/crm/src/progs,/qad/local/sandbox/team/crm2
012ee/crm/src/system,/qad/local/sandbox/team/crm2012ee/crm/src/triggers,/qad/local/san
dbox/team/crm2012ee/crm/src/report
    registerNameServer=1
    registrationMode=Register-IP
    srvrActivateProc=
    srvrConnectProc=
    srvrDeactivateProc=
    srvrDisconnProc=
    srvrLogFile=/qad/local/sandbox/team/crm2012ee/build/work/logs/QADCRM_AS.server.log
    srvrLoggingLevel=2
    srvrLogThreshold=500000
    srvrNumLogFiles=2
    srvrShutdownProc=
    srvrStartupParam=-pf /qad/local/sandbox/team/crm2012ee/crm/src/qadsfamaprod_as.pf
    srvrStartupProc=/qad
/local/sandbox/team/crm2012ee/crm/src/progs/pappsistart.p
    sslEnable=0
    uuid=-1cfaa137:137db7e54a9:-8000
    workDir=/qad/local/sandbox/team/crm2012ee/build/work
```

2 Create the AppServer broker `.pf` file using the *QADCRMInstalldir*`/qadcrmparam_as.pf` as a template to connect to the QAD CRM databases.

Note Do not remove any predefined parameters in your . pf file. If the Progress database server and AppServer are installed on same machine, do not connect the databases using the client-server mode (-H -S parameters) in your `.pf` file and start the databases as self-service clients.

3 Specify following startup parameters for the AppServer broker:

a Specify the srvrStartupParam parameter:

```
srvrStartupParam=-pf <AppServer broker .pf file with full path>
```

Note If you are using a Unicode database, make sure that the Appserver Broker `.pf` file contains the following Unicode parameters:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

b Specify the srvrStartupProc parameter:

```
srvrStartupProc=QADERPInstallDir/qadcrm/prod/progs/pappsistart.p
```

4 Modify the PROPATH parameters of the AppServer brokers. Put QAD CRM directories in the PROPATH; for example, put the following folders in the PROPATH:

```
qadcrm\prod
qadcrm\prod\system
qadcrm\prod\integration\mfgpro
qadcrm\prod\dataexch
qadcrm\prod\progs
qadcrm\prod\report
qadcrm\prod\triggers
```

5 Start the AppServer broker using the following command:

```
ProgressInstallDir/bin/asbman -name <broker name> -start
```

6 To start the AppServer automatically, modify the QAD-supplied startup batch files.

Performing Additional Configurations for Integration with QAD Enterprise Applications

If QAD CRM is integrated with QAD Enterprise Applications (SE or EE), you must perform additional configurations for the application server.

QAD CRM Integrated with QAD SE

1. Modify the AppServer broker `.pf` file to connect to the QAD SE databases and qxevents databases in addition to the QAD CRM databases. The qaddb should be the first database in the `.pf` file.
2. Use the trigger option and specify the trigger location for QAD Enterprise Applications databases and qxevents database:

   ```
   -trig triggers
   ```

3. Modify the PROPATH to add QAD SE directories before QAD CRM directories.

QAD CRM Integrated with QAD EE

1. Modify the AppServer broker `.pf` file to connect to the QAD EE databases and qxevents databases in addition to the QAD CRM databases. The qaddb should be the first database in the `.pf` file.
2. Use the trigger option and specify the trigger location for QAD Enterprise Applications databases and qxevents database:

   ```
   -trig triggers
   ```

3. Modify the PROPATH of the CRM AppServer brokers:
   - Add *`QADERPInstallDir`*`/prod/integration/mfgpro` as the first line
   - Add QAD EE directories before QAD CRM directories

   For example, the modified PROPATH looks something like this:

   ```
   QADERPInstallDir/qadcrm/prod/integration/mfgpro
   SSMPatchInstallDir/
   QXtendInstallDir/
   QXOInstallDir/
   QADERPDesktopInstallDir/com/mfgpro
   QADERPDesktopInstallDir/
   QADERPInstallDir/
   QADERPInstallDir/us/bbi
   QADERPInstallDir/us
   QADERPInstallDir/us/sq
   QADERPInstallDir/us/tx
   QADERPInstallDir/config
   QADERPInstallDir/qra/qra.pl
   QADERPInstallDir/fin/proxy.pl
   QADERPInstallDir/fin/proxy
   QADERPInstallDir/qadcrm/prod
   QADERPInstallDir/qadcrm/prod/dataexch
   QADERPInstallDir/qadcrm/prod/progs
   QADERPInstallDir/qadcrm/prod/system
   QADERPInstallDir/qadcrm/prod/triggers
   QADERPInstallDir/qadcrm/prod/report
   ```

   Note Include *`SSMPatchInstallDir`* if the SSM patch is installed.

   It is also important to include the following ERP folders in the CRM Appserver Propath:

   - QADERPInstalldir/us/bbi

- QADERPInstalldir/us
- QADERPInstalldir/us/sq
- QADERPInstalldir/us/tx

4 Start the CRM AppServer broker using the following command:

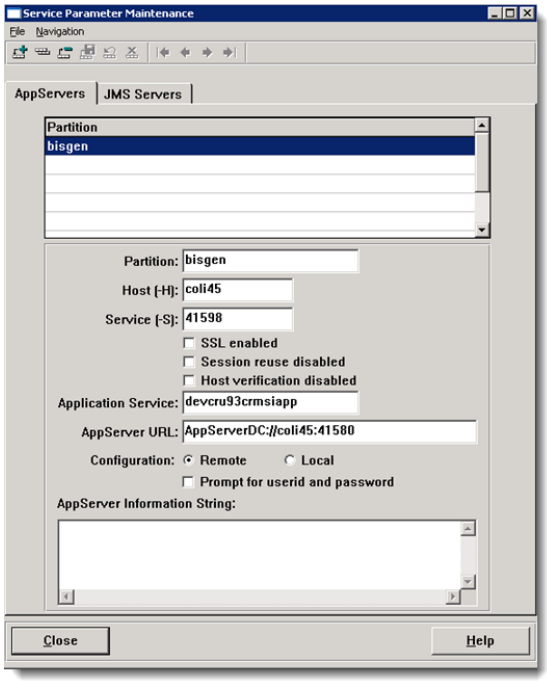
```
ProgressInstallDir/bin/asbman -name <broker name> -start
```

Maintaining and Validating QAD CRM AppServer Information

Perform the following steps on the CRM Deployment Server:

1 From the QAD CRM Deployment Utility screen, click the Maintain QAD CRM AppServer Information button.

2 In the Service Parameter Maintenance window, configure appropriate parameter values.



Host (-H). Enter the host name or IP address of the NameServer that provides the AppServer connection.

Service (-S). Enter the service name or port number of the NameServer that provides the AppServer connection. The port number of the NameServer being used by your AppServer is referenced in its corresponding NameServer log file, whose location is specified in the Progress `ubroker.properties` file.

Application Service. Enter the name of a valid AppServer application service supported by the NameServer. The NameServer chooses an AppServer that supports this application service for the partition connection.

AppServer URL. Specify the URL for connecting to the AppServer; for example, coli45 is the name of the host and 41580 is the broker port number through which to connect to the AppServer. Your CRM Appserver port number is defined in the Progress `ubroker.properties` file.

Note You are advised to use the DirectConnect method to connect to the AppServer through a URL similar to the AppServer URL, as shown in the screenshot.

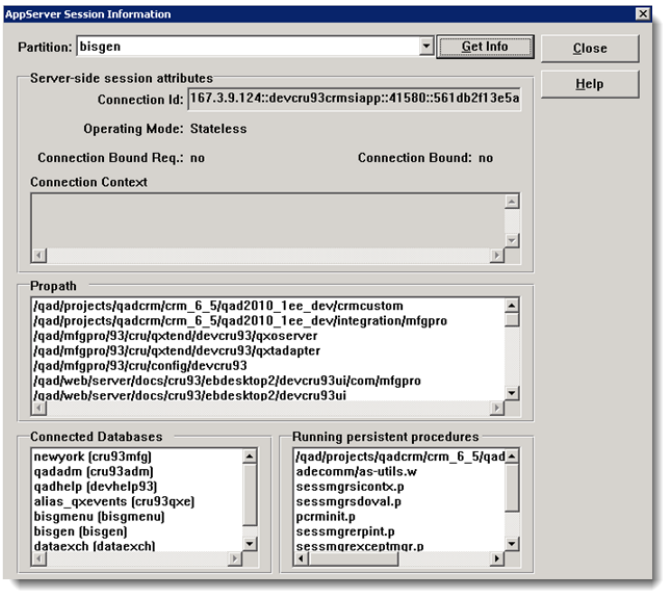
Configuration. Choose Remote to connect to an AppServer using the connection information specified for this partition.

3 Save your changes and exit the Progress session completely.

4 Run the QAD CRM Deployment Utility and click the Validate QAD CRM AppServer Information button.

5 In the AppServer Session Information window, click Get Info and make sure that the AppServer connection information such as PROPATH and databases information is correct as per your CRM environment configuration.

If the connection is successful, you will see a connection string in the connection Id fill-in beginning with the Host IP address that hosts the appserver.



6 A file called `appsrvtt.d` has now been updated to record the AppServer information you have set up.

Copy this newly updated `appsrvtt.d` file from the folder *`QADCRMInstallDir\`* to the folder *`QADCRMInstallDir`*`\webclient\frontend\` before proceeding to the generation of the CRM cab files in the next section.

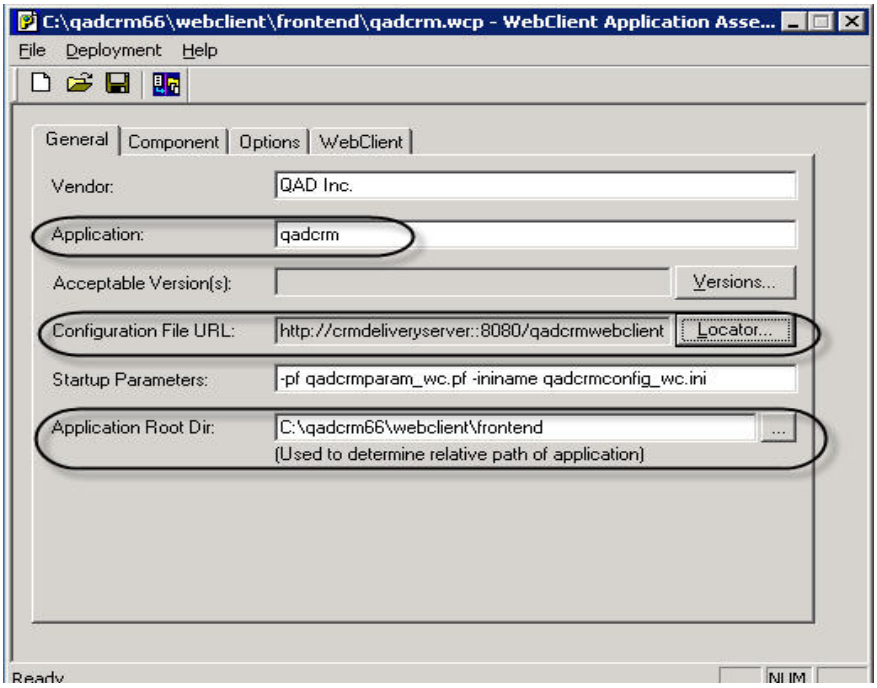
Generating and Copying QAD CRM WebClient Files

After you install QAD CRM, you can find the QAD CRM WebClient project file `qadcrm.wcp` in *`QADCRMInstallDir`*`\webclient\frontend`. You can tailor some settings in this file based on your system configuration.

1 Run the QAD CRM Deployment Utility and click the Generate QAD CRM Webclient Files button.

2 From the File menu, select Open to locate and open the file `qadcrm.wcp` in the *`QADCRMInstallDir`*`\webclient\frontend` directory.

3 In the WebClient project file window, enter values in the fields based on your deployment configurations.



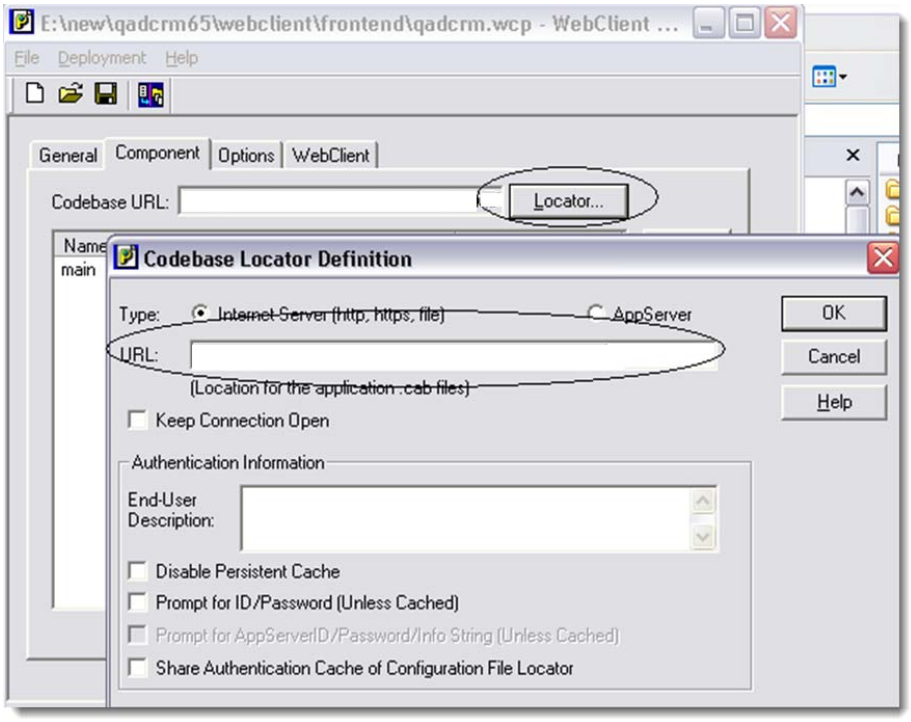
Application. Enter the application name to generate the `prowcapc` file that is referenced in the `bootstrap.htm` and `webclient.htm` file that you modified earlier. Note that the `prowcapc` file name is case sensitive.

Configuration File URL. Enter the configuration file URL according to your CRM setup on the (Tomcat) delivery server. See the configuration file URL information in “Modifying the `bootstrap.htm` File” on page 31.

Application Root Dir. Enter *`QADCRMInstallDir`*`\webclient\frontend`.

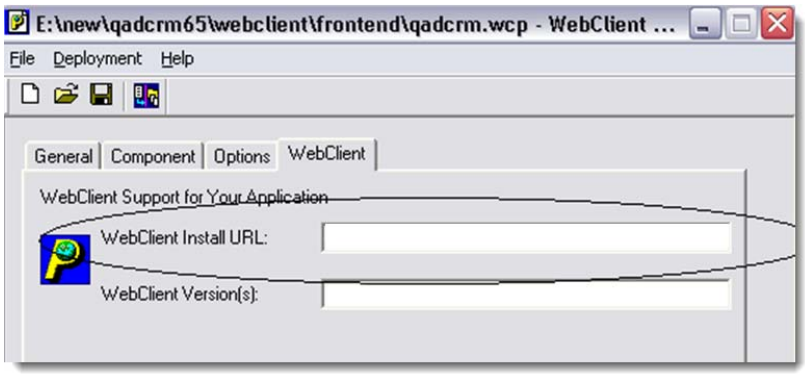
Acceptable Version(s). Click the Versions button and in the window that appears, clear the Acceptable to run option for the current version; then select 6.6b7 and click the Remove button. Click OK to return to the General tab; you should now have no value for the Acceptable Version(s) field.

4 Under the Component tab, click the Locator button and modify the URL of your codebase as per your configuration. Click OK to Save your changes. See the URL information in “Modifying the `bootstrap.htm` File” on page 31.



5 Under the Options tab, make sure that the Intellistream System Tasks field is checked, and the System Tasks Version field is set to 6.6b7.

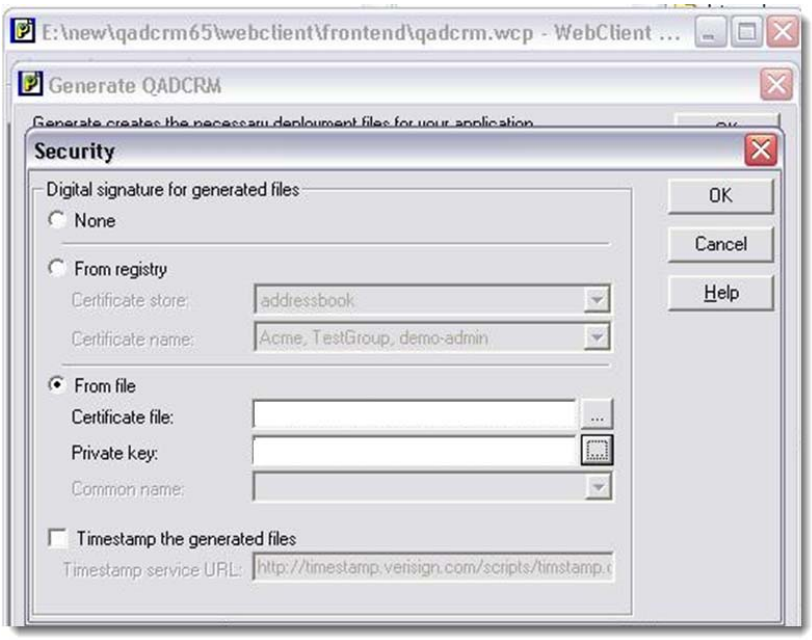
6 Under the WebClient tab, modify the WebClient Install URL as per your configuration. See the window.location URL information in “Modifying the `bootstrap.htm` File” on page 31.



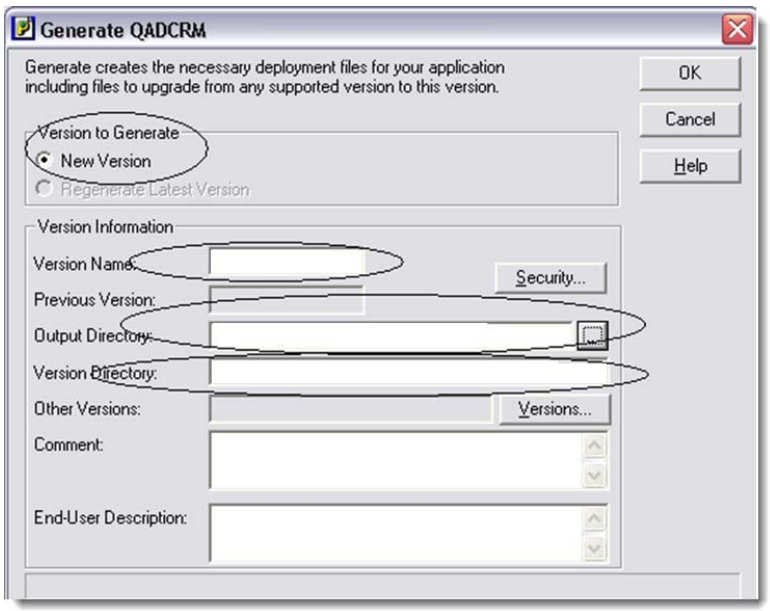
7 Click the Save button on the toolbar to save the project.

8 From the Deployment menu, select Generate.

9 In the Generate QADCRM window, click the Security button and select the digital signature files; then click OK. Relevant files for a particular environment are available in *`QADCRMInstallDir`*`\bin`. In this folder, search for a `*.cer` file name for the Certificate file, and a `*.pvk` file name for the Private key file.



10 Select Deployment|Generate from the menu and make sure all the settings in the Generate QADCRM window are configured correctly.



New Version. You must select this option.

Version Name. Enter the current version name 6.6b7.

Output Directory. Specify the output directory based on your CRM installation directory; that is, `QADCRMInstalldir\frontend`.

Version Directory. This field is automatically populated once you specify the output directory.

11 Click OK to generate the cab files.

In the process of cab files generation, the system prompts you to enter a password for each component cab file to be created. In the password prompt, enter qadcrm and click OK.

In case of errors, the cab files generation process is aborted and errors are recorded in the log file. Refer to the log file for error details, if any; then rectify any problems and generate the files again.

12 When cab files generation is complete, WebClient files are created in the *QADCRMInstallDir*\webclient\frontend*CRMVersion* directory.

13 You must copy the .cab files generated for QAD CRM earlier during the step: splitting of user interface and backend programs on Deployment Server. Refer to *QADCRMInstallDir* \webclient\frontend\6.6b7\qadcrm.log for the files that need to be copied from the CRM Deployment Server to Delivery Server (where Tomcat is installed).

Integrating QAD CRM with QAD SE

QAD CRM uses database and session triggers to connect and update the databases of both systems, eliminating the need for manual intervention when transferring data between the two systems.

For integration, the databases of both systems:

- Must always be available
- Must run in multi-user mode
- Can share the same database server

For integration you must configure the deployment servers of the QAD CRM and your QAD Enterprise Applications.

Prerequisites

Before integrating with QAD Enterprise Applications, verify that you have met the following prerequisites:

- System requirements for QAD Enterprise Applications integration. See “System Requirements” on page 11.
- Your QAD CRM databases are running in multi-user mode.
- Your QAD Enterprise Applications is functioning properly.
- Your network is operating.
- QAD Enterprise Applications databases are in multi-user mode.
- You have access to QAD Enterprise Applications compiled programs (.r) and the xrc folder.

Configuring QAD Enterprise Applications For Integration

1 Modify QAD Enterprise Applications parameter file (.pf) for connecting to the QAD CRM databases.

The following is an example of how you can modify the .pf file.

```
-db /QADERPInstallDir/db/testdb -ld qaddb -trig triggers
-db /qaderpinstalldir/db/helptest -ld qadhelp -trig triggers
-db /qaderpinstalldir/db/admintest -ld qadadm -trig triggers
```

```
-db /qadcrm/db/bisgen   -ld bisgen -trig triggers
-db /qadcrm/db/bisgmenu -ld bisgmenu -trig triggers
-db /qadcrm/db/dataexch -ld dataexch -trig triggers
-h 8
-yy 1950
```

Normally, QAD Enterprise Applications uses the same `.pf` file for telnet, connmgr, AppServer broker, and WebSpeed broker. If this is not the case, you must modify all `.pf` files.

2 Modify QAD Enterprise Applications configuration settings (`.ini`) file, telnet, connmgr, AppServer broker, and WebSpeed broker to add the following directory locations in the PROPATH:

```
QADERPInstallDir/qadcrm/prod
QADERPInstallDir/qadcrm/prod/system
QADERPInstallDir/qadcrm/prod/dataexch
QADERPInstallDir/qadcrm/prod/progs
QADERPInstallDir/qadcrm/prod/report
QADERPInstallDir/qadcrm/prod/triggers
QADERPInstallDir/qadcrm/prod/integration/mfgpro
```

Note If you are using QAD 2008 SE or earlier, specify the srvrStartupProc parameter for the .NET UI as follows:

```
srvrStartupProc=mfaistrt.p
```

3 Modify the script file used by QAD Enterprise Applications Character Client to connect to the `bisgen`, `bisgmenu`, and `dataexch` databases and startup program:

```
exec $DLC/bin/_progres -rq
$MFGDB -ld qaddb -znotrim -trig triggers
-db $ADMDB -ld qadadm
-db $HLPDB -ld qadhelp
-db $QADSAMDB -ld bisgen -trig triggers
-db $EDATADB -ld dataexch -trig triggers
-db $EBMENUDB -ld bisgmenu -trig triggers
-cpstream iso8859-1 -cpinternal iso8859-1 -cpcoll basic
-Bt 350 -c 30 -D 100 -mmax 3000 -nb 200 -s 63
-E -d dmy -yy 1970 -T /ext1/mfgeB/mfgwork -h 8
-p mf.p
```

If you are integrating CRM with QAD 2007.1 SE, you must replace “-p mf.p” with “-p mfbg.p” in the above file.

Performing Additional Steps For QAD 2007.1 SE

Additional steps are required to integrate QAD CRM with the QAD 2007.1 SE Release. Skip the following steps if you are integrating CRM with QAD 2009 SE or later releases.

1 Back up the following programs from the *`QADERPInstallDir`*`/xrc` directory if available:

`cmw.t`	Write trigger for QAD Enterprise Applications `cm_mstr` table
`ptw.t`	Write trigger for QAD Enterprise Applications `pt_mstr` table
`adw.t`	Write trigger for QAD Enterprise Applications `ad_mstr` table
`gpapist.p`	Program for the integration
`sopiwitt.i`	Best Price routine
`sopiwids.i`	Best Price routine
`sopiwapi.p`	Best Price routine

2 Transfer the programs listed in the last step from *`QADCRMInstallDir`*`\integration\eb21` to *`QADERPInstallDir`*`/xrc` using an FTP or WinSCP program.

3 Compile the programs you copied in the previous step using MFG/UTIL.

Note If the programs are customized, contact your QAD Enterprise Applications supplier.

4 Copy the compiled files `cmw.r`, `ptw.r`, and `adw.r` from *`QADERPInstallDir`*`\xrc` to the directory *`QADERPInstallDir`*`/triggers`.

5 Copy `mfwb01a.r` from *`QADERPInstallDir`*`\xrc` to the directory *`QADERPInstallDir`*.

6 Copy `sopiwapi.r` from *`QADERPInstallDir`*`\xrc` to the directory *`QADERPInstallDir`*`/us/so` directory.

Performing Additional Steps For QAD 2008 SE

Additional steps are required to integrate QAD CRM with the QAD 2008 SE release. Skip the following steps if you are integrating CRM with QAD 2009 SE or later releases.

1 Back up the following programs from the *`QADERPInstallDir`*`/xrc` directory if available:

`sopiwitt.i`	Best Price routine
`sopiwids.i`	Best Price routine
`sopiwapi.p`	Best Price routine

2 Transfer the programs listed in step 1 from *`QADCRMInstallDir`*`\integration\eb21` to *`QADERPInstallDir`*`\xrc` using an FTP or WinSCP program.

3 Compile the `sopiwapi.p` program you copied in step 1 using MFG/UTIL.

Note If the programs are customized, contact your QAD Enterprise Applications supplier.

4 Copy sopiwapi.r from *`QADERPInstallDir`*`\xrc` to the directory *`QADERPInstallDir`*`/us/so` directory.

AIM Configuration

Do the following if AIM is configured with QAD Enterprise Applications (SE):

1 Before configuring AIM, verify that you have met the following prerequisites:

- System requirements for AIM in QAD Enterprise Applications integration section. See “System Requirements” on page 11.

2 Back up `cpdtrig.p` from the AIMInstallDir/xrc directory.

3 Transfer `cpdtrig.p` from *`QADCRMInstallDir`*`\integration\eb21` to `AIMInstallDir/xrc` using an FTP or WinSCP program.

4 Compile `cpdtrig.p`.

Note If the above program is customized, contact your QAD Enterprise Applications supplier.

5 Copy the compiled `cpdtrig.r` to the QAD Enterprise Applications environment, depending upon the AIM configuration.

Integrating QAD CRM with QAD EE

QAD CRM uses database and session triggers and QXtend to connect and update the databases of both systems for other modules.

For integration, the databases of both systems:

- Must always be available
- Must run in multi-user mode
- Can share the same database server

For integration you must configure the file servers of QAD CRM and your QAD Enterprise Applications.

QAD CRM uses QXtend to transfer data between QAD Enterprise Applications and QAD CRM for the following modules.

- Address
- Multiple Currency
- Users

Prerequisites

Before integrating with QAD Enterprise Applications, verify that you have met the following prerequisites:

- System requirements for QAD Enterprise Applications integration. See “System Requirements” on page 11.
- QAD CRM databases are in multi-user mode.
- Your QAD Enterprise Applications is functioning properly.
- Your network is operating.
- QAD Enterprise Applications databases are in multi-user mode.
- You have access to QAD Enterprise Applications compiled programs (`.r`) and the `xrc` folder.
- QXtend is installed and functioning properly.

Configuring QAD Enterprise Applications for Integration

1 Modify QAD Enterprise Applications parameter file (`.pf`) for connecting to the QAD CRM databases.

The following is an example of how you can modify the `.pf` file.

```
-db /QADERPInstallDir/db/testdb -ld qaddb -trig triggers
-db /QADERPInstallDir/db/helptest -ld qadhelp -trig triggers
-db /QADERPInstallDir/db/admintest -ld qadadm -trig triggers
-db /qadcrm/db/bisgen   -ld bisgen -trig triggers
-db /qadcrm/db/bisgmenu -ld bisgmenu -trig triggers
-db /qadcrm/db/dataexch -ld dataexch -trig triggers
-h 8
-yy 1950
```

Normally, QAD Enterprise Applications uses the same `.pf` file for telnet, connmgr, AppServer broker, and WebSpeed broker. If this is not the case, you must modify all `.pf` files.

2 Modify QAD Enterprise Applications configuration settings (.ini) file, telnet, QAD Financials AppServer broker, QAD UI AppServer, WebSpeed broker, and connmgr to append the following directory locations in the PROPATH:

```
QADERPInstallDir/qadcrm/prod
QADERPInstallDir/qadcrm/prod/system
QADERPInstallDir/qadcrm/prod/dataexch
QADERPInstallDir/qadcrm/prod/progs
QADERPInstallDir/qadcrm/prod/report
QADERPInstallDir/qadcrm/prod/triggers
QADERPInstallDir/qadcrm/prod/integration/mfgpro
```

3 Modify `server.xml` under folder *<QDT_install_directory>*`/envs/`*<environment name>*`/configs` to include QAD CRM database connection details as follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <serverConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:noNamespaceSchemaLocation="serverConfiguration.xsd">
  + <components>
  - <databases>
      <rdbms>Progress</rdbms>
    - <database>
        <name>sfm93t_mfg</name>
        <parameters>-H coli40 -S sfm93t_mfg-server -N TCP -ld newyork -trig
          triggers</parameters>
      </database>
    - <database>
        <name>sfm93t_adm</name>
        <parameters>-H coli40 -S sfm93t_adm-server -N TCP -ld qadadm -trig
          triggers</parameters>
      </database>
    - <database>
        <name>bisgmenu</name>
        <parameters>-H coli40 -S sfm93tt_bm-server -N TCP -ld bisgmenu -trig
          triggers</parameters>
      </database>
    - <database>
        <name>bisgen</name>
        <parameters>-H coli40 -S sfm93tt_bg-server -N TCP -ld bisgen -trig
          triggers</parameters>
      </database>
    - <database>
        <name>dataexch</name>
        <parameters>-H coli40 -S sfm93tt_dx-server -N TCP -ld dataexch -trig
          triggers</parameters>
      </database>
    - <database>
```

Note Skip the following steps if you are integrating CRM with QAD 2009.1 EE or later releases.

4 If you are using QAD 2009 EE, back up the following program from the *QADERPInstallDir*`/xrc` directory:

`ptw.t`	Write trigger for the QAD Enterprise Applications `pt_mstr` table

5 Transfer the programs in step 4 from *QADCRMInstallDir*`\integration\eb3` to *QADERPInstallDir*`/xrc` using an FTP or WinSCP program.

6 Compile the programs you copied using MFG/UTIL.

Note If the programs are customized, contact your QAD Enterprise Applications supplier.

7 Copy the compiled file `ptw.r` from *QADERPInstallDir*`/xrc` to the directory *QADERPInstallDir*`/triggers`.

8 Modify the script file used by QAD Enterprise Applications Character Client to connect to the `bisgen`, `bisgmenu`, and `dataexch` databases and startup program:

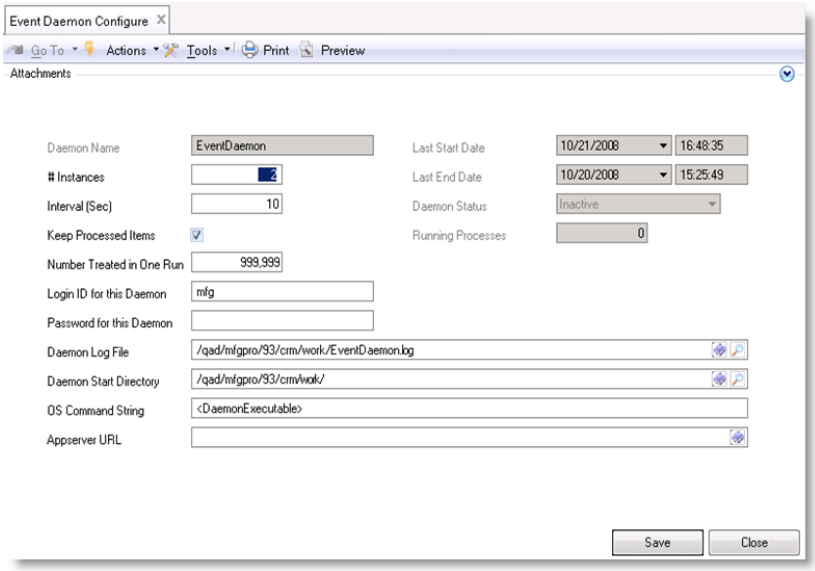
```
exec $DLC/bin/_progres -rq
$MFGDB -ld qaddb -znotrim -trig triggers
-db $ADMDB -ld qadadm
-db $HLPDB -ld qadhelp
-db $QADSAMDB -ld bisgen -trig triggers
-db $EDATADB -ld dataexch -trig triggers
-db $EBMENUDB -ld bisgmenu -trig triggers
-cpstream iso8859-1 -cpinternal iso8859-1 -cpcoll basic
-Bt 350 -c 30 -D 100 -mmax 3000 -nb 200 -s 63
-E -d dmy -yy 1970 -T /ext1/mfgeB/mfgwork -h 8
-p mfbg.p
```

Configuring QXtend for Integration

This section explains how to configure QXtend to enable data transfer between QAD EE and QAD CRM. It involves various settings in QAD EE, QXtend Outbound, and QXtend Inbound.

1 Configure Event Daemon settings using Event Daemon Configure in the .NET UI.

Fig. 2.4
Event Daemon Configure



Instances. Enter 5.

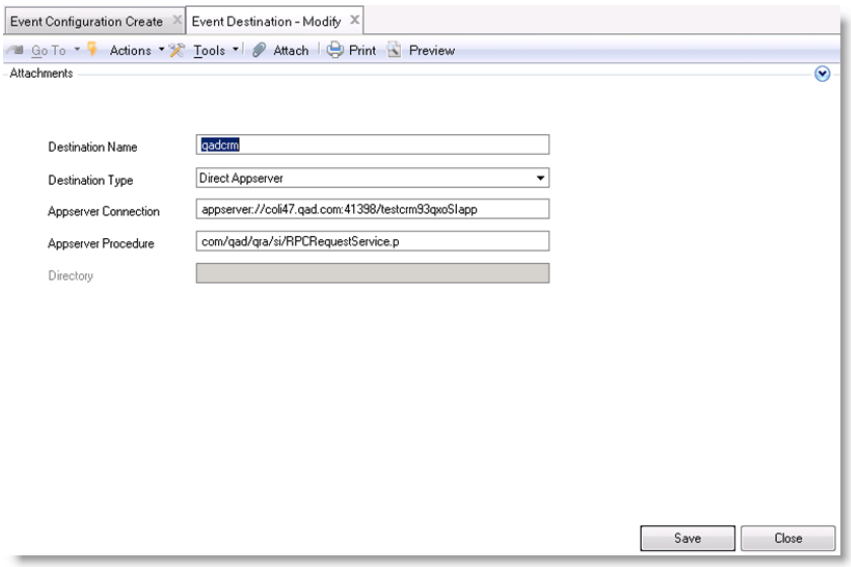
Log-in ID for this Daemon/Password for this Daemon. Enter the log-in ID and password for this daemon.

Daemon Log File. Specify the Daemon log file; for example, `/qad/mfgpro/93/crm/work/EventDaemon.log`.

Daemon Start Directory. Specify the Daemon start directory; for example, `/qad/mfgpro/93/crm/work/`. Make sure that the directory has write permission.

2 Create event destination using Event Destination Create in the .NET UI.

Fig. 2.5
Event Destination



Note The Modify function is shown here to provide an example of values to enter in the Event Destination-Create function.

Destination Name. Enter qadcrm.

Destination Type. Choose Direct AppServer.

AppServer Connection. Specify the AppServer Connection QXtend Outbound SI AppServer connection string; for example:

```
AppServer://coli45.qad.com:42398/testsfm93qxoSIapp
```

Where coli45 is the AppServer host name; 42398 is the NameServer port number; testsfm93qxoSIapp is QXtend Outbound SI AppServer broker name.

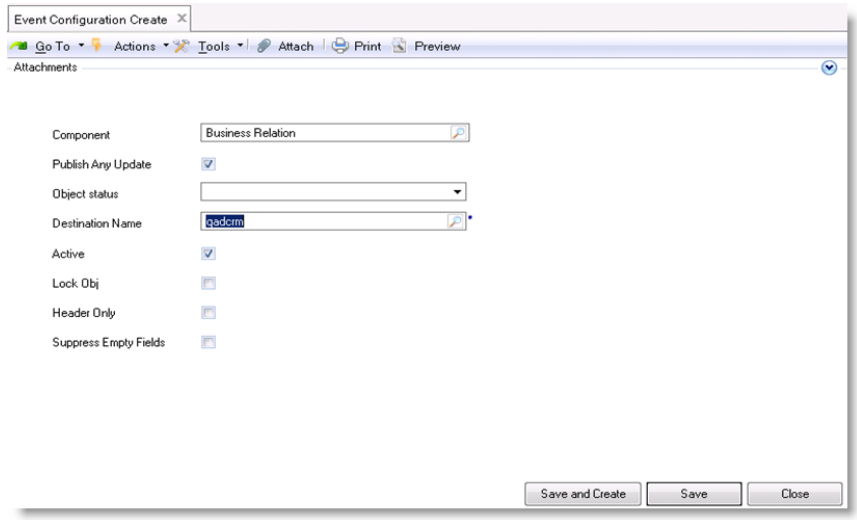
AppSever Procedure. Enter `com/qad/qra/si/RPCRequestService.p`

3 Create event configuration for the following components in all the entities of all the integrated components using Event Configuration Create in the .NET UI:

- Business Relation
- Supplier
- Customer
- Customer Ship-To
- End User
- Domain
- Domain Property
- Currency
- Exchange Rate
- User

Repeat the above steps for all the entities of all the domains available in QAD Enterprise Applications.

Fig. 2.6
Event Configuration Create



Component. Choose one of the above-mentioned components in the list by searching for it using the Component Label field; for example, choose Business Relation.

Publish Any Update. Select this option.

Object Status. Leave the field blank.

Destination Name. Enter qadcrm.

Active. Select this option.

4 Start the event daemon using the Event Daemon Start. When the event daemon is started, the system displays the message: The daemon is successfully started.

5 Update CRM application code using System Maintain in the .NET UI. In System Maintain, specify QADEE as the application ID.

Configuring QXtend for Integration (if QXtend Version is 1.6.3 or Later)

To configure QXtend for integration:

1 Make backups of the following `.xml` template files from directory *`QADCRMInstallDir`*`\integration\eb3\templates\`.

- `qadcrmdefaultConfiguration.xml`
- `qadcrmconfigureSourceApplication.xml`
- `qadcrmconfigureProfile.xml`
- `qadcrmconfigureOthers.xml`

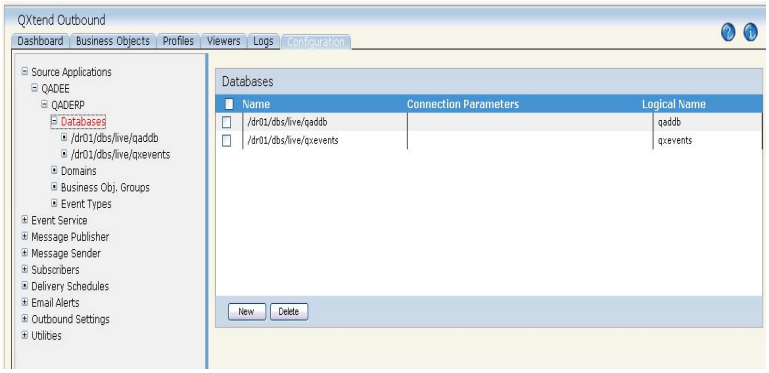
2 Make sure the source application type *QADEE*, source application *QADERP*, and business objects are already created and configured. To verify this:

a In a Web browser, enter the QXtend Outbound URL; for example, http://qaddemo:8080/qxo/.

b In the QXtend Outbound main page, click Configuration.

c Expand Source Applications.

d Make sure the source application type *QADEE* is available and source application *QADERP* is created under source application type *QADEE*.



If it does not exist, go to step 3; otherwise, go to step 4.

3 Load default configuration:

a Open qadcrmdefaultConfiguration.xml from dir `QADCRMInstallDir\compile\integration\eb3\templates\` in Notepad and modify the entries highlighted under SourceApplicationType and licenseManager sections with the corresponding values and save the xml file.

Fig. 2.7
Source Application Type Section

```
- <qxc:qxoConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  - <qxc:sourceApplicationType>
      <qxc:name>QADEE</qxc:name>
      <qxc:active>true</qxc:active>
      <qxc:useRowids>true</qxc:useRowids>
      <qxc:directDataPublish>false</qxc:directDataPublish>
    - <qxc:sourceApplication>
        <qxc:code>QADERP</qxc:code>
        <qxc:description />
        <qxc:appServerParameters />
      - <qxc:databaseConnection>
          <qxc:name>/dr01/dbs/live/qaddb</qxc:name>
          <qxc:connectionParameters />
          <qxc:logicalName>qaddb</qxc:logicalName>
        </qxc:databaseConnection>
      - <qxc:databaseConnection>
          <qxc:name>/dr01/dbs/live/qxevents</qxc:name>
          <qxc:connectionParameters />
          <qxc:logicalName>qxevents</qxc:logicalName>
        </qxc:databaseConnection>
      </qxc:sourceApplication>
    </qxc:sourceApplicationType>
```

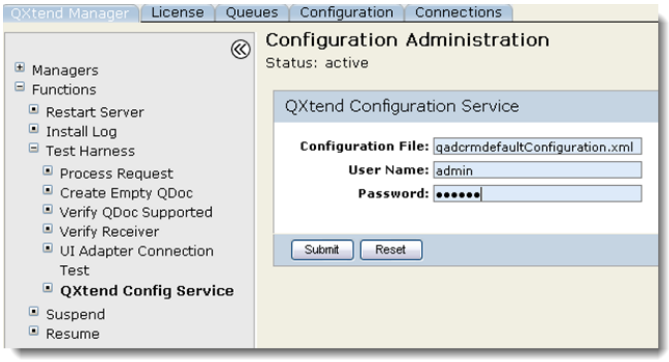
Fig. 2.8
License Manager Section

```
- <qxc:licenseManager>
    <qxc:host>qaddemo</qxc:host>
    <qxc:port>8080</qxc:port>
    <qxc:webApp>qxi</qxc:webApp>
    <qxc:useSSL>false</qxc:useSSL>
  </qxc:licenseManager>
```

b Copy the modified *qadcrmdefaultConfiguration.xml* to the QXtend Inbound configService directory; for example, `\dr01\tomcat\8080\webapps\qxi\WEB-INF\configService`.

c In a Web browser, enter the QXtend Inbound URL; for example, http://qaddemo:8080/qxi.

d In the QXtend Inbound main page, click QXtend Manager, select Functions|Test Harness|QXtend Config Service, and enter Configuration File as `qadcrmdefaultConfiguration.xml`, User Name as `admin`, and Password as `mfgpro`, and click Submit to load the `.xml` file.



e Refresh the QXtend Outbound URL and verify source application type *QADEE* is available and source application *QADERP* is created under source application type *QADEE*.

4 Configure the source application for QAD CRM.

a Copy `qadcrmconfigureSourceApplication.xml` from dir *QADCRMInstallDir*`\integration\eb3\templates\` to the QXtend Inbound configService directory, which is a subfolder that resides under the Tomcat Webserver as follow:

<TOMCATInstalldir>`/webapps/WEB-INF/configuService`

b In a Web browser, enter the QXtend Inbound URL.

c In the QXtend Inbound main page, click QXtend Manager and select Functions|Test Harness|QXtend Config Service and enter Configuration File as `qadcrmconfigureSourceApplication.xml`, User Name as `admin`, and Password as `mfgpro`; click Submit to load the xml file.

5 Configure profiles for QAD CRM.

a Copy `qadcrmconfigureProfile.xml` from directory *QADCRMInstallDir*`\compile\integration\eb3\templates\` to the QXtend Inbound config Service directory, which is a subfolder that resides under the Tomcat Webserver as follow:

<TOMCATInstalldir>`/webapps/WEB-INF/configuService`

b In a Web browser, enter the QXtend Inbound URL.

c In the QXtend Inbound main page, click QXtend Manager and select Functions|Test Harness|QXtend Config Service, and enter `qadcrmconfigureProfile.xml` for Configuration File, User Name as `admin`, and Password as `mfgpro`; click Submit to load the `.xml` file.

6 Configure Others for QAD CRM.

a Open `qadcrmconfigureOthers.xml` from directory *`QADCRMInstallDir`*`\compile\integration\eb3\templates\` in Notepad and modify the highlighted entries for connection pool *ee-crm* with the QAD CRM AppServer details, then save the `.xml` file.

In the following example, qaddemo is AppServer host name, 5162 is the NameServer port number, crm_ASlive is the QAD CRM AppServer broker name, demo is user id, and 12/9fVy87Uw= is the password.

```
- <qxc:connectionPool>
    <qxc:name>ee-crm</qxc:name>
    <qxc:type>SIAPI</qxc:type>
    <qxc:host>qaddemo</qxc:host>
    <qxc:port>5162</qxc:port>
    <qxc:appserverName>crm_ASlive</qxc:appserverName>
    <qxc:clientUser>demo</qxc:clientUser>
    <qxc:clientPassword>I2/9fVy87Uw=</qxc:clientPassword>
    <qxc:clientDomain />
  </qxc:connectionPool>
```

b Copy `qadcrmconfigureOthers.xml` from directory *`QADCRMInstallDir`*`\compile\integration\eb3\templates\` to the QXtend Inbound configService directory, which is a subfolder that resides under the Tomcat Webserver as follow:

`<TOMCATInstalldir>``/webapps/WEB-INF/configuService`

c In a Web browser, enter the QXtend Inbound URL.

d In the QXtend Inbound main page, click QXtend Manager and select Functions|Test Harness|QXtend Config Service and set Configuration File to `qadcrmconfigureOthers.xml`, User Name as `admin`, and Password as `mfgpro`; click Submit to load the `.xml` file.

Configuring QXtend for Integration (if QXtend Version is earlier than 1.6.3)

Configuring QXtend Outbound for integration

1 Create the source application for QAD CRM integration.

a In a Web browser, enter the QXtend Outbound URL; for example, http://coli47.qad.com:10040/testcrm93qxo/.

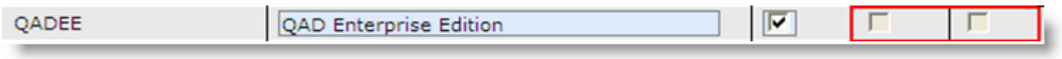
b In the QXtend Outbound main page, click Configuration.

c Expand Source Applications.

d Make sure that source application type QAD EE is created. If it does not exist, create one with the following details:

- Name as QADEE
- Description as QAD Enterprise Edition

- Active selected
- Use RowIDs deselected
- Direct Data Publish (DDP) only deselected

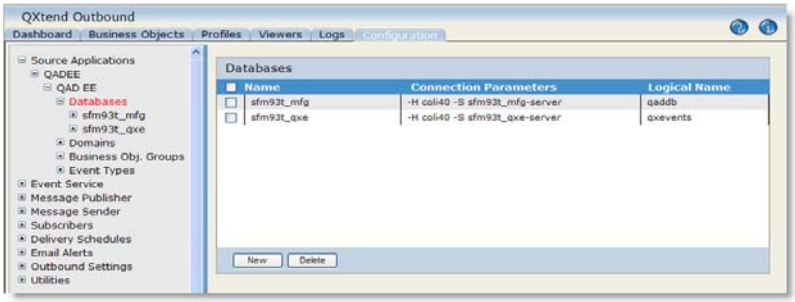


e Create a new source application. Specify QAD EE as the code and leave AppServer parameters blank.

f If QXtend version is 1.6.2.6 or later, create the following databases:

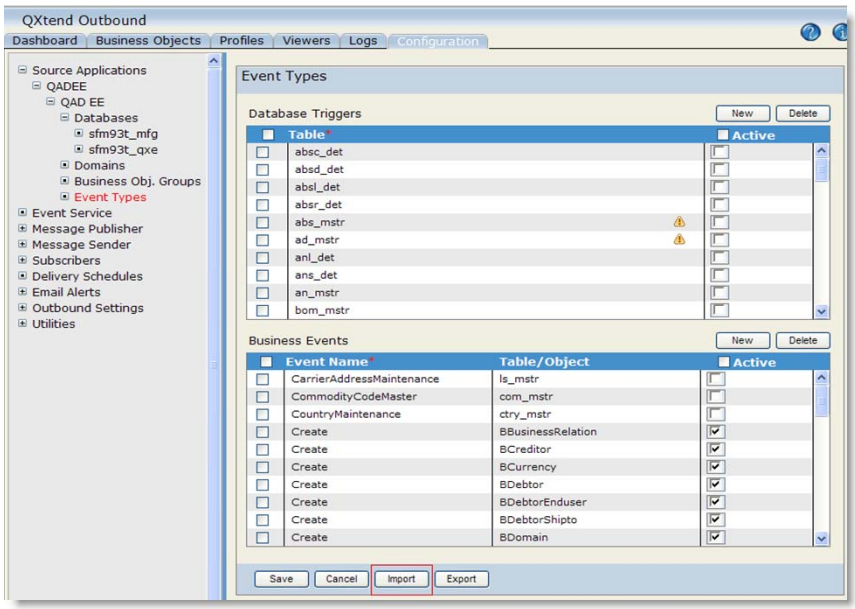
- Add one database and specify Name of qaddb database (for example, sfm93t_mfg), Connection Parameters (for example, -H coli40 -S sfm93t_mfg-server, where coli40 is the database host name and sfm93t_mfg-server is the service name created for the qaddb database) and Logical name of mfg database as qaddb.
- Add database and specify Name of qxevents database (for example, sfm93t_qxe), Connection Parameters (for example, -H coli40 -S sfm93t_qxe-server, where coli40 is the database host name and sfm93t_mfg-server is the service name created for qaddb database) and Logical Name (for example, qxevents)

Fig. 2.9
Set Up Databases



g Make sure default event types are imported. If not, import event types by selecting the Import button.

Fig. 2.10
Import Event Type



h Create event types for CRM integration for the following objects using Events Create, Modify, and Delete.

- BBusinessRelation
- BCreditor
- BCurrency
- BDebtor
- BDebtorEndUser
- BDebtorShipto
- BDomain
- BDomainProperty
- BExchangeRate
- BUser

2 Configure schemas, business objects, and profiles.

If you are using QXtend 1.6.2.6 or later, use the following steps to load business objects and profiles:

a Go to the QXtend Outbound main page.

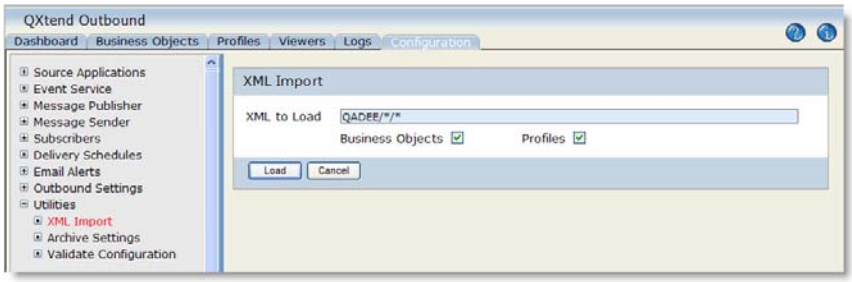
b Click the Configuration tab.

c In the left pane, choose Utilities|XML Import.

d In the XML Import screen, specify QADEE/*/* in the XML to Load field.

e Click Load to import business objects and profiles.

Fig. 2.11
XML Import



If your QXtend version is earlier than 1.6.2, use the following steps:

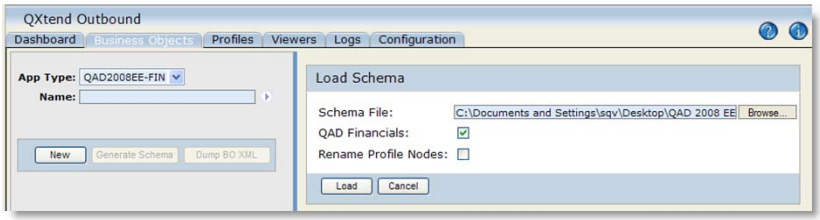
a Go to the QXtend Outbound main page.

b Click the Business Objects tab.

c Select the App Type created earlier, such as QAD2008EE-FIN.

d Click the New button.

Fig. 2.12
Load Schema



Schema File. Copy the `bbusinessrelation-ERP3_1.xsd` schema file from Qxtend Inbound webapp folder to a temp folder on your Deployment server; for example, *`QADCRMInstallDir`*`\temp`.

For example, the schema file could be copied from *`Qxtend Inbound webapp folder`*`/WEB-INF/schemas/QADEE/bbusinessrelation-ERP3_1.xsd` to the `c:\qadcrm\temp` folder, where `c:\qadcrm` is the CRM installation folder.

Now specify the above location (for example, `c:\qadcrm\temp`) as the schema file for the business relation.

QAD Financials. Select QAD Financials.

Rename Profile Nodes. Leave this option deselected.

e Click Load to load the schema.

f Repeat steps d and e to load schemas for the following components:

- BCreditor
- BDebtor
- BDebtorShipto
- BDebtorEndUser
- BDomain

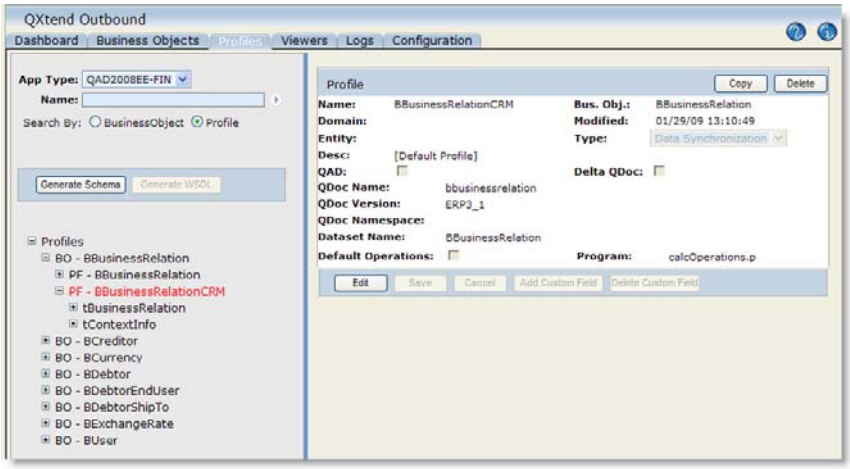
- BDomainProperty
- BCurrency
- BExchangeRate
- BUser

g In the left pane, select the profile radio button.

h Select default profile for business relation.

i Click Copy to create a new profile for CRM integration.

Fig. 2.13
Create Profile



Name. Enter a profile name, such as BBusinessRelationCRM.

QDoc Name. Enter a QDoc name in lower case; for example, bbusinessrelation.

QDoc Version. Enter ERP3_1.

Type. Choose Data Synchronization.

j Make sure that all the ID fields are included for the BBusinessRelation profile. To do this, select the profile and click the Edit button to select check boxes for ID fields; then click Save.

k Repeat steps h through j to create profiles for all the following components:

- BCreditor
- BDebtor
- BDebtorShipto
- BDebtorEndUser
- BDomain
- BDomainProperty
- BCurrency
- BExchangeRate
- BUser

3 Create a new subscriber

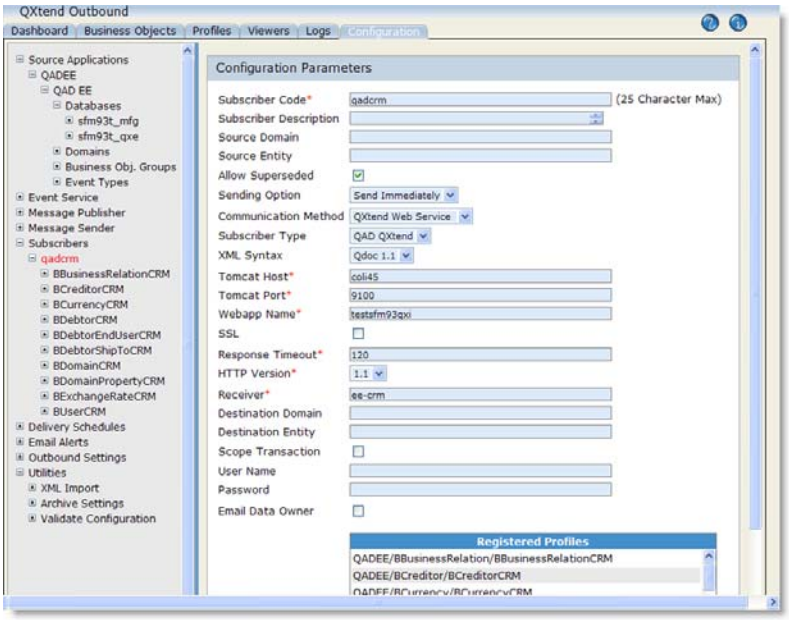
a Go to the QXtend Outbound main page.

b Click the Configuration tab.

a In the left pane, click Subscriber.

b Click New to create a new subscriber.

Fig. 2.14
Create Profile



Subscriber Code. Enter qadcrm.

Allow superseded. Select this option.

Sending Option. Choose Send Immediately.

Communication Method. Choose QXtend Web Service.

XML syntax. Choose QDoc 1.1.

Tomcat Host. Enter the Tomcat host name.

Tomcat Port. Enter Tomcat host port.

Webappname. Enter the Inbound Webappname; for example, testcrm93qxi.

HTTP Version. Enter 1.1.

Receiver Name. Specify the QXtend Inbound receiver name.

Destination Domain. Leave this field blank.

Destination Entity. Leave this field blank.

Scope Transaction. Leave this option deselected.

c Click Register Profiles.

d Select all the profiles created for CRM from the list on the right and click Add the Profiles.

e Click Register Src Apps and select Source Application.

f Click Save.

4 Configure Message Sender.

a Go to the QXtend Outbound main page.

b Click the Configuration tab.

c From the left pane, click Message Sender.

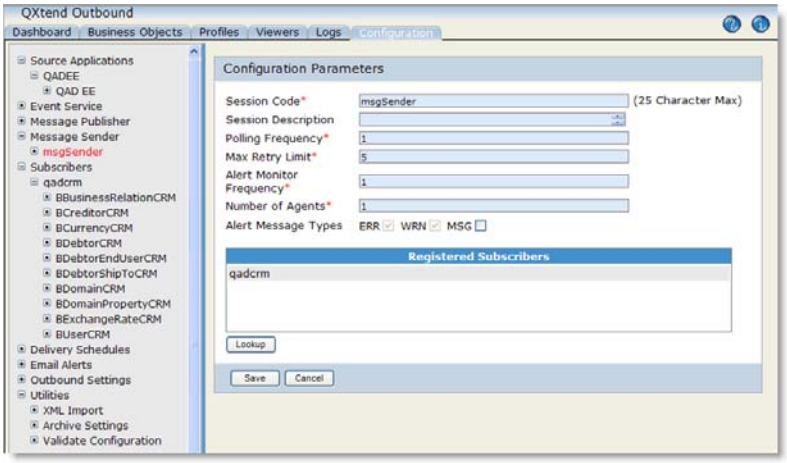
d Select an available message sender under Message Sender. Create one if no default message sender exists.

e Select the Lookup button.

f Select newly created Subscriber and click Add.

g Click save to save the details.

Fig. 2.15
Create Message Sender



5 Configure Message Publisher.

a Go to the QXtend Outbound main page.

b Click the Configuration tab.

c From the left panel, click Message Publisher.

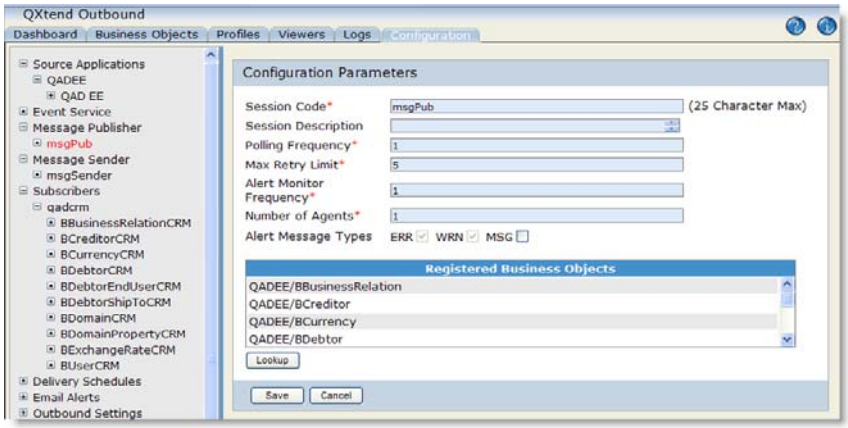
d Select available message Publisher under Message Publisher. Create one if default one does not exist.

e Click the Lookup button.

f Select App Type QAD EE.

g Select BusinessObjects created for CRM integration and click Add to include it in the Message publisher.

Fig. 2.16
Configure Message Publisher



Configuring QXtend Inbound for Integration

1 Load Business Components schemas for CRM integration only if QXtend version is prior to 1.6.2.6.

   a Go to the QXtend Inbound main page.

   b Go to the Configuration tab.

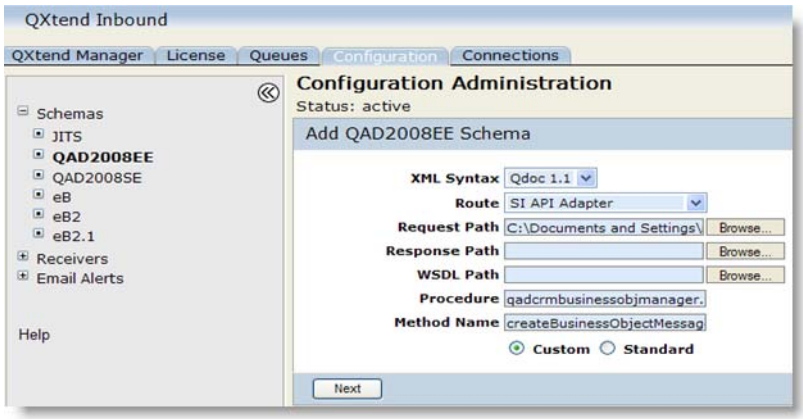
   c Select Schemas from the left pane.

   d Select QAD2008EE under schemas

   e Click Add.

   f Select Continue Configuration update without suspending QXtend Inbound.

Fig. 2.17
Configure Message Publisher



XML syntax. Select Qdoc 1.1.

Route. Select SI API Adapter.

Request Path. Enter the following:

QADCRMInstallDir\temp\bbusinessrelation-ERP3_1.xsd

This assumes that you have followed the instructions listed under step Load Schema in the Qxtend Outbound setup in the previous section.

Response Path. Leave this field blank.

WSDL Path. Leave this field blank.

Procedure. Enter `qadcrmbusinessobjmanager.r`.

Method Name. Enter createBusinessObjectMessage.

Custom/Standard. Select Custom.

g Click Next.

h Select the receiver ee-crm specified during subscriber configuration.

i Repeat the above steps to load schemas for the following components:

- BCreditor
- BDebtor
- BDebtorShipto
- BDebtorEndUser
- BDomain
- BDomainProperty
- BCurrency
- BExchangeRate
- BUser

2 Create New Receiver for data transfer from QAD EE to QAD CRM.

a Go to the QXtend Inbound main page.

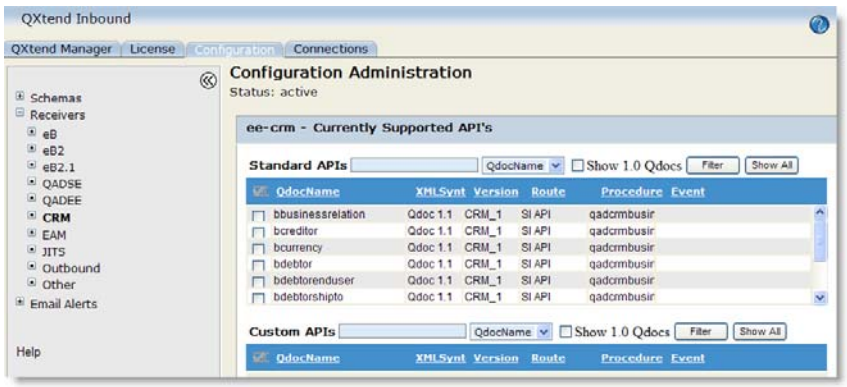
b Go to the Configuration tab.

c Select Receivers from left pane.

d Select QADEE if QXtend Version is prior to 1.6.2.6; otherwise, select CRM.

e Click New.

Fig. 2.18
Add Receiver



f Select Continue Configuration update without suspending QXtend Inbound.

g Specify the receiver name as ee-crm.

h Leave licensed domains blank.

i Click Next.

j Select the following QDocs from Standard APIs if QXtend version is 1.6.2.6 or later; otherwise select Qdocs from custom APIs.

- BBusinessRelation
- BCreditor
- BDebtor
- BDebtorShipto
- BDebtorEndUser
- BDomain
- BDomainProperty
- BCurrency
- BExchangeRate
- BUser

3 Create New Connection for data transfer from QAD EE to QAD CRM.

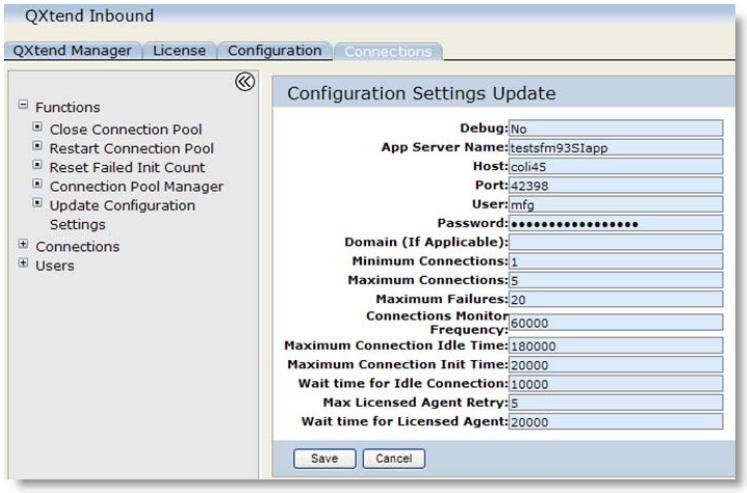
a Go to the QXtend Inbound main page.

b Go to the Connection tab.

c Expand Add connection pool.

d Click Add SIAPI pool.

Fig. 2.19
Add Receiver



Pool Name. Enter the same name as the receiver name, such as ee-crm.

AppServer Name. Enter the AppServer name created when you set up the AppServer environment; for example, testsfm93SIapp.

Host. Enter the AppServer host name.

Port. Enter the NameServer port number.

e Click Save.

4 Create new receiver for data transfer from QAD CRM to QAD EE.

a Go to the QXtend Inbound main page.

b Go to the Configuration tab.

c Select Receivers from the left pane.

d Select QADEE and Click New.

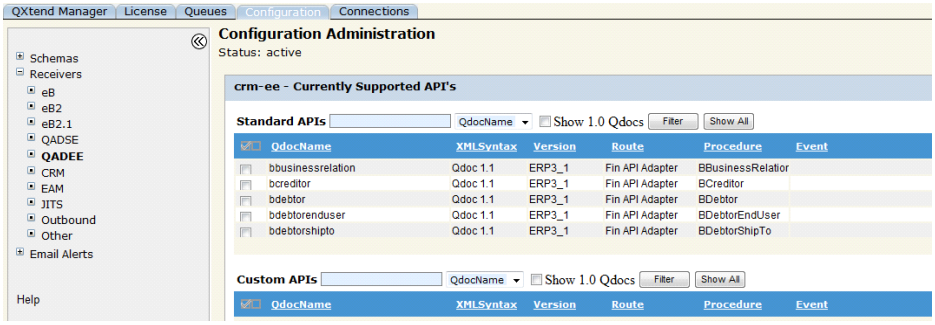
e Select Continue Configuration update without suspending QXtend Inbound.

f Specify crm-ee as the receiver name and leave licensed domains blank.

g Select following QDocs from Standard APIs:

- BBusinessRelation
- BCreditor
- BDebtor
- BDebtorShipto
- BDebtorEndUser
- BDomain
- BDomainProperty
- BCurrency
- BExchangeRate
- BUser

Fig. 2.20
Select QDocs



5 Create New Connection for data transfer from QAD CRM to QAD EE.

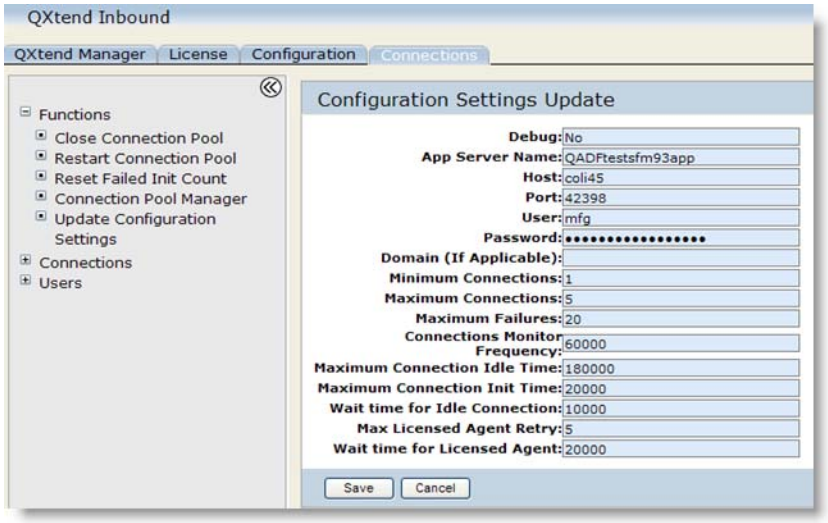
a Go to the QXtend Inbound.

b Go to the Connection tab.

c Expand Add connection pool.

d Click Add Fin API pool.

Fig. 2.21
Create Connection



Pool Name. Specify the same name as the receiver name such as crm-ee.

AppServer Name. Specify QAD EE Financial AppServer broker name; for example, QFtestsfm93app.

Host. Enter the AppServer Host name.

Port. Enter the NameServer port number.

User/Password. Enter the user and password.

e Click Save.

Configuring the Environment for Sales Order Integration

QAD CRM uses CIM to create sales orders in QAD Enterprise Applications. If you plan to use this feature, use the AppServer from the QAD Enterprise Applications machine.

You must also perform the following configuration in your test and production environments, and then refer to the QAD CRM *Administration Guide* to complete further configuration steps required for sales order integration.

1 Do either of the following:

- If your QAD Enterprise Applications is installed on a Linux\UNIX system, copy *QADCRMInstallDir*\bin\client_cim_linux.sh as client_cim_prod_linux.sh to *QADERPInstallDir*/script (where all QAD Enterprise Applications batch files are available).
- If your QAD Enterprise Applications is installed on Windows, copy *QADCRMInstallDir*\bin\client_cim_win.bat as client_cim_prod_win.bat to *QADERPInstallDir*/script (where all QAD Enterprise Applications batch files are available).

2 Open the copied client_cim_prod_linux.sh/client_cim_prod_win.bat file in an editor and make sure the DLC and PROPATH entries have valid values. For example in case of Linux/UNIX, it should look like this:

```
&DLC = /home/progress/dlc101c
&PROPATH =
QADERPInstallDir,QADERPInstallDir/us/bbi,QADERPInstallDir/qadcrm/prod,QADERPInstallDir
/qadcrm/prod/system,QADERPInstallDir/qadcrm/prod/dataexch,QADERPInstallDir/qadcrm/prod
/progs,QADERPInstallDir/qadcrm/prod/report,QADERPInstallDir/qadcrm/prod/triggers,QADER
PInstallDir/qadcrm/prod/integration/mfgpro
```

3 If QAD QXtend is installed, open the copied client_cim_linux.sh/client_cim_win.bat file in an editor and include the QXtend Outbound install directory in the beginning of the PROPATH:

```
&PROPATH =
QXtendOutboundInstallDir,QADERPInstallDir,QADERPInstallDir/us/bbi,QADERPInstallDir/qad
crm/prod,QADERPInstallDir/qadcrm/prod/system,QADERPInstallDir/qadcrm/prod/dataexch,QAD
ERPInstallDir/qadcrm/prod/progs,QADERPInstallDir/qadcrm/prod/report,QADERPInstallDir/q
adcrm/prod/triggers,QADERPInstallDir/qadcrm/prod/integration/mfgpro
```

4 Modify the paths of the following files in the client_cim_prod_linux.sh/client_cim_prod_win.bat file:

- Production.pf. This parameter file should be replaced by the one that connects the QAD CRM and QAD Enterprise Applications prod databases and qxevents database if QXtend is installed in your environment. You must create one if you cannot use any existing .pf file.
- pintord02.r file located in the *QADERPInstallDir*/qadcrm/prod/integration/mfgpro directory.

5 Create a printer record for Sales Order Integration in QAD Enterprise Applications using the following steps:

a Run QAD Enterprise Applications.

b Go to Printer Setup Maintenance (36.13.2) and create a printer record with the following details:

- Output To: sfama.so
- Destination Type: Default
- Description: sfama

- Lines / Page: 66
- Scroll Output: No
- Device Pathname: /tmp/sfama.so
- Spooler: No

Leave the rest of the fields blank.

Installing QAD CRM on End User PC

Before setting up QAD CRM clients, verify that you have met the following prerequisites:

- System requirements for QAD CRM. See “System Requirements” on page 11.
- Your network is operating.
- Create the folder `C:\temp` on your client PC if a it does not exist.
- You have permission level required on your PC to install new applications such as QAD CRM WebClient, which requires access to update the Windows registry file.

The installation of QAD CRM WebClient on end user PC consists of two steps:

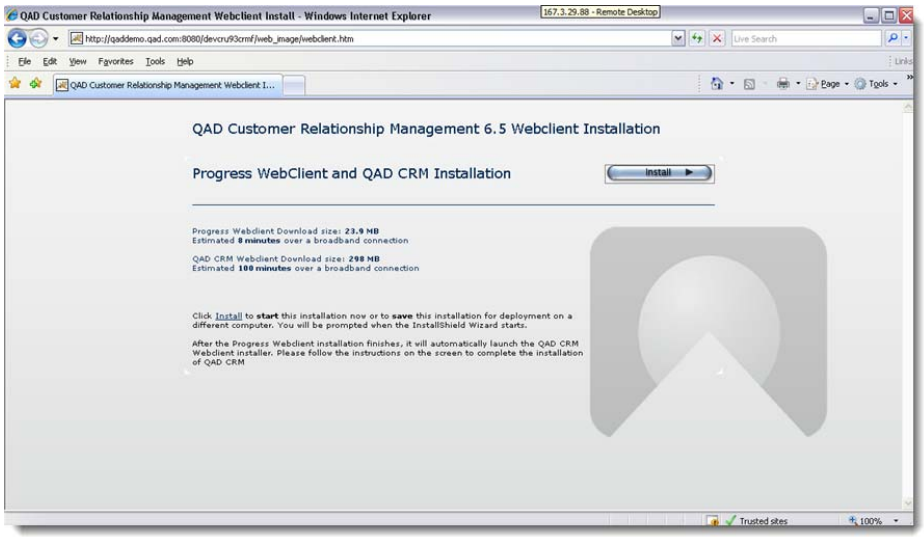
1. Install Progress WebClient (if not already installed).
2. Install QAD CRM.

Once you have finished hosting your CRM WebClient application `.cab` files on the Delivery Server (a Tomcat server), do the following:

1. Start Internet Explorer.
2. Go to this URL:

   ```
   http://<DeliveryServerIpAddressorHostName>:<TomcatPortNo>/<qadcrmwebclient>/web_image/bootstrap.htm
   ```

3. If Progress WebClient is not installed on your machine, Internet Explorer displays the Progress WebClient and QAD CRM installation page.



Click the Install button to launch the installation process.

1 It installs the required version of Progress WebClient application, then launches the CRM WebClient application download and eventually starts the CRM.

Note You might be required and prompted to restart your PC after Progress WebClient has been installed.

2 If you already have Progress WebClient installed on your machine, the installer displays a warning message and prompts you to exit.

Exit the installer and go to the following URL to proceed to download the CRM WebClient application:

`http://qaddemo.qad.com:8080/qadcrmwebclient/qadcrm/qadcrm.prowcapc`

3 At the Security Warning message box, click Run to launch the QAD CRM installation process.

4 When installation is complete, a QAD CRM WebClient icon is created on the Windows Desktop. QAD CRM WebClient shortcut menus are also created.

- QAD CRM WebClient: Launch QAD CRM in the WebClient mode.
- QAD CRM WebClient AppManager: View detailed information about QAD CRM WebClient installed on your machine, such as configuration file and application directory.
- Uninstall QAD CRM WebClient: Uninstall QAD CRM WebClient from your machine.

Note If you're installing a CRM Webclient on a test server (instead of an end user PC) so that it can be shared with multiple users via remote desktop into that test server, then you will need to open up the Properties of the CRM Webclient Window icon, and blank out the the "Start in" value before you click on this icon to launch the Webclient for the first time.

5 Launch CRM WebClient either by clicking the application Desktop icon or selecting the application shortcut command from the Start menu.

6 When you run QAD CRM WebClient for the first time on your machine, you get a message similar to one shown below.

Click OK to install required components. When installation is complete, launch QAD CRM WebClient again.

Note During the first launch of the CRM WebClient application, it could take some time depending on the connection speed between the Tomcat server where your CRM application is hosted and your own computer on which you are trying to launch CRM WebClient. However, this delay will be experienced only during first time you access CRM. Subsequent access to the CRM system is quicker.

If a user launched the QAD CRM Webclient and did not perform the initial installation on a client PC, the user will encounter an error similar to the one following even if the user belongs to a local admin group:

Unable to install/run <application name>. You must have full access to the Application Key in the windows Registry. HKEY_Local_MACHINE\Software\QAD Inc.\<application name>.

Contact your System Administrator.

To resolve this issue, take the following steps:

1 Go to the registry and select following node:

- Windows 32-bit clients:

  `HKEY_LOCAL_MACHINE\Software\<VendorName>\<ApplicationName>`
- Windows 64-bit clients:

  `HKEY_LOCAL_MACHINE\Software\Wow6432Node\<VendorName>\<ApplicationName>`

2 Select the application name. Then, right-click and choose Permission.

3 Select Users from Group or user names section.

4 Select Full Control from Permissions for user group and select Allow.

5 Click OK and restart the QAD CRM Webclient.

Note Running the CRM Webclient application does not require the user to have admin permission. The user only needs access permission to the registery nodes.

Creating Separate QAD CRM Environment

Prerequisites

For an integration with QAD Enterprise Applications, a corresponding environment should be available for each separate QAD CRM environment you want to set up.

Duplicate Environment Creation Process

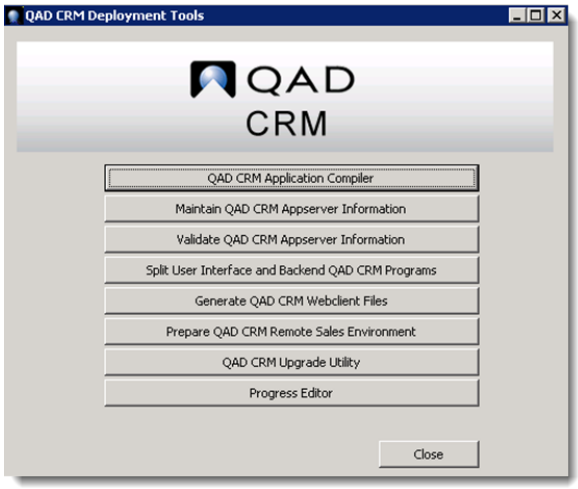
Make a copy of the *QADCRMInstallDir* on your deployment server to a new folder; for example, *QADCRMInstallDir_Env*.

For example, if you installed the original configuration of QAD CRM on a Deployment server in *c:\qadcrm661*, you could copy it to a new folder such as *c:\qadcrm661_test*.

Once you have made a copy of the environment to a new folder, the instructions for setting up your environment remain the same as your original configuration except that wherever you see a tag *QADCRMInstallDir*, you must replace it with the new folder name you created; that is, *C:\qadcrm661_tes*t in this case.

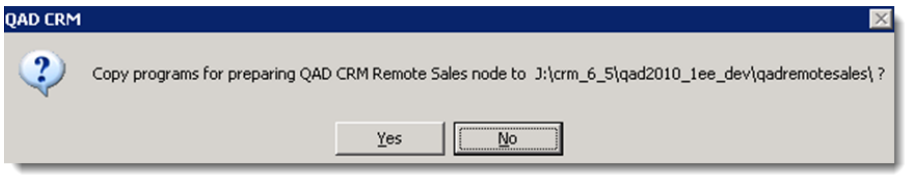
Preparing the QAD Remote Sales Environment on the Deployment Server

1 On the QAD CRM deployment server, run the QAD CRM Deployment Utility. The following window pops up.



2 Click the Prepare QAD CRM Remote Sales Environment button.

3 A message is displayed. Click Yes to copy required programs.



Implementing QAD Remote Sales (Optional)

Installing QAD Remote Sales

Before installing QAD Remote Sales, you must complete the previous step (Preparing the QAD Remote Sales Environment on the Deployment Server). The previous step must be performed only once and it can be used to set up any number of remote nodes, as described in the following procedure.

To install QAD Remote Sales on a remote computer:

1. Install the Progress Personal Database license at:

   `C:\Progress\openedge`

2. Create a directory on the remote computer to store QAD Remote Sales program files. The assumed directory is:

   `C:\QADRemoteSales`

   Copy the directories and their content from the following location on your deployment server to the new directory you created; that is,

   `QADCRMInstallDir``\QADRemoteSales` on deployment server to `C:\QADRemoteSales`

3. Run the following program:

   `C:\`*`QADRemoteSales`*`\bin\remotesetup\setup.exe`

   This program starts the QAD Remote Sales installation.

4. Click Next.

   If QAD CRM 6.4B8/6.4B6/6.4B2/6.3/6.1 is found on the system, Setup displays a warning message. Click Yes to continue with the installation or No to abort the setup.

   It is highly recommended that you uninstall any previous version of QAD CRM prior to installing the latest release.

5. Setup checks for the Progress database version installed on the computer.
   - If the compatible Progress versions are not found, Setup displays an error message and aborts the installation.
   - It will use the highest version of Progress supported by CRM that is available on the computer.

   Select the Progress version you want to use and click Next.

6. Setup checks for Microsoft .NET Framework 4.0 on the system.
   - If Microsoft .NET Framework 4.0 is already installed, skip to the next step.
   - If Microsoft .NET Framework 4.0 is not installed, Setup prompts you to install the component. Click Yes to install .NET Framework 4.0. Setup Wizard installs the component.

   After Microsoft .NET Framework 4.0 is installed, you might get an alert that you must restart Windows so that an application using .NET Framework can work properly. If you see this prompt, choose the option Restart Later and make sure that you restart windows after the CRM Client installation has been completed.

7. Click OK. The Destination Location screen appears.

8. To change the default installation directory, click Change. Browse and select the directory. Then click OK and then click Next. The Program Folder screen appears.

9. To change the default program folder for storing shortcuts, specify the folder you want in the Program folder field. Click Next. The Options Selected screen appears.

10. Click Install. Setup starts installing the system components in the designated directory.

11 During install, Setup checks some Progress files. If the files cannot be found, Setup prompts you to copy Progress files. It is recommended to choose Yes to copy the Progress files required.

12 The installation program now initiates the Crystal Distribution package installation or repair. If this software is already installed, select the Repair option.

Note Choosing the Remove option removes the Crystal Distribution package from the client computer.

13 To install the Crystal Distribution package, click Next.

The Select Installation Folder screen appears.

14 To change the default installation directory, click Browse. Specify the installation directory.

15 Click Next. The Confirm Installation screen appears. Click Next to start the installation.

16 On the Installation Complete screen, click Close to finish the Crystal Reports Installation.

17 Click Finish to end the QAD CRM Remote Sales installation.

The QAD Remote Sales installer creates icons to start the system and access the help system.

After installation you can start QAD Remote Sales with demo data. You should restart the computer for your changes to take effect.

Note In case of Unicode implementation, you must have done the following:

Change some parameter values in the remote sales client parameter (.pf) file. The file name is `qadsfama.pf` and is available in the remote sales installation folder (`C:\QADRemoteSales`).

Update or add the following entries in the qadsfama.pf file:

```
-cpinternal UTF-8
-cpstream UTF-8
-cpcoll ICU-UCA
-cpcase Basic
```

Preparing QAD Remote Sales

Before preparing QAD Remote Sales, you must register the QAD Remote Sales database—called the remote node—with the host system on the network. This is required for data synchronization and data subset creation.

From the database on the network—also called the host node—you must create the data subset file for the remote node. This file is loaded onto the QAD Remote Sales.

To load the host node data subset onto the personal database:

1 Extract the appropriate data subset from the host node and save it in the `.res` file format.

2 Copy the data subset file of the node in `.res` format from:

`QADCRMInstallDir``\dataout`

to this directory on the computer where QAD Remote Sales is installed:

`QADRemoteSaleInstallDir``\datain`

3 Log in as the demo in QAD Remote Sales.

Note At this point, if you run into the an error about Unable to open word-break table, take the following steps to resolve the error:

a. Start a command window (`cmd.exe`) and set the DLC and PATH variables.

```
set DLC=ProgressInstallDir
set PATH=%PATH%;%DLC%;%DLC%\bin
```

b. Change current directory to the Progress installation directory.

```
cd %DLC%
```

c. Compile the new word-break file using the following command:

```
proutil -C wbreak-compiler %DLC%\prolang\convmap\utf8-bas.wbt 1
```

4. Choose Main Menu|Remote Sales Data Synchronization|Receive Data to Recreate Current Node. The Node Requiring Re-creation dialog box appears.
5. From the Load data from list, choose File.
6. In the File Name field, specify the full path and name of the `.res` file.
7. Click OK. The system starts loading the data into the personal database.
8. Restart the system.

To enable data synchronization:

1. Choose Main Menu|Remote Sales Data Synchronization|Node Management Control|Synchronization settings.
2. Select the Enable Data Synchronization check box.
3. In the No of Days Modified Records must be kept field, type `30`.
4. Restart QAD Remote Sales.

When needed, synchronize the data with the host node. You must ensure that the data synchronization feature is configured in QAD CRM. QAD Remote Sales users should periodically synchronize data with the host node to keep information current.

Chapter 3

Post-Installation Configuration

This section describes post-installation configuration of QAD Customer Relationship Management (QAD CRM). It discusses the following topics:

Overview

After installing QAD CRM, you must configure it according to the requirements of your company. Most system features are based on these configurations. For example, users access the system through their user profile and permissions as configured in the system.

You must configure the system before using it in your company's production environment.

Custom settings of the system are categorized as mandatory configurations or function settings.

Mandatory Configuration Tasks

Mandatory configuration tasks provide the minimum information required to operate QAD CRM. These are typically one-time settings and must be completed before the system is used in the production environment. The system provides a Configuration Wizard to set up mandatory information.

Mandatory information includes:

- Details of the headquarters of your business unit
- Administrator profile
- Base currency
- Business year
- Data synchronization
- Look-up data

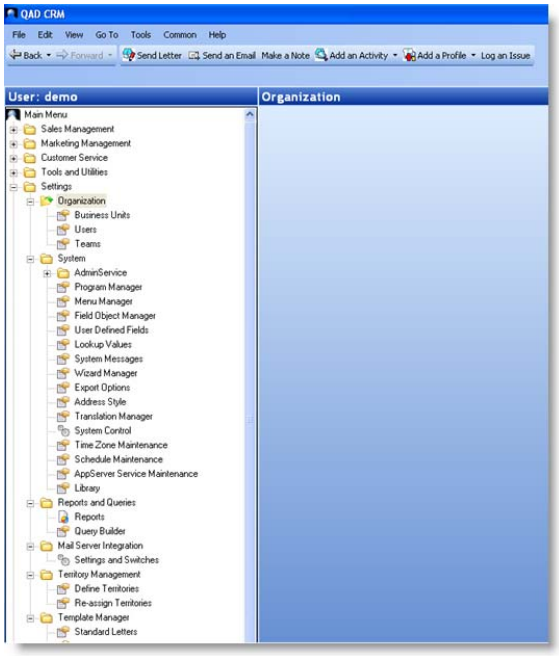
Function Settings

Function settings are useful for customizing and operating the system. They can be set up at any time during system deployment and include:

- User profiles
- Teams
- System parameters
- Menus
- Programs
- Wizards
- System messages
- User-defined frames
- Export options
- Templates
- Currency and foreign exchange rates
- VAT details
- Product details
- Territory details

You can customize the system with mandatory and function information through the System Setup module.

Fig. 3.1
System Setup Module



To integrate the system with your QAD Enterprise Applications, you must appropriately configure QAD CRM for integration. You must then transfer information from your QAD Enterprise Applications to the system.

Configuring Mandatory Information

You can configure the system with mandatory information using the Configuration Wizard, which is available when you first start the QAD CRM after installation. The Configuration Wizard leads you step by step through entering the mandatory data.

After configuring the system with mandatory information, log in using the admin user name and password. Then configure the system with function information.

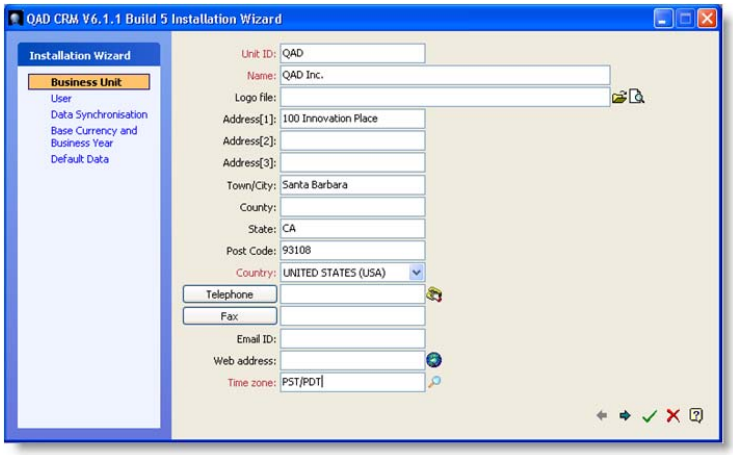
To configure the system using the Configuration Wizard:

1 Start QAD CRM.

Fig. 3.2
Starting the Wizard

2 Click Setup. The Configuration Wizard screen appears.

Fig. 3.3
Installation Wizard - Business Unit

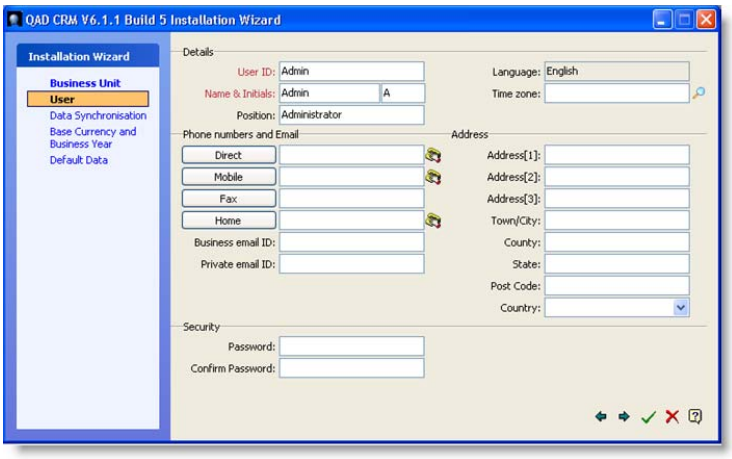


3 Enter your business unit details.

4 Click Next.

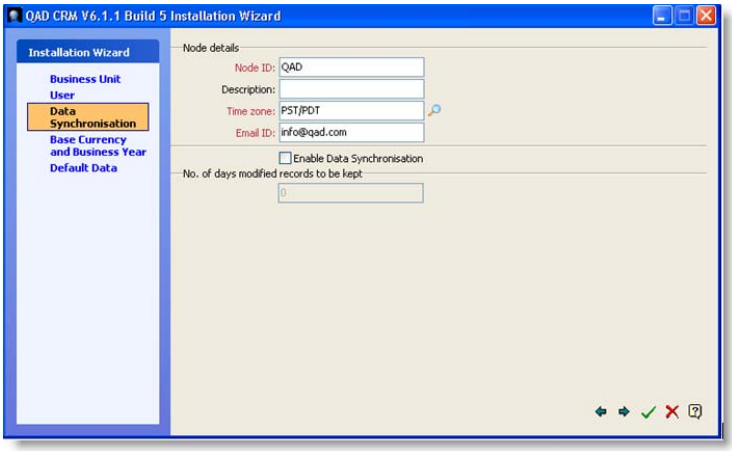
5 Enter details for the system administrator user profile.

Fig. 3.4
Administrator Details



6 Click Next.

Fig. 3.5
Node Details

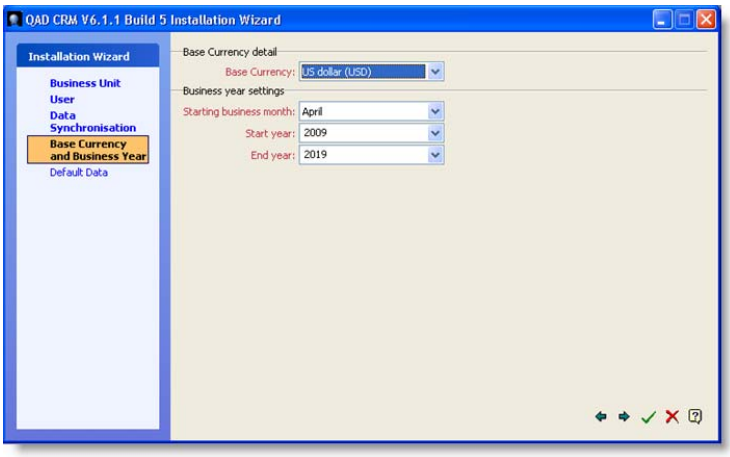


7 Enter host node details.

Note A node is a database that the system uses. The host node is the main central database to which QAD CRM connects. Once the Node ID has been created, it cannot be changed. A Node ID is used in CRM to identify the database and also forms a prefix to certain keys generated by the system in various modules. Select the Node ID carefully before proceeding further.

8 Click Next.

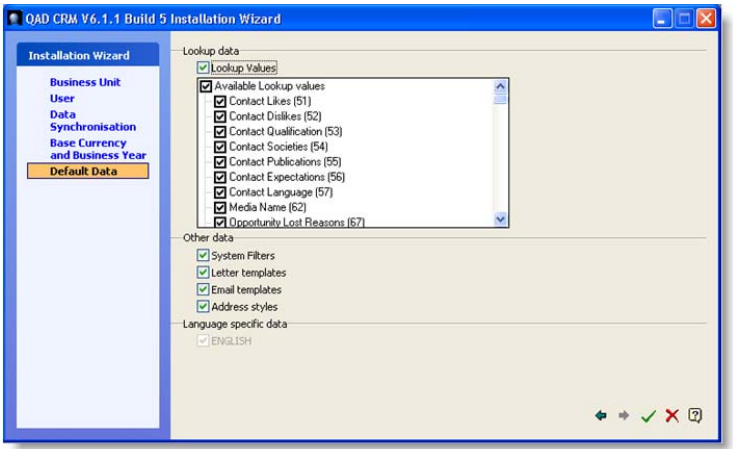
Fig. 3.6
Selecting Base Currency



9 From the Base Currency drop-down list, select the base currency that your company uses for business.

10 Click Next.

Fig. 3.7
Setting Lookup Values



11 Select the required options to configure look-up values and select the languages that the system must support.

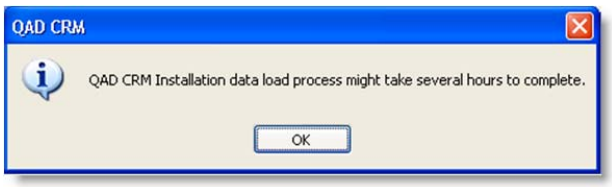
12 Click Save.

If you leave any mandatory input fields empty, the Configuration Wizard does not let you save the information. In this case use the Back and Next buttons to complete the information, then click Save.

The system is now configured with mandatory information.

13 Click OK. The message below appears.

Fig. 3.8
Data Load Process



If necessary, you can modify the configuration from the System Setup module. See *Administration Guide: QAD Customer Relationship Management* for details.

Warning Before modifying any mandatory information, analyze the results. For example, changing the base currency can adversely affect product pricing and exchange rates.

Loading Language Files into QAD CRM

If you need to load any language files after QAD CRM is installed, you must perform the tasks described below.

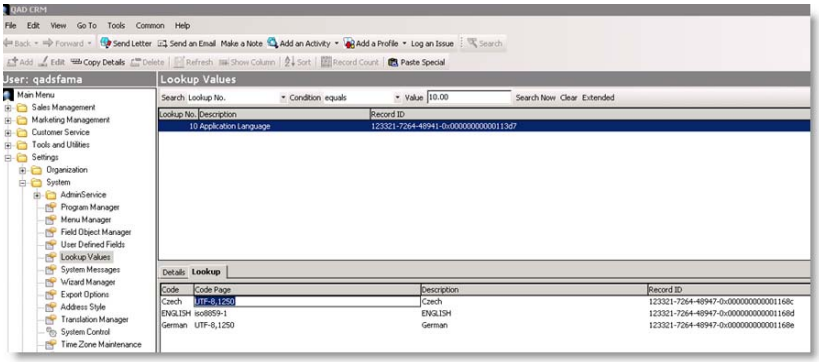
Perform the following general steps if you want to load language files after QAD CRM is installed:

1. Set up a new language record in the lookup table for lookup no = 10 and update the correct code page.
2. Run the QAD CRM Deployment Utility and then click the CRM Upgrade Utility button to launch the Upgrade Utility.
3. Specify the name of the `.pf` file to connect to the required databases you want to update with the language file. Then click the tick button to launch the Upgrade Utility to select and load the language file.

Setting Up a New Language Record

1. From the QAD CRM Main Menu, choose Settings|System|Lookup Values.
2. Set Lookup No. equals 10.00 as the search criteria and click Search Now.
3. Under the Lookup tab in the lower frame, right-click and select Add to add a new language code.
4. Enter the code, code page, and description in the corresponding fields and save the record.

Fig. 3.9
Setting Up a New Language Record



Code. Enter the language code as supplied in the below language table; for example, if you want to load Castilian Spanish, enter code as ‘CastSpaní’. The system will validate the language file name against the code identifier during file load and will not load if it does not match.

Code Page. Enter the language code page as supplied in the below language table corresponding to the language code. For example, if you want to load Castilian Spanish, enter “UTF-8, ISO8859-1” as code page. System validates the code page against the Progress session code page. It will not load if the system code page does not match the language code page.

Description. Enter the language description as supplied in the below language table corresponding to the language code.

Table 3.1
Language Table

Code	Code Page	Description
CastSpan	UTF-8, ISO8859-1	Castilian Spanish
Czech	UTF-8	Czech
Dutch	UTF-8, ISO8859-1	Dutch
French	UTF-8, ISO8859-1	French
German	UTF-8, ISO8859-1	German
Italian	UTF-8	Italian
Japanese	UTF-8	Japanese
Korean	UTF-8	Korean
LatiSpan	UTF-8, ISO8859-1	Latin Spanish
Polish	UTF-8	Polish
Portug	UTF-8, ISO8859-1	Portuguese
SimpChin	UTF-8	Simplified Chinese
TradChin	UTF-8	Traditional Chinese

Loading Language File

QAD CRM supports the following code pages:

- Unicode (UTF-8)

- ISO (ISO8859-1)

For non-iso languages, CRM databases should be configured to run in Unicode.

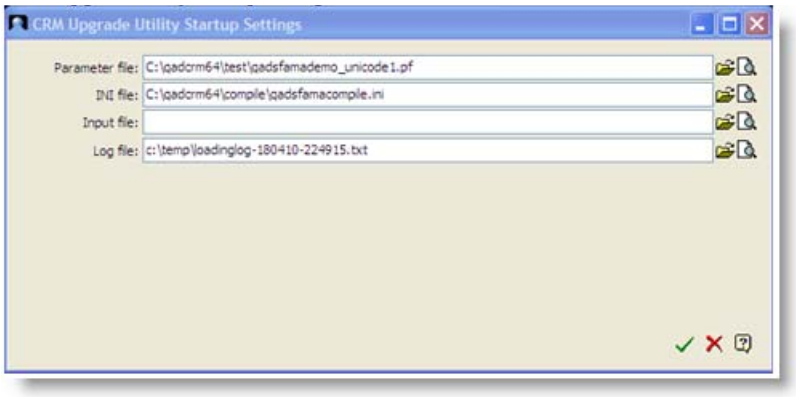
1. Make sure that the databases are running in multi-user mode. Modify the Upgrade utility parameter file (.pf) and connect to the same databases where you created the language records.

2. Launch the QAD CRM Deployment Utility and then click the QAD CRM Upgrade Utility button.

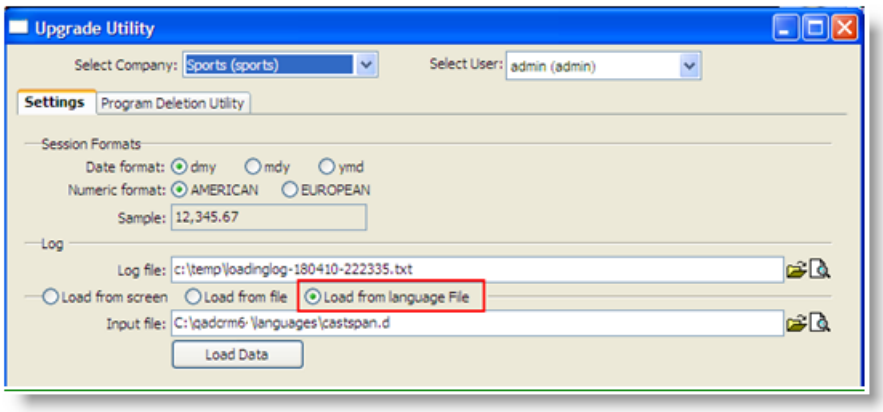
3. In the QAD CRM upgrade startup screen, specify the parameter file and the .ini file located under *QADCRMInstallDir**Environment* to connect to your CRM environment, then click the OK icon (green check mark).

   The parameter file (.pf) file should connect to the same databases where you created the language record.

Fig. 3.10
CRM Upgrade Utility Startup Settings



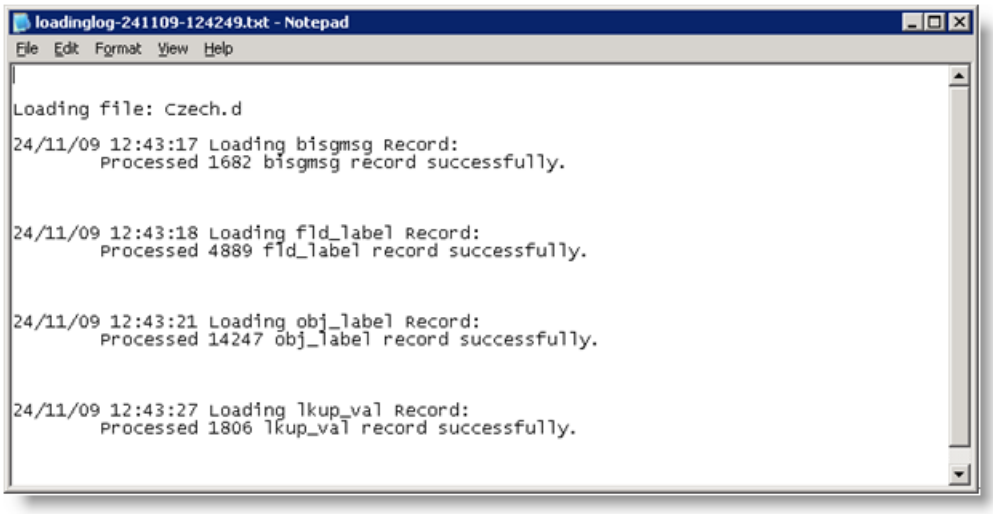
4. Under the Settings tab on the Upgrade Utility screen, select Load From Language File and specify the language file to load from the *QADCRMInstallDir*\languages directory, where all CRM language files are located. If the *QADCRMInstallDir*\languages directory was not created during installation or if new language files are provided, manually create the languages directory under *QADCRMInstallDir* and copy the language files you want to load to it.



5. Click Load Data. The data load process begins.

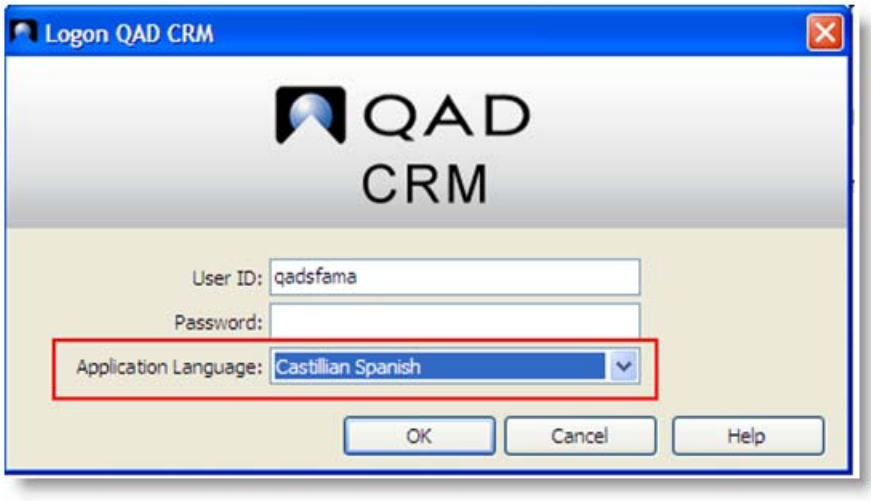
6 After the language file load is complete, a message prompts you to view the log file. Click Yes to open the log file. The following illustration shows how the log file will look after loading the `Czech.d` file. Four tables get loaded as a result of loading a language file. They are as follows:

- bisgmsg
- fld_label
- obj_label
- lkup_val



7 If the system fails to load them successfully, contact QAD Support.

8 Log out and log in to CRM again. In the log-in screen, select the language you just loaded the language file for from the Application Language field. After you log in, you will see the CRM user interface in the new language.



Configuring Function Information

Function information is supplied using various system setup features after the application has been configured with mandatory information. For details, see *Administration Guide: QAD Customer Relationship Management*.

QAD provides the Dump and Load Utility that helps transfer CRM system settings from one environment to another; for example, from the Pilot environment to the Production environment.

Go to the QAD KnowledgeBase on the QAD Support Website at http://www.qad.com/erp/Support/ for instructions on how to install and use the utility.

Chapter 4

Upgrade

Upgrading QAD CRM 6.1.1 to 6.3B1

Use the instructions in this section to convert QAD CRM versions 6.1.1 to the 6.3B1 release. This guide covers Windows conversions for Progress databases.

The upgrade process consists of several steps:

1. Installing QAD CRM 6.3B1
2. Converting 6.1.1 Databases to the Supported Progress Version
3. Converting 6.1.1 Databases to 6.3B1 (Non-Unicode)
4. Converting 6.3B1 Databases From Non-Unicode to Unicode
5. Performing Post-Upgrade Tasks

Note If the system breaks down during upgrade, you should start again with a backup copy. You cannot re-run the conversion on the same database.

Installing QAD CRM 6.3B1

1. Make sure the following prerequisite components are installed:
   - Progress OpenEdge 10.1C03 or 10.2A02, including the following components: Client Networking, Query Result, and OE Studio
   - QAD CRM 6.3 GA (September 2009) release
   - The appropriate version of QAD Enterprise Applications you want to integrate QAD CRM with
2. Download the QAD CRM 6.3B1 (QAD CRM 6.3 build 1) update bundle from the Product Changes and Advisories|Customer Advisories section on the QAD support Web site and install the package on top of the QAD CRM 6.3 GA (September 2009) release installation using the accompanying installation instructions.
3. Perform QAD CRM 6.1.1 data synchronization to make sure all remote nodes are synchronized with the host database. If you do not synchronize remote nodes now, they will be re-created after upgrade and all data residing in them will be lost.
4. Make sure none of the sub-directories under *`QADCRMInstallDir`*`\compile` contains any r-code files. Delete them if you find any.
5. Back up any QAD CRM 6.1.1 database you want to convert.
6. Make sure no other user is using the QAD CRM 6.1.1 database during the upgrade process.

Converting 6.1.1 Databases to the Supported Progress Version

QAD CRM 6.3B1 only supports Progress OpenEdge 10.1C03 and 10.2A02. Use the following steps to convert your QAD CRM 6.1.1 databases to the supported Progress version:

1. Stop all the QAD CRM databases.
2. Truncate the BI file using the old Progress version for each of the QAD CRM databases (bisgen, bisgmenu, and dataexch) using the following command:

```
proutil DBPath\bisgen.db -C truncate bi
proutil DBPath\bisgmenu.db -C truncate bi
proutil DBPath\dataexch.db -C truncate bi
```

3. Start all the QAD CRM databases using the new Progress version.

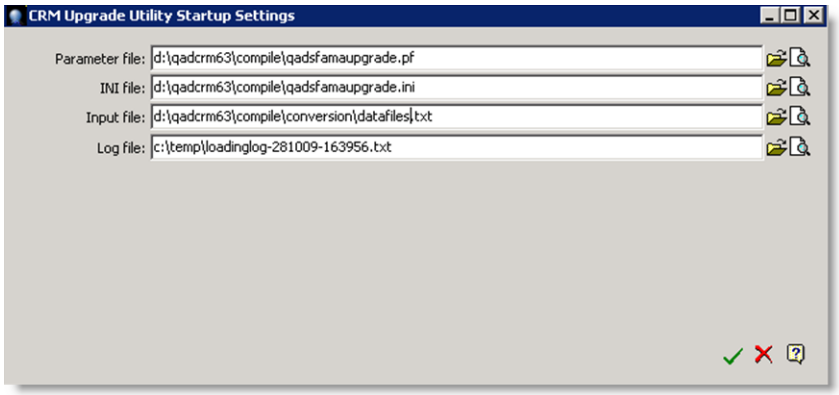
Converting 6.1.1 Databases to 6.3B1 (Non-Unicode)

1. Make a copy of *QADCRMInstallDir*\compile\qadsfamacompile.ini and rename it qadsfamaupgrade.ini.
2. Modify qadsfamaupgrade.ini using a text editor to include the conversion directory at the beginning of the PROPATH as in the following example:

```
PROPATH=
.,conversion,progs,system,dataexch,triggers,integration\mfgpro,report,lib,xrc,si\xrc,m
fgsrv,mfgsrv\us,mfgsrv\us\sq,mfgsrv\triggers,mfgsrv\qxo,mfgsrv\us\tx,c:\apps\dlc\gui,c
:\apps\dlc,c:\apps\dlc\bin
```

3. Modify *QADCRMInstallDir*\compile\qadsfamaupgrade.pf to connect the QAD CRM 6.1.1 databases. You do not need to connect the QAD Enterprise Applications databases.
4. Modify the properties of QAD CRM Upgrade Utility shortcut for QAD CRM 6.3B1 to change the INI file name from qadsfamacompile.ini to qadsfamaupgrade.ini.
5. Double-click the CRM Upgrade Utility icon to run the utility.
6. In the CRM Upgrade Utility Startup Settings window, specify the file paths; then click the OK icon (green check mark).

Fig. 4.1
CRM Upgrade Utility Startup Settings



Parameter File. Enter *QADCRMInstallDir*\compile\qadsfamaupgrade.pf.

INI File. Enter *QADCRMInstallDir*\compile\qadsfamaupgrade.ini.

Input File. Enter *QADCRMInstallDir*\compile\conversion\datafiles.txt.

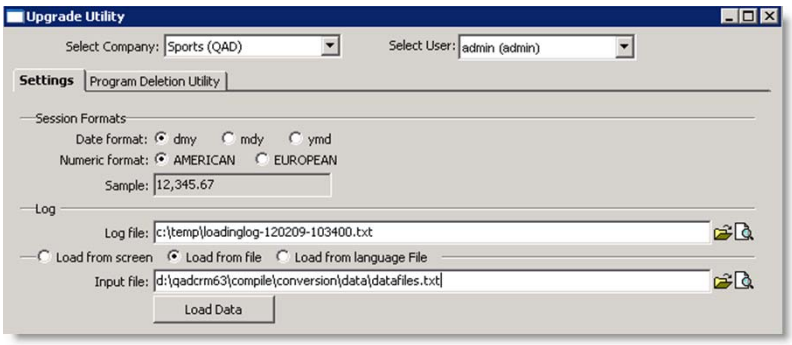
Log File. Leave the field as is.

7 The system prompts you to back up your existing databases before proceeding. Make sure you have backed up your databases and click Yes to continue.

8 A message informs you that data load is complete and prompts you to view the log file. Click No.

9 In the Upgrade Utility window, choose the proper company or business unit, select Load From File, and specify *QADCRMInstallDir*\compile\conversion\datafiles.txt as the input file; then click Load Data.

Fig. 4.2
CRM Upgrade Utility



10 The system prompts you to back up your existing databases before proceeding. Make sure you have backed up your databases and click Yes to continue.

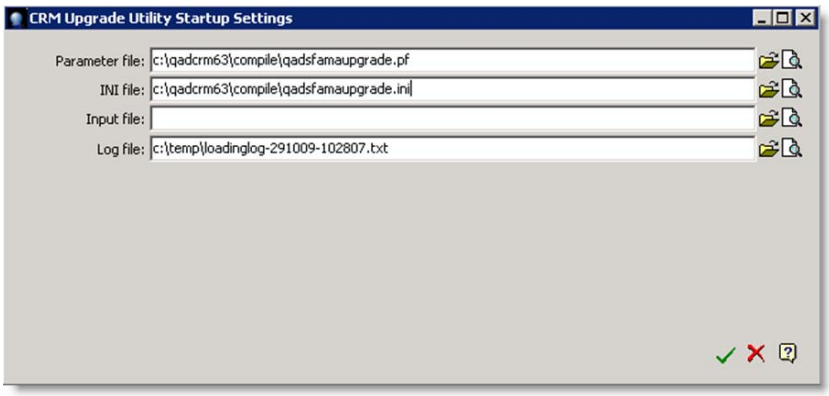
11 A message informs you that data load is complete and prompts you to view the log file. Click No.

12 Close the window.

13 Double-click the QAD CRM Upgrade Utility to run the utility again from the QAD CRM 6.3B1 environment.

14 In the CRM Upgrade Utility Startup Settings window, specify the file paths; then click the OK icon (green check mark).

Fig. 4.3
CRM Upgrade Utility Startup Settings



Parameter File. Enter *QADCRMInstallDir*\compile\qadsfamaupgrade.pf.

INI File. Enter *QADCRMInstallDir*\compile\qadsfamaupgrade.ini.

Input File. Leave the field as is.

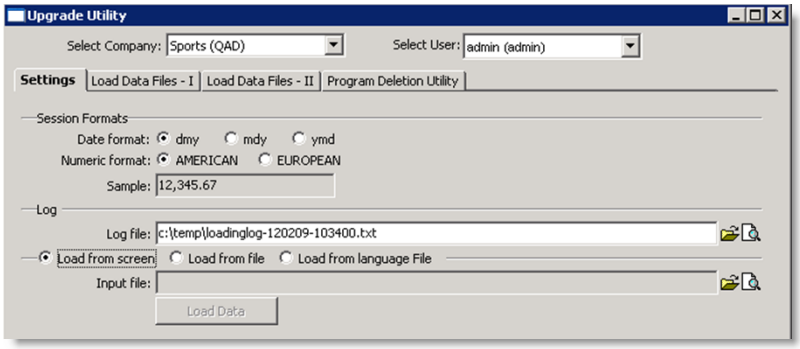
Log File. Leave the field as is.

15 A message pops up prompting you to back up your existing databases before proceeding. Make sure you have backed up your existing databases and click Yes to continue.

16 A message is displayed informing you that data load is complete and prompting you to view the log file. Click No.

17 In the Upgrade Utility window, select Load From Screen and click the Load Data Files - I tab.

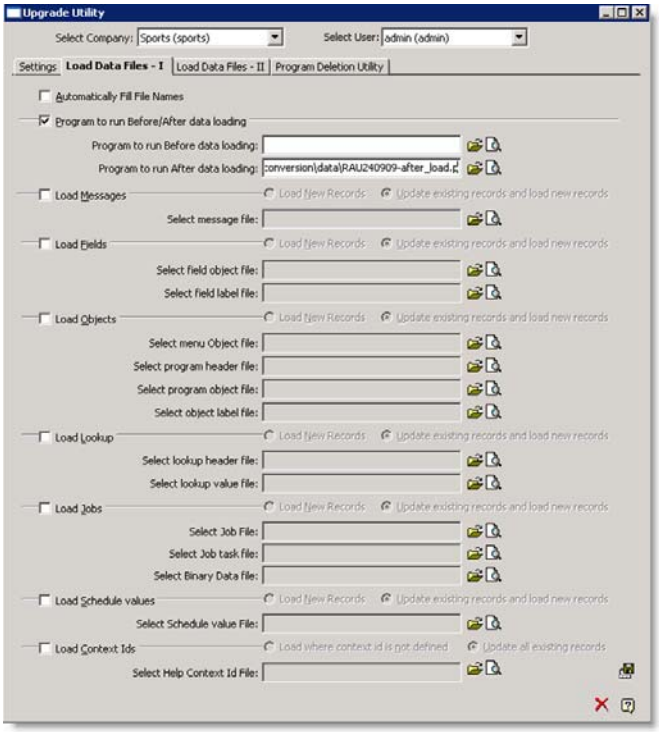
Fig. 4.4
CRM Upgrade Utility



18 Under the Load Data Files - I tab, select Program to Run Before/After Data Loading and specify the following as the program to run after data loading:

QADCRMInstallDir\compile\conversion\data\RAU240909-after_load.p

Fig. 4.5
CRM Upgrade Utility



19 Click the Save icon and close the window when done.

Converting 6.3B1 Databases From Non-Unicode to Unicode

Perform these steps only if you want to change the code page of your QAD CRM 6.3B1 databases from non-Unicode to Unicode:

1 Stop all the QAD CRM databases.

2 Open the command prompt window and execute the proenv command.

3 Use the following command to convert each of the QAD CRM databases—bisgen, bisgmenu, and dataexch—to support UTF-8:

```
proutil DBPath\bisgen.db -C convchar convert UTF-8
proutil DBPath\bisgmenu.db -C convchar convert UTF-8
proutil DBPath\dataexch.db -C convchar convert UTF-8
```

4 Open Progress Procedure Editor with all the required databases connected in single-user mode.

5 Run Data Administration. For each of the QAD CRM databases—bisgen, bisgmenu, and dataexch—perform the following steps:

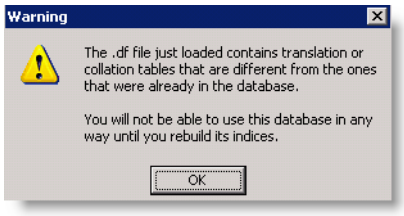
a If not connected to the database, choose Database|Connect to connect it.

b Choose Admin|Load Data and Definitions|Data Definitions (`.df` file). Locate the file `icu-uca.df` under *`$DLC`*`/prolang/utf` and load it into the database.

c Ignore the following error and warning messages:

```
Error: Collation tables for database DBName have been changed. You must
rebuild all the indexes in order to reconnect to this database. (2609)
```

Fig. 4.6
Warning Message



6 Stop all the QAD CRM databases.

7 Execute the following command to rebuild indexes for the new ICU-UCA collation:

```
proutil DBPath/bisgen -C idxbuild all -cpinternal UTF-8
proutil DBPath/bisgmenu -C idxbuild all -cpinternal UTF-8
proutil DBPath/dataexch -C idxbuild all -cpinternal UTF-8
```

8 If your existing database code page is not iso8859-1, modify the `codepage.txt` file under *QADCRMInstallDir*`\compile\conversion` to include your source code page value.

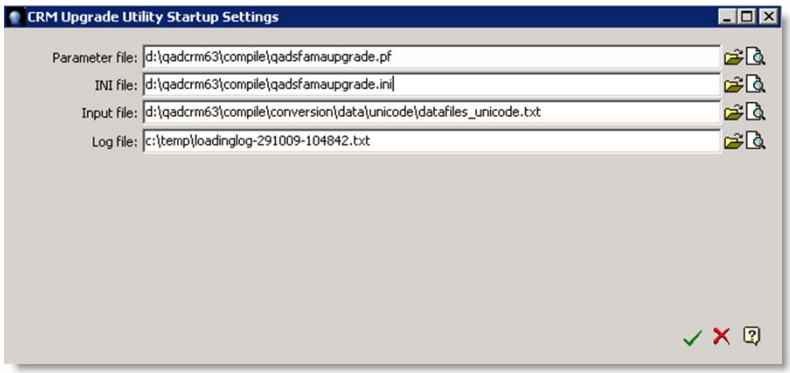
9 Modify *QADCRMInstallDir*`\compile\qadsfamaupgrade.pf` to change the following parameter values from the source code page to UTF-8 related values:

- -cpinternal UTF-8
- -cpstream UTF-8
- -cpcoll ICU-UCA
- -cpcase Basic

10 Double-click the CRM Upgrade Utility icon to run the utility.

11 In the CRM Upgrade Utility Startup Settings window, specify the file paths; then click the OK icon (green check mark).

Fig. 4.7
CRM Upgrade Utility Startup Settings



Parameter File. Enter *QADCRMInstallDir*`\compile\qadsfamaupgrade.pf`.

INI File. Enter *QADCRMInstallDir*`\compile\qadsfamaupgrade.ini`.

Input File. Enter `QADCRMInstallDir\compile\conversion\data\unicode\datafiles_unicode.txt`.

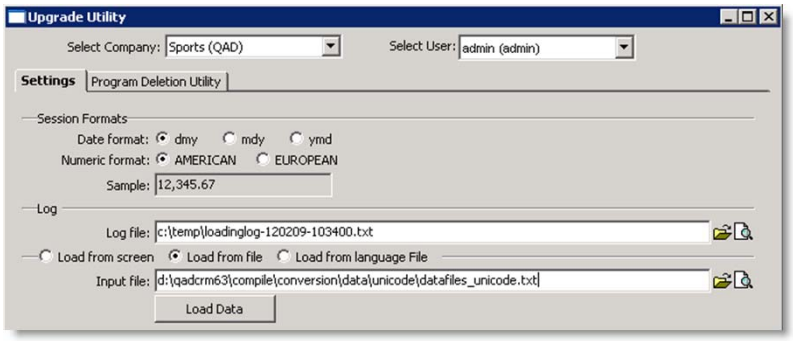
Log File. Leave the field as is.

12 The system prompts you to back up your existing databases before proceeding. Make sure you have backed up your databases and click Yes to continue.

13 A message informs you that data load is complete and prompts you to view the log file. Click No.

14 In the Upgrade Utility window, select Load From File and specify `QADCRMInstallDir\compile\conversion\data\unicode\datafiles_unicode.txt` as the input file; then click Load Data.

Fig. 4.8
CRM Upgrade Utility



15 The system prompts you to back up your existing databases before proceeding. Make sure you have backed up your databases and click Yes to continue.

16 A message informs you that data load is complete and prompts you to view the log file. Click No.

17 Close the window.

Performing Post-Upgrade Tasks

The upgrade process deletes all the existing address style records but does not create any system-supplied records. Therefore, you need to re-create these records.

1 Switch on the following integrations based on the previous settings in QAD CRM 6.1.1 and modify the settings where necessary.

- QAD Enterprise Applications Integration
- Data Synchronization
- QAD AdminService
- Microsoft Exchange Integration

2 Modify node details for each node and enter such values as Business Unit. You may also need to check and modify the settings under the Node Details|Products tab.

3 Rebuild all the remote nodes.

4 Optionally, uninstall QAD CRM 6.1.1.

   a Run the following program to unregister ocx, assembler, and other components:
   QADCRMInstallDir\compile\bin\QADCRMClientComponents\setup.exe

   b Delete the whole conversion directory under *QADCRMInstallDir*\compile.

Upgrading QAD CRM 6.3 to 6.3B1

Download the QAD CRM 6.3B1 (QAD CRM 6.3 build 1) update bundle from the Product Changes and Advisories|Customer Advisories section on the QAD support Web site and install the package on top of the QAD CRM 6.3 GA (September 2009) release installation using the accompanying installation instructions.

Upgrading QAD CRM 6.3 B1 / 6.4 B2 to QAD CRM 6.4 B6

Use the instructions in this section to convert QAD CRM version 6.3 B1 / 6.4 B2 to the 6.4 B6 release. This guide covers Windows conversions for Progress databases.

The conversion process consists of three major steps:

1 Pre-Upgrade Tasks.

2 Converting 6.3 B1 / 6.4 B2 databases to 6.4 B6 Format.

3 Post-Upgrade Tasks.

Note If the system breaks during upgrade then you should start again with a backup copy. Re-run of conversion on the same database is not allowed.

Pre-Upgrade Tasks

Perform the following steps before upgrading the QAD CRM database from version 6.3 B1 / 6.4 B2 to 6.4 B6.

1 Make sure the following prerequisite components are installed:

- Progress 10.1C03 / 10.2A02 / 10.2B01 Client Networking, Query Result and OE Studio
- QAD CRM 6.4 B6
- The appropriate version of QAD Enterprise Applications (if you want to integrate QAD CRM with QAD Enterprise Applications)

2 Perform QAD CRM 6.3 B1 / 6.4 B2 data synchronization. That is, make sure all the remote nodes are synchronized with the host database because remote nodes need to be re-created after upgrade and if you do not synchronize then their data will not be available on host and this way they can lose the data.

3 Make sure that there are no r-code files available under various sub-folders of *QADCRM64InstallDir*\compile folder. In case any r-code files are available then delete them.

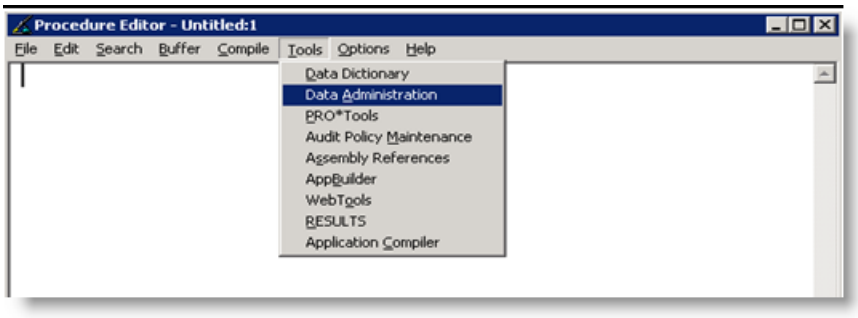
4 Back up the QAD CRM 6.3 B1 / 6.4 B2 databases (bisgen, bisgmenu and dataexch) you want to upgrade.

5 Make sure no user is using the version 6.3 B1 / 6.4 B2 database during upgrade.

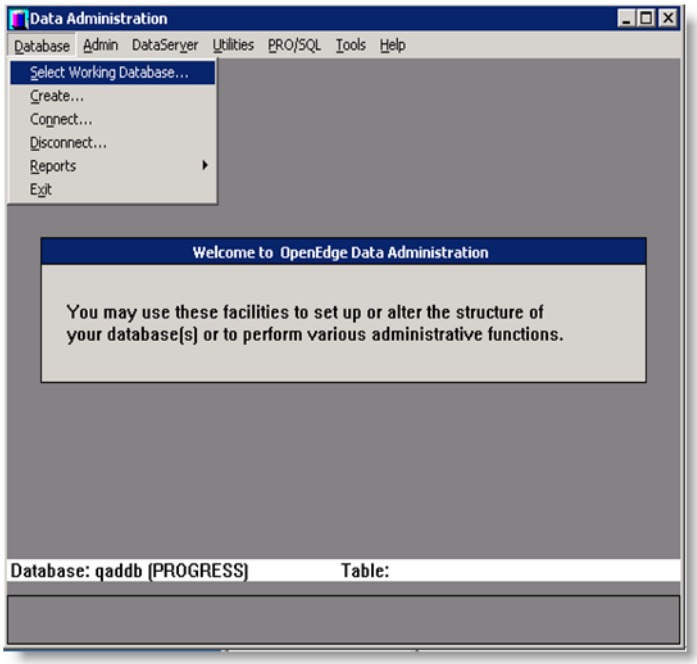
6 Please skip this step if you are upgrading from 6.4 B2.

Make sure opportunity, prc_hdr, and product tables from the bisgen database are not frozen. This can be done using the following steps:

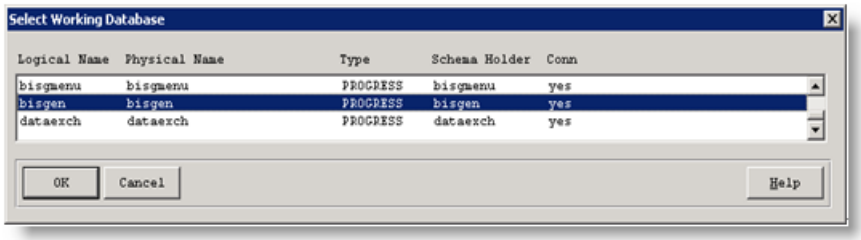
- Go to QAD CRM Procedure Editor and select Tools|Data Administration.



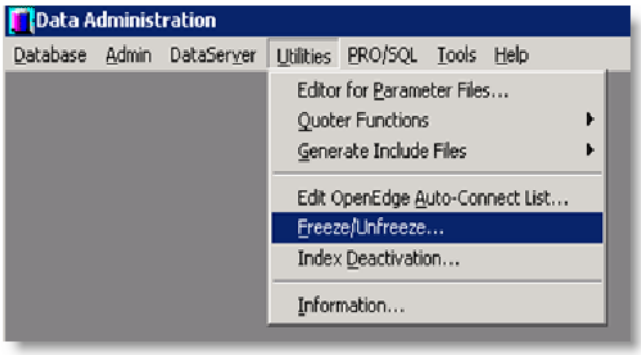
- Select Database > Select Working Database.



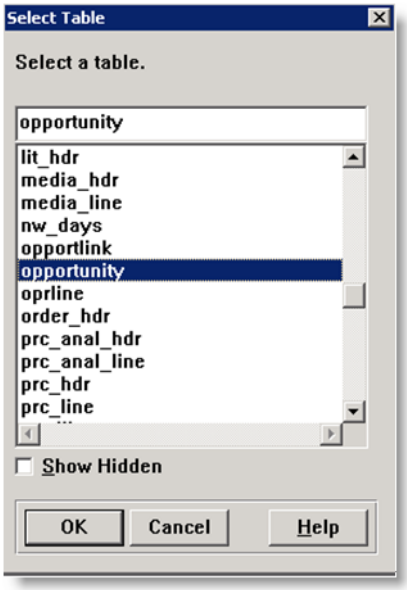
- Select bisgen database from the below Select Working Database screen and press OK.



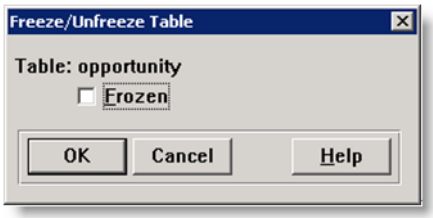
- Select Utilities > Freeze/Unfreeze.



- Select the opportunity table and press OK.



- Make sure the Frozen check box is unchecked and press OK.



- Repeat the same thing for the prc_hdr and product tables.

Converting 6.3 B1 / 6.4 B2 Databases to 6.4 B6 Format

Perform the following steps in order to upgrade QAD CRM database from version 6.3 B1 / 6.4 B2 to 6.4 B6. Please skip steps from 2 to 13 if you are upgrading from 6.4 B2.

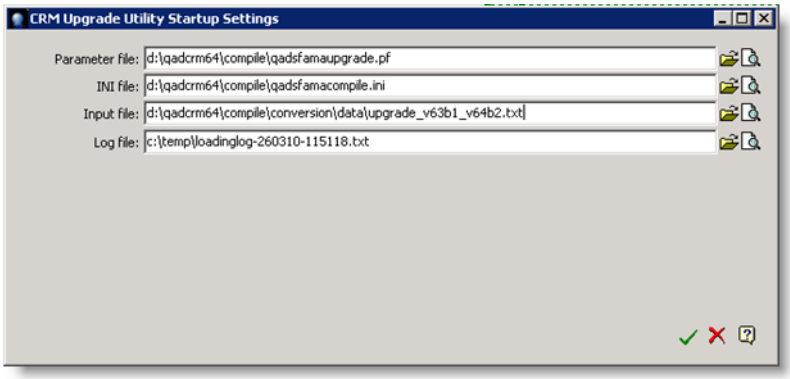
1. Modify `QADCRM64InstallDir\compile\qadsfamaupgrade.pf` to connect to QAD CRM 6.3 B1 / 6.4 B2 databases. You do not need to connect QAD Enterprise Applications databases.

2. Copy `emailc.txt` file from *`QADCRM64InstallDir`*`\compile\conversion\data` to `c:\temp` folder.

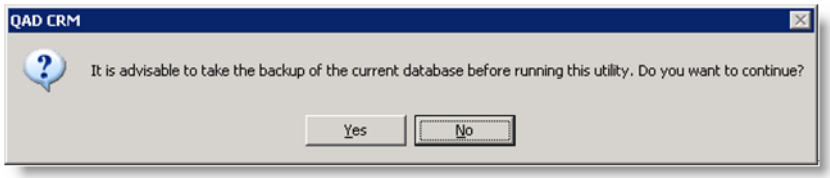
3. Choose Start|All Programs|QAD CRM 6.4|QAD CRM Upgrade Utility in order to apply df / data.

4. Select the value of “Parameter file” and “Input file” as shown in the following figure and then select the OK button.

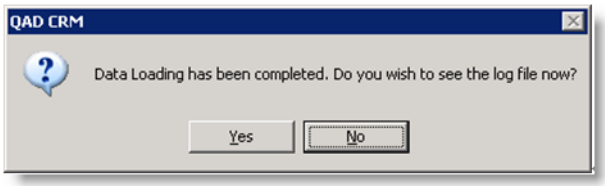
   The below screen assumes that QAD CRM 6.4 is installed in the `d:\qadcrm64` directory.



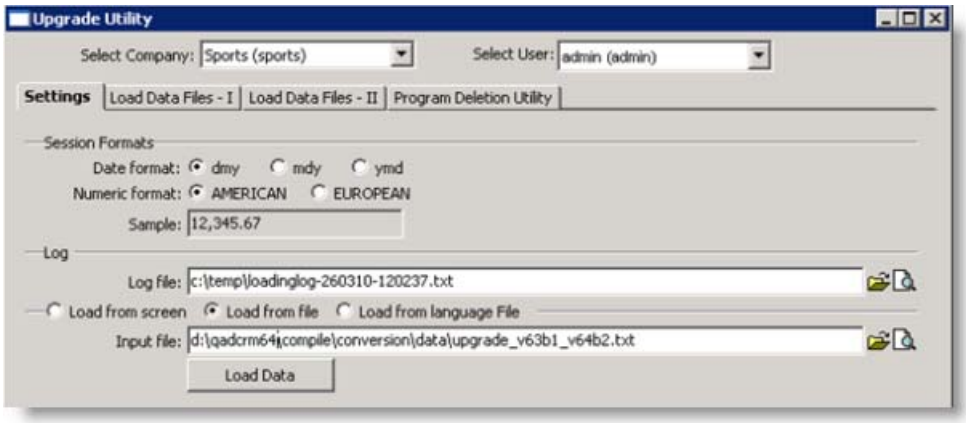
5. When you select OK, the following screen appears:



6. Make sure the CRM 6.3 B1 databases are backed up and select Yes. The following screen appears:

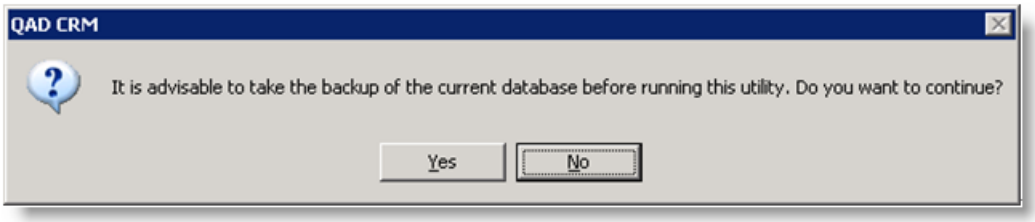


7. Select No. The following screen appears:

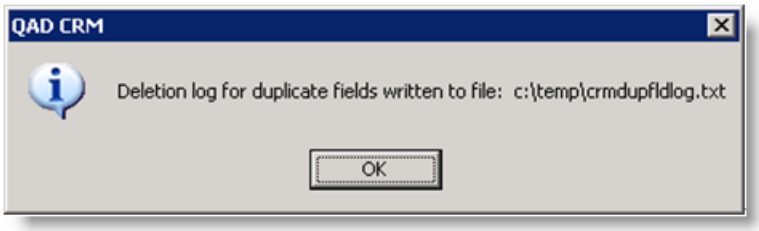


8 Select the correct Company (Business Unit) from Select Company combo and make sure that the “Load from file” option is selected and the value of “Input file” is correct as shown in the above figure.

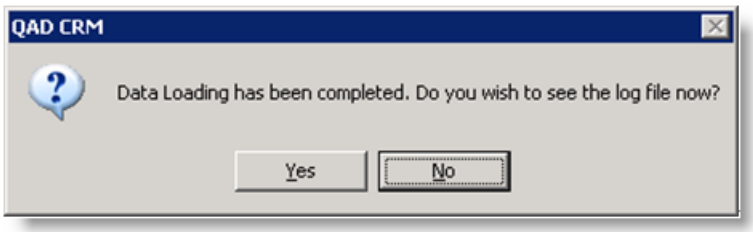
9 Select the Load Data button. The following screen appears.



10 Make sure databases are backed up and select Yes. The following screen appears.



11 Select OK. The following screen appears:

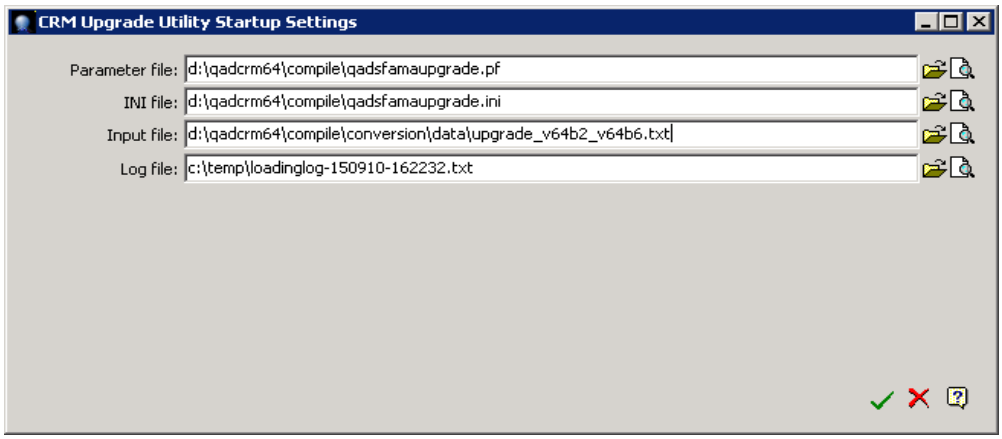


12 Select No. The original interface remains visible on the screen.

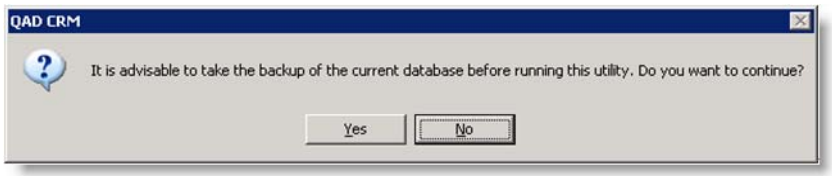
13 Select the Close button to close the interface.

14 Run Upgrade Utility. Choose Start|All Programs|QAD CRM 6.4|QAD CRM Upgrade Utility in order to apply df / data.

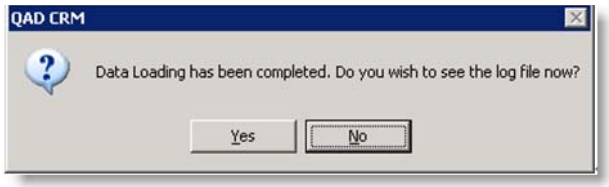
15 Select the value of “Parameter file” and “Input file” as shown in the following figure and then select the OK button. The below screen assumes that QAD CRM 6.4 is installed in the `d:\qadcrm64` folder.



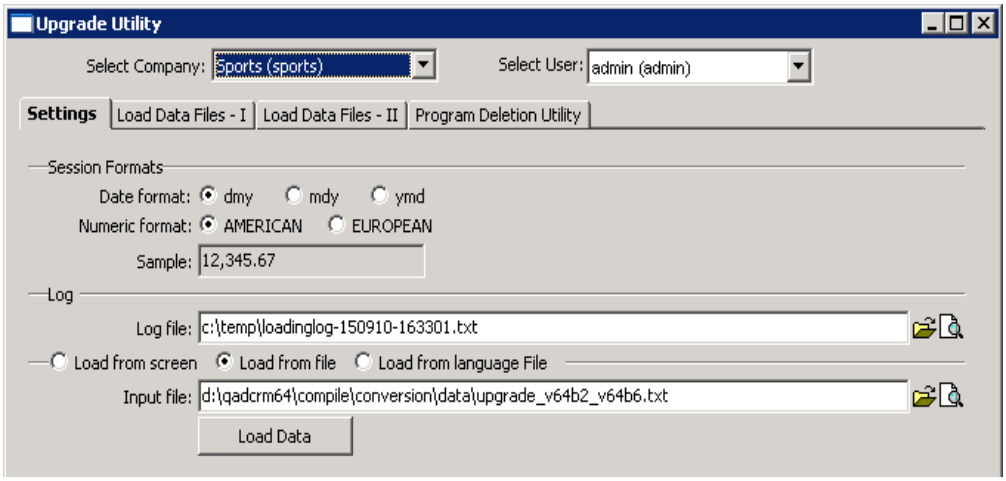
16 When you select OK, the following screen appears:



17 Make sure the CRM 6.3 B1/ 6.4 B2 databases are backed up and select Yes. The following screen appears:

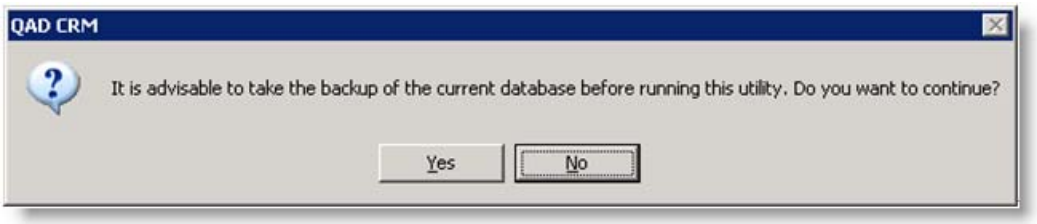


18 Select No. The following screen appears:

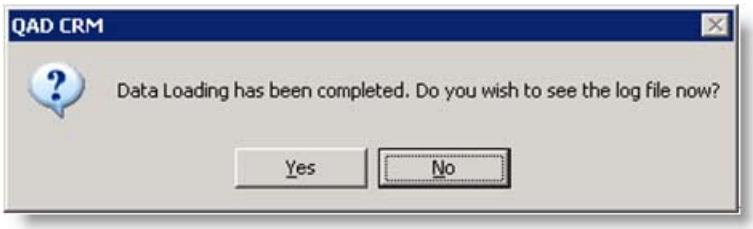


19 Select the correct Company (Business Unit) from Select Company combo and make sure that the “Load from file” option is selected and the value of “Input file” is correct as shown in the above figure.

20 Select the Load Data button. The following screen appears:



21 Make sure databases are backed up and select Yes. The following screen appears:



22 Select No. The original interface remains visible on the screen.

23 Select the Close button to close the interface.

Post-Upgrade Tasks

Perform the following steps after upgrading QAD CRM database from version 6.3 B1 / 6.4 B2 to 6.4 B6.

1 If you are upgrading from 6.3 B1 to 6.4 B6 then make sure opportunity, prc_hdr, and product tables from the bisgen database are frozen. This can be done using the similar steps as mentioned in Pre-Upgrade Tasks section except that the “Frozen” check-box should be selected here.

2 Re-create all the Remote Nodes.

3 Un-install QAD CRM 6.3 B1 / 6.4 B2 once you have checked data conversion and it is no longer required.

In case you uninstall QAD CRM 6.3 B1 / 6.4 B2 then run `QADCRMInstallDir\prod\netsetup\setup.exe` to re-register system files (ocx, assembler and so on), which got unregistered during un-installing QAD CRM 6.3 B1 / 6.4 B2.

Upgrading QAD CRM 6.4 B2/6.4 B6 to QAD CRM 6.4 B8

Use the instructions in this section to convert QAD CRM version 6.3 B2 / 6.4 B6 to the 6.4 B8 release.

The conversion process consists of three major steps:

1 Pre-Upgrade Tasks

2 Converting 6.3 B1 / 6.4 B2 Databases to 6.4 B6 Format

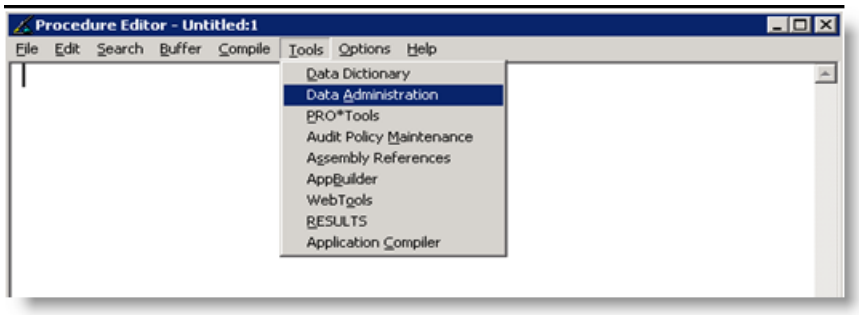
3 Post-Upgrade Tasks

Note If the system breaks during upgrade then you should start again with a backup copy. Rerunning the conversion on the same database is not allowed.

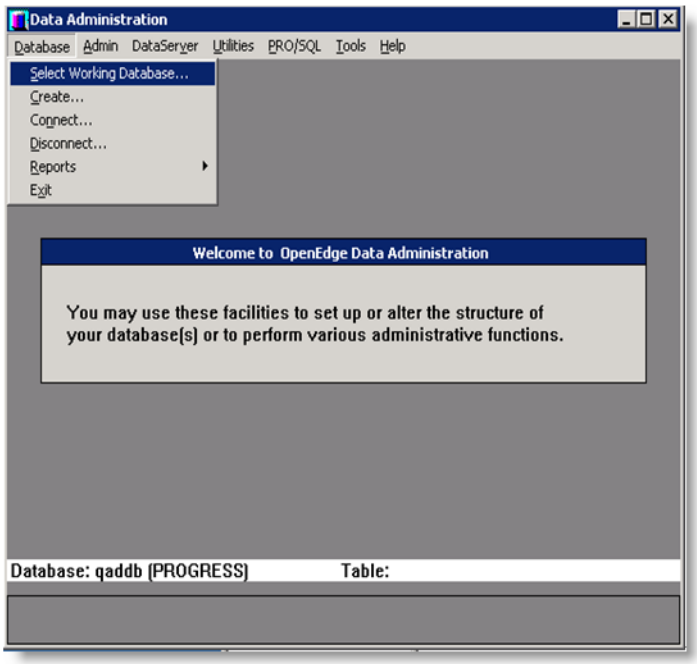
Pre-Upgrade Tasks

Perform the following steps before upgrading the QAD CRM database from version 6.4 B2 / 6.4 B6 to 6.4 B8.

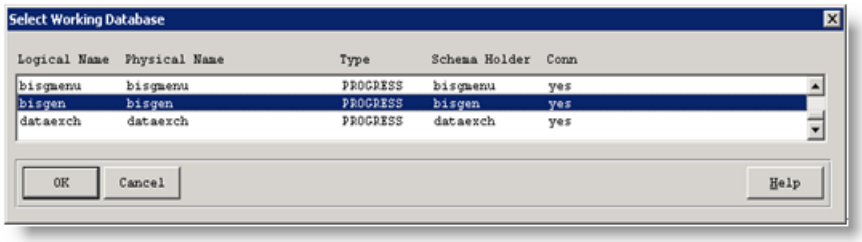
1. Make sure the following prerequisite components are installed:
   - Progress 10.1C03 / 10.2A02 / 10.2B01 / 10.2B02 Client Networking, Query Result and OE Studio
   - QAD CRM 6.4 B8
   - The appropriate version of QAD Enterprise Applications (if you want to integrate QAD CRM with QAD Enterprise Applications)
2. Perform QAD CRM 6.4 B2 / 6.4 B6 data synchronization. That is, make sure all the remote nodes are synchronized with the host database because remote nodes need to be re-created after upgrade. If you do not synchronize then their data will not be available on the host; this way they can lose the data.
3. Make sure that there are no r-code files available under various sub-folders of *`QADCRM64InstallDir`*`\compile` folder. In case any r-code files are available then delete them, where *`QADCRM64InstallDir`* is your QAD CRM 6.4B8 installation directory.
4. Back up the QAD CRM 6.4 B2 / 6.4 B6 databases (bisgen, bisgmenu, and dataexch) that you want to upgrade.
5. Make sure that no user (including any Progress AppServer process) is using the QAD CRM 6.4 B2 / 6.4 B6 database during the upgrade.
6. Make sure that the product table in the bisgen database is not frozen using the following steps:
   - Go to QAD CRM Procedure Editor and select Tools|Data Administration.



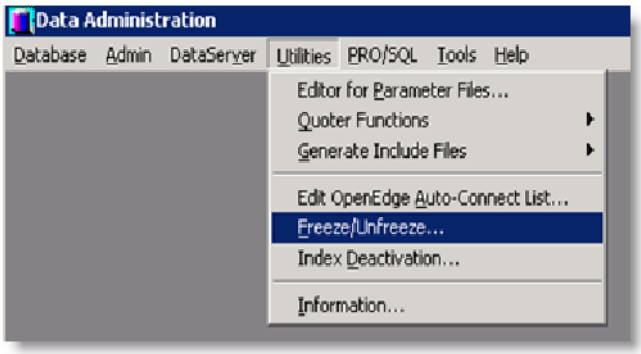
   - Select Database > Select Working Database.



- Select bisgen database from the following Select Working Database screen and press OK.



- Select Utilities > Freeze/Unfreeze.



- Select the Product table from the list and press OK.
- Make sure the Frozen check box is unselected and press OK.

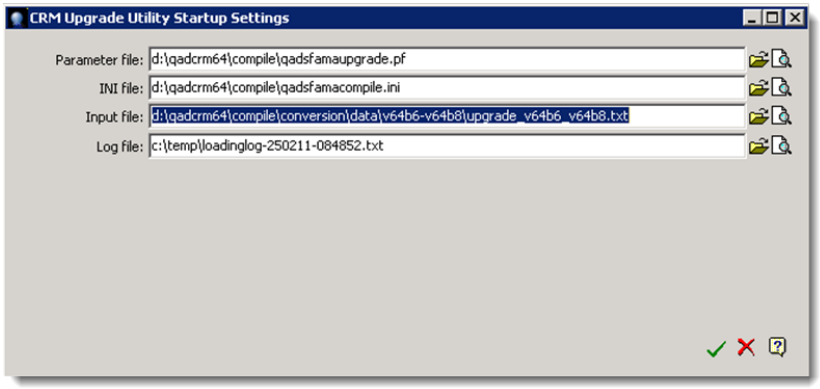
Converting QAD CRM 6.4 B2 / 6.4 B6 Databases to QAD CRM 6.4 B8

Perform the following steps to upgrade QAD CRM database from version 6.4 B2 / 6.4 B6 to 6.4 B8.

1 Modify `QADCRM64InstallDir\compile\qadsfamaupgrade.pf` to connect to the QAD CRM 6.3 B1 / 6.4 B2 databases. You do not need to connect QAD Enterprise Applications databases.

2 Run the Upgrade utility. Choose Start|All Programs|QAD CRM 6.4|QAD CRM Upgrade Utility in order to apply df / data.

3 Select the value of “Parameter file” and “Input file” as shown in the following screen and then select the OK button. The following screen assumes that QAD CRM 6.4B8 is installed in the `d:\qadcrm64` folder.



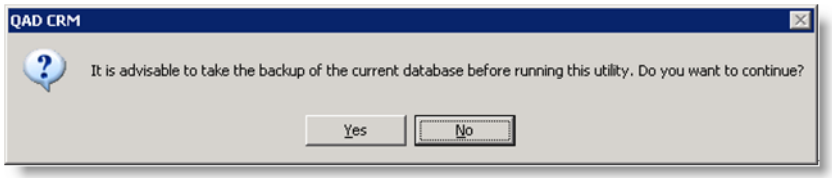
Input File. If you are upgrading from 6.4b2 to 6.4b8, specify the following:

`d:\qadcrm64\compile\conversion\data\v64b2-v64b8\upgrade_v64b2_v64b8.txt`

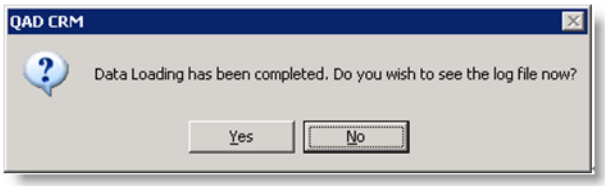
If you are upgrading from 6.4b6 to 6.4b8, specify the following:

`d:\qadcrm64\compile\conversion\data\v64b6-v64b8\upgrade_v64b6_v64b8.txt`

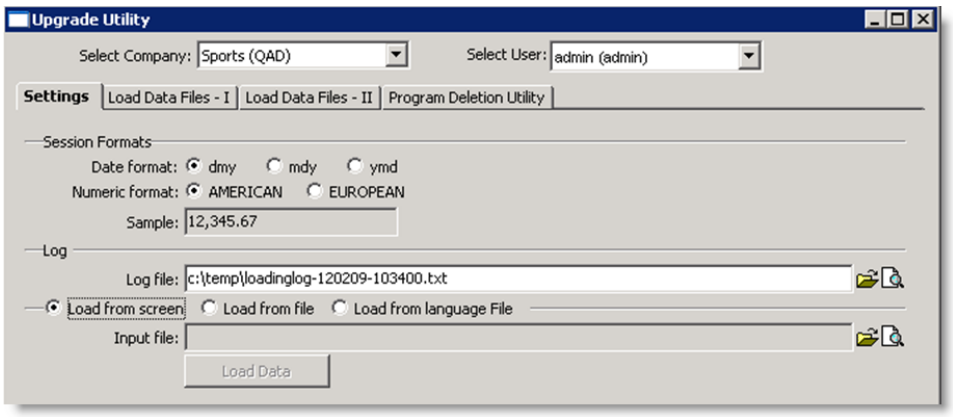
4 When you select OK, the following screen appears:



5 Make sure the CRM 6.4B2/B6.4B6 databases are backed up and select Yes. The following screen appears:

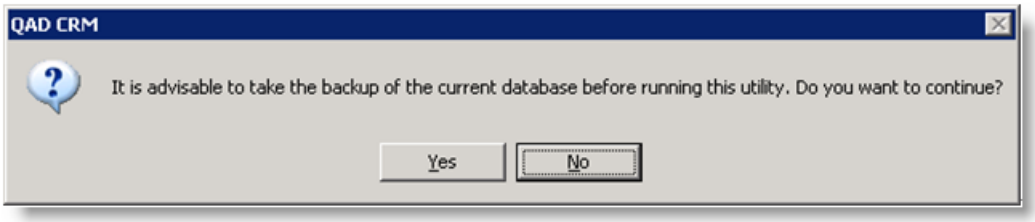


6 Select No. The following screen appears:

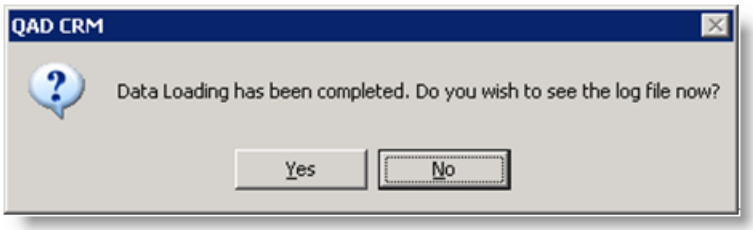


7 Select the correct Company (Business Unit) from Select Company combo and make sure that the “Load from file” option is selected and the value of “Input file” is correct as shown in the above figure.

8 Select the Load Data button. The following screen appears.



9 Make sure databases are backed up and select Yes. The following screen appears.



10 Select No. The original interface remains visible on the screen.

11 Select the Close button to close the interface.

Post-Upgrade Tasks

Perform the following steps after upgrading QAD CRM database from version 6.4 B2 / 6.4 B6 to 6.4 B8.

1 Make sure the product table from the bisgen database is frozen. This can be done using similar steps to those described in the Pre-Upgrade Tasks section, except that the “Frozen” check box should be selected here.

2 Re-create all the Remote Nodes.

3 Uninstall QAD CRM 6.4 B2 / 6.4 B6 once you have verified data conversion and it is no longer required.

In case you uninstall QAD CRM 6.4 B2 / 6.4 B6 then run *QADCRMInstallDir*\prod\netsetup\setup.exe to re-register system files (ocx, assembler, and so on), which got unregistered when you uninstalled QAD CRM 6.4 B2 / 6.4 B6.

Upgrading QAD CRM 6.4.4 Patch Bundle1 to QAD CRM 6.5.1

Pre-Upgrade Tasks

1 Perform QAD CRM 6.4.4 pb1 data synchronization to make sure all the remote nodes are synchronized with the host database because remote nodes need to be recreated after upgrade. If you do not synchronize, their data will not be available on the host and this way they can lose data.

2 Make sure following prerequisite components are installed:

- Appropriate Progress 10.1C03/10.2A02/10.2B01/10.2b02 OE studio
- QAD CRM 6.5b13 (=CRM 6.5.1)
- Appropriate version of QAD ERP (If applicable—that is, if QAD CRM is to be integrated with ERP)

3 Backup the CRM 6.4.4 pb1 database to be upgraded.

Converting QAD CRM 6.4.4 Patch Bundle1 Databases to QAD CRM 6.5.1

1 During the upgrade process make sure that no users are using your existing QAD CRM 6.4.4 pb1 database.

2 With 6.4.4 pb1 databases connected, invoke the Progress Data Administration tool by using Tools|Data Administration in Progress Procedure Editor.

3 In Progress Data Admin tool, choose Database|Select Working Database to select the bisgmenu database.

4 Choose Utilities|Freeze/Unfreeze, select the prog_object table, and clear the Frozen check box to unfreeze the definition for the table.

5 Choose Admin|Load Data and Definitions|Data Definitions (`.df` file) to load the data definition file `bmsqv220611_live.df` supplied in the conversion directory of CRM 6.5b13.

6 Choose Utilities|Freeze/Unfreeze, select the prog_object table, and select the Frozen check box to freeze the definition for the table.

7 Make a copy of the `qadsfamaupggrade.pf` file in the CRM 6.5b13 installation directory and rename it `qadsfama64pb1.pf`; then edit the file to insert connection information for connecting to your existing 6.4.4 pb1 databases.

8 Run the QAD CRM 6.5b13 Deployment Utility.

9 Click the QAD CRM Upgrade Utility button.

10 In the Upgrade Utility window, select the modified `qadsfama64pb1.pf` file to connect to your existing 6.4.4 pb1 databases that you want to upgrade. Click OK.

Note If you started the 6.4.4 pb1 databases with Progress 10.2B and tried connecting them using Progress 10.2A, you may get Progress error 1178. So, make sure that your Progress version is consistent between CRM 6.5 and CRM 6.4.4 Pb1 environments.

11 Select the load from file option and specify `upgrade_v64pb1_v65b13.txt` as the input file; then click Load Data to load the data files supplied in this file.

Note `upgrade_v64pb1_v65b13.txt` contains information about all the files that need to be loaded and names of before and after load programs to tune the 6.4.4 pb1 database and bring it to the 6.5.1 state.

Post-Upgrade Tasks

1 Re-create each of the Remote Nodes, if needed.

2 Uninstall QAD CRM 6.4.4 patch bundle1 if the conversion is successful and you are sure that you want to retire this earlier version of QAD CRM.

3 Run *`QADCRMInstallDir`*`\bin\qadcrm_webclient_client.exe` to re-register the ocx/assembler, which was unregistered during the QAD CRM 6.4.4 Patch bundle1 uninstall.

Upgrading QAD CRM 6.5.1 to QAD CRM 6.6.1

Use the instructions in this section to upgrade QAD CRM 6.5.1 to QAD CRM 6.6.1.

Pre-Upgrade Tasks

It is recommended that you perform the upgrade from CRM 6.5.1 to CRM 6.6.1 using your TEST CRM 6.5.1 first. In this way you become familiar with the required steps before you apply the upgrade to the CRM 6.5.1 database.

Perform the following steps before upgrading:

1 If you use Remote Sales, perform QAD CRM 6.5.1 data synchronization to ensure that all the remote nodes are synchronized with the host database, since remote nodes need to be recreated after upgrade.

2 Back up the existing QAD CRM 6.5.1 databases that you are planning to convert to QAD CRM 6.6b7. If you plan to integrate CRM 6.6.1 with QAD EA, then also back up the QAD EA databases, as well as the QXtend database if CRM 6.5.1 is integrated with QAD EA.

Note Certain CRM and MS Exchange integration functions cannot be run in both CRM 6.5.1 and CRM 6.6.1 simultaneously. For more details, see the relevant KnowledgeBase article on the QAD Support Web site.

Installing QAD CRM 6.6 B7 on the Deployment Server

Install QAD CRM 6.6b7 from the installation CD; for the installation instructions, see “Installing QAD CRM on the Deployment Server” on page 17.

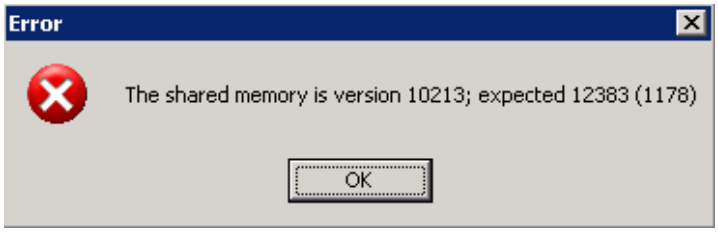
Note When you prompted to remove the existing CRM 6.5.1, answer No. You have the option of removing the CRM 6.5.1 configuration later after you have confirmed that the CRM 6.6.1 configuration is working correctly.

Note You do not need to follow the instructions in “Setting Up the Database Server” on page 20, since now you are converting the existing CRM 6.5.1 to CRM6.6.1.

Converting 6.5.1 Databases to 6.6.1 Format

1. After CRM 6.6b7 is installed, remove all the Progress compile code (`*.r` files) in the following folders from the newly installed QAD CRM 6.6b7 CD environment:
   - `dataexch`
   - `lib`
   - `integration\mfgpro`
   - `progs`
   - `report`
   - `system`
   - `triggers`
2. Modify the *`crm661_install_dir`*`\qadsfamaupgrade.pf` file to connect to the QAD CRM 6.5.1 databases in multi-user mode. If your QAD CRM 6.5.1 databases have been configured in the self-service (shared memory) mode on your database server, you must temporarily restart using the client server mode, so that the CRM 6.6.1 Deployment Utility can access the databases from the Windows Deployment server.
3. Make sure no other user or Progress process, including any AppServer process, is using the QAD CRM 6.5.1 databases that you are upgrading.
4. Click QAD CRM Deployment Utility.

   Note If you are running QAD CRM 6.5.1 databases on the server using Progress 10.1C while your CRM 6.6.1 is set up against Progress 10.2Bxx, you might get an error message after you click the QAD CRM Deployment Utility icon.

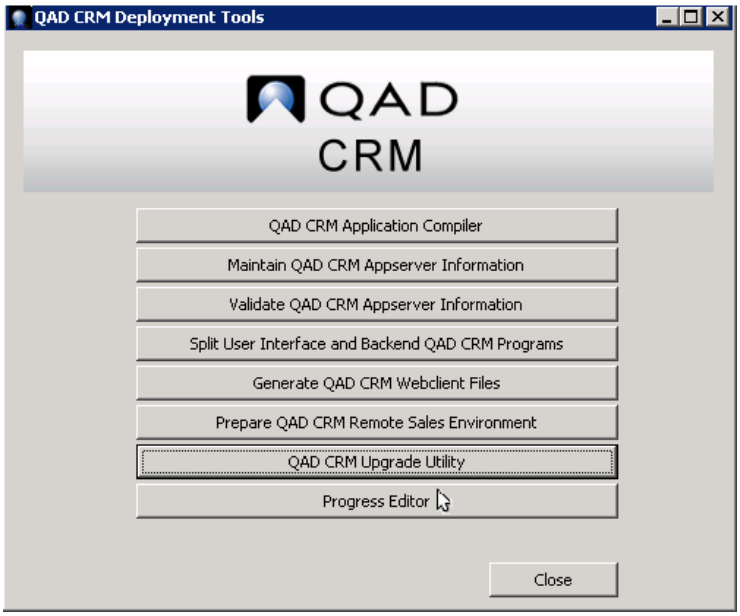


To resolve this error, connect to the QAD CRM 6.6.1 session using the Progress version that is compatible with the Progress version used by your 6.5.1 database server:

a Modify all QAD CRM `.ini` files in `crm_install_dir` of your QAD CRM 6.6.1 installation. Change the DLC system variable and other Progress configuration parameters to point to a Progress version that is compatible with the Progress version used by your 6.5.1 database server.

b Modify the CRM 6.6.1 shortcut icons created as a result of CRM6.6.1 installation, and ensure that they also reference the compatible Progress file `prowin32.exe`.

5 On the QAD CRM Deployment Tools screen, click Progress Editor.



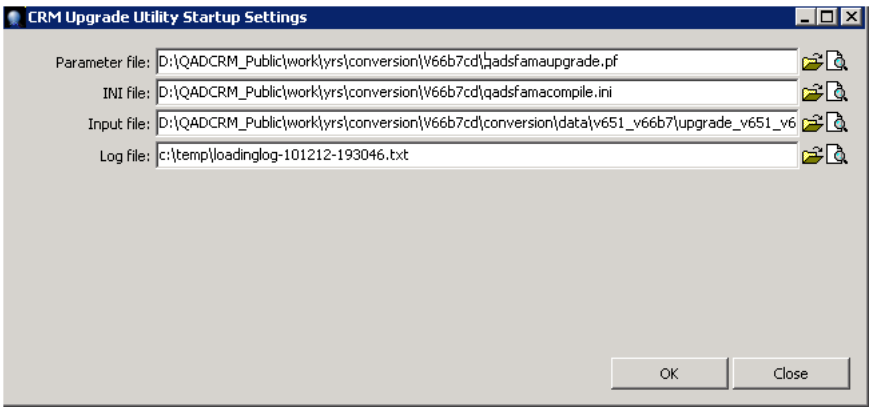
6 In the Procedure editor window, run the program `punfreezetbl.p`.

a Enter the following command:
run <crm661_install_dir>`\conversion\punfreezetbl.p`.

b Select Compile|Run from the menu or Press F2.

c The program sets `_frozen = no` for all tables in CRM databases. After the program is executed, a confirmation message appears; click OK and close the editor window.

7 On the QAD CRM Deployment utility screen, click QAD CRM upgrade Utility, fill in the following Utility settings, and click OK.



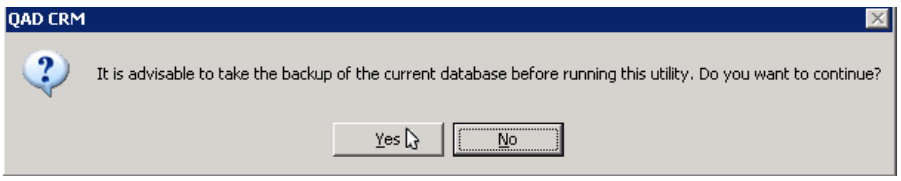
Parameter file. Specify the name of the parameter file (`qadsfamaupgrade.pf`) to connect to your CRM 6.5.1 databases running in multi-user mode.

INI file. This is pre-populated for you by default.

Input file. Specify the path to file `upgrade_v651_v66b7.txt`. You can locate this file in the *`<crm661_install_dir>`*`\conversion\v651_v66b7` folder.

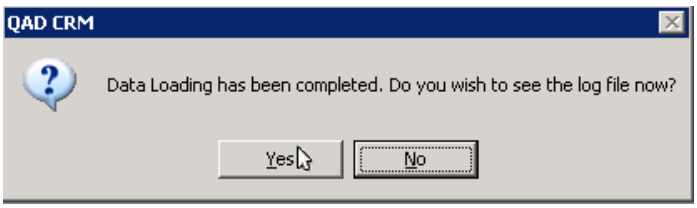
Log file. Specify the name of the log file.

8 After you fill in the Utility settings, you are prompted to check whether you have backed up the databases. Make sure you have backed up the databases and click Yes to continue.



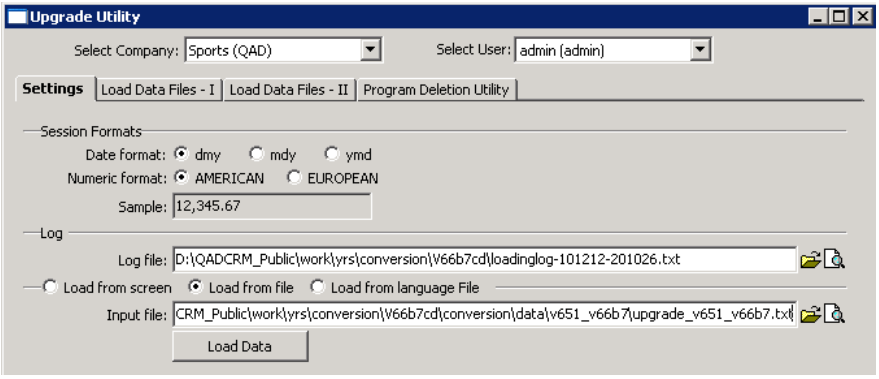
9 You see the following message after the data loading has been completed. You can click Yes to see if there are any errors recorded in the log file.

Note Some `.df` loading errors might be reported in the log file, since CRM uses Progress tools for loading the `.df` file. If the `.df` loading fails for some reason, see `bisgen.e`, `bisgmenu.e`, and `dataexch.e` files under *`crm661_install_dir`*.



Make sure that you fix all errors before you proceed any further. If you encounter errors during the `.df` loading, restore the databases from the backup and continue again from step 3 on page 108.

10 When the `.df` loading is correct and there are no `.e` files in *`crm661_install_dir`*, the Upgrade Utility screen appears.



a Make sure that the *Load from file* option is selected; by default, it is selected.

b Make sure the Input file field displays the conversion file that you specified earlier; that is, *crm661_install_dir\conversion\v651_v66b7\upgrade_v651_v66b7.txt*.

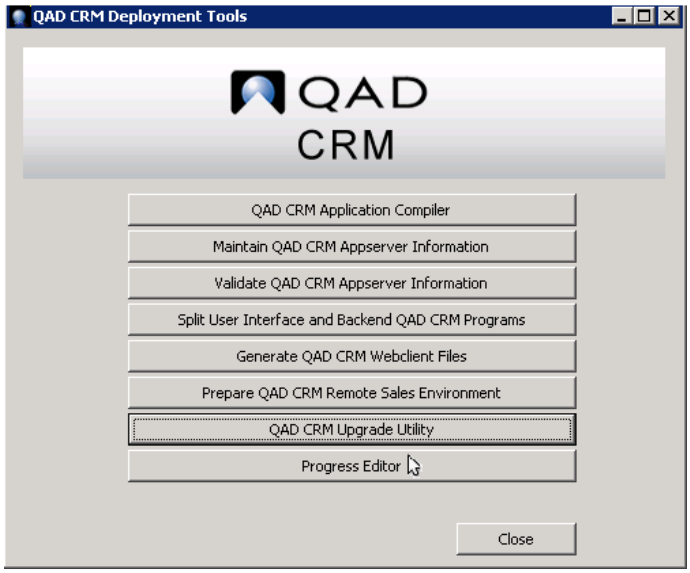
c Click Load Data.

Note After you click Load Data, you are prompted once again to confirm that your databases have been backed up. Click Yes to continue.

d After the data loading is complete, the system prompts you to view the log file. If you need any help to resolve errors in the log file, contact QAD CRM support.

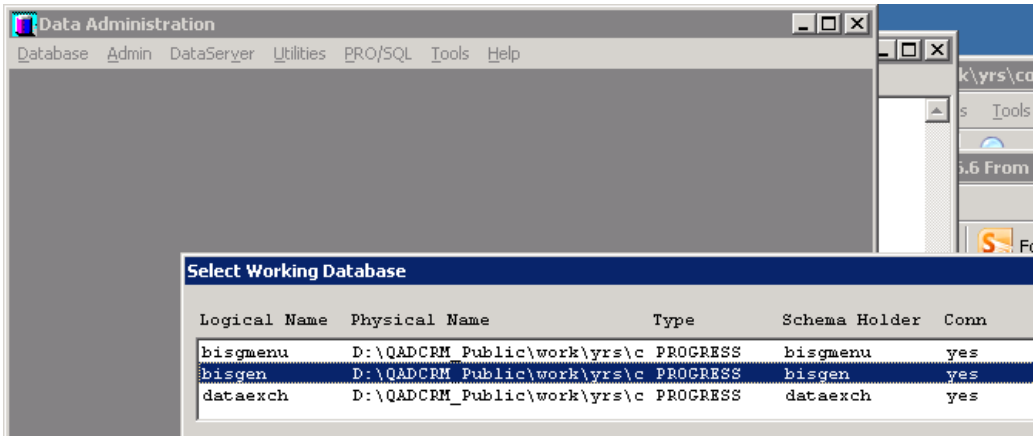
e Close the Upgrade Utility window and any other Deployment utility windows, including the main Deployment Tools window.

11 Restart the Deployment Tools window again and click Progress Editor.

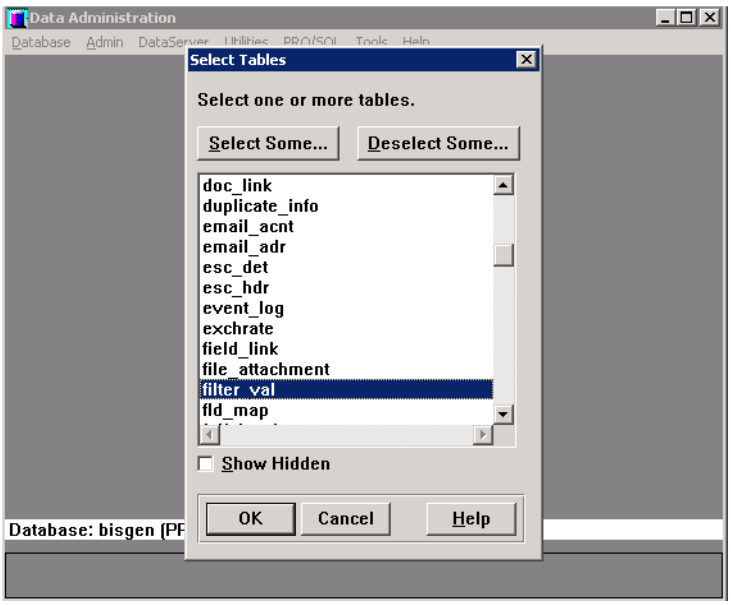


a On the Progress Editor screen, select Tools |Data Administration.

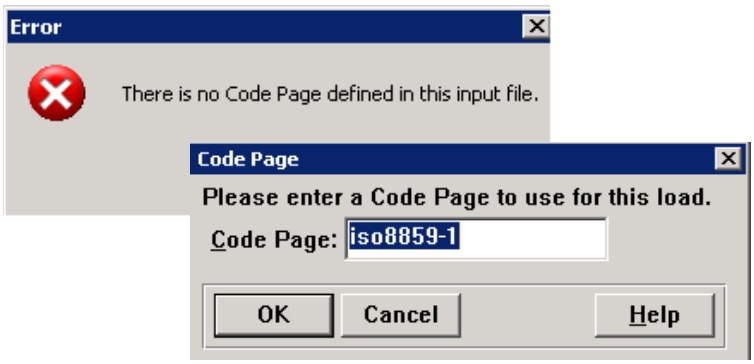
b On the Data Administration screen, click the Database menu, select *bisgen* as the working database, and click OK.



c On the Data Administration screen, select Admin|Load Data and Definitions |Table Contents(.d file), choose the table *filter_val*, and click OK.

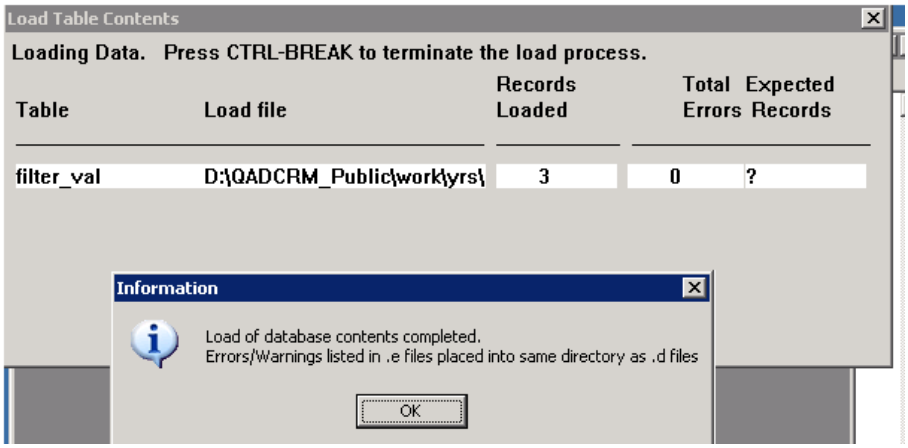


d In loading data for the table *filter_val*, select the input file *crm661_install_dir\conversion\v651_v66b7\qps120812-filter_val.d* and click OK.



Note When a message about no code page defined in the input file appears, click OK and accept the default code values.

e When database content loading is complete, make sure the Records Loaded column shows 3 and the Total Errors Column shows 0, and click OK to close the information window.



f Exit the Data Admin window by selecting Database|Exit.

g Exit Progress Editor by selecting File|Exit.

h Restart Progress Editor and run the `pfreezetbl.p` program. To run the program, enter the following command, then select Compile|Run from the menu or Press F2.
`run <crm661_install_dir>``\conversion\pfreezetbl.p`

This sets `_frozen = yes` for all tables in CRM databases. After the program is run, a confirmation message appears; click OK and close the editor window. Click No when you are prompted to save changes in the Progress Editor buffer.

i Close the Deployment Utility. If you do not see any errors in the log file, your CRM 6.5.1 databases have now been upgraded to 6.6.1.

Configuring QAD CRM 6.6.1 on Deployment Server

Use the same steps in “Configuring QAD CRM on Deployment Server” on page 27.

Note *`QADCRMInstallDir`* refers to the new CRM6.6.1 folder that has been created by the CRM 6.6.1 Installer.

Compilation Procedure

Use the same steps in “Compilation Procedure” on page 28.

Note *`QADCRMInstallDir`* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.

Note Ignore the step “Modify the .pf file.” on page 28 when you are implementing the steps described in the Compilation Procedure section. You can do this because you have already modified the same .pf file in an earlier step to connect to your recently converted CRM 6.6.1 database, which can be used for compilation purposes.

Configuring the Delivery Server

Use the same steps in “Configuring QAD CRM on Deployment Server” on page 27.

Note *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.

Note Rename the `qadcrmwebclient.war` file; for example, `qadcrmwebclient661.war`. In this way, when you copy this .war file to the Tomcat webapps folder, it can be extracted to a different webapps folder, other than the one that is used by your existing CRM 6.5.1 system.

Splitting UI and Backend Programs on the Deployment Server

Use the same steps in the section “Splitting UI and Backend Programs on the Deployment Server” on page 33.

Note *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.

Copying QAD Backend Programs on the Application Server

Use the same steps in the section “Copying QAD Backend Programs on the Application Server” on page 114 with the following notes:

- *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.
- Since you already have an existing CRM 6.5.1 system that is integrated with QAD EA, make sure that you create a new folder under *QADERPInstallDir*`/qadcrm/`*<New CRM6.6.1 env name>* to reflect the new CRM6.6.1 program files that need to be stored in the backend Application Server; for example, *QADERPInstallDir*`/qadcrm/qad661test.`

Compiling QAD CRM Backend Programs on the Application Server

Use the same steps in the section “Compiling QAD CRM Backend Programs on the Application Server” on page 114 with the following notes:

- *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.
- If you have a 64-bit Progress AppServer, you must also perform the steps under “Compiling QAD CRM Backend Programs on the Application Server” on page 35.

Configuring Application Server

Use the same steps in “Configuring Application Server” on page 37 with the following notes:

- *QADCRMInstallDir* refers to the newly installed CRM 6.6.1 folders on your Windows Deployment server.
- Back up your existing `ubroker.propoerties` file before you make any changes to it.
- It is recommended that you define a new entry in the `ubroker.properties` file rather than updating the existing CRM6.5.1 entry. You can always remove the existing CRM6.5.1 AppServer later after your CRM 6.6.1 system is confirmed to be working.

- When defining the PROPATH for your Appserver, make sure that you refer to the correct *QADERPInstallDir*/qadcrm/*<New CRM6.6.1 env name>* folder that you created in an earlier upgrade step in “Copying QAD Backend Programs on the Application Server” on page 114.

Performing Additional Configurations for Integration with QAD EA

Use the same steps in “Performing Additional Configurations for Integration with QAD Enterprise Applications” on page 39.

Note *QADCRMInstallDir* refers to the newly installed CRM 6.6.1 folders on your Windows Deployment server.

Maintaining and Validating QAD CRM AppServer Information

Use the same steps in “Maintaining and Validating QAD CRM AppServer Information” on page 40.

Note *QADCRMInstallDir* refers to the newly installed CRM 6.6.1 folders on your Windows Deployment server.

Generating and Copying QAD CRM WebClient Files

Use the same steps in “Generating and Copying QAD CRM WebClient Files” on page 42.

Note *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.

Integrating with QAD SE

If you need to integrate CRM 6.6.1 with your QAD SE system, you must implement the steps under the following sections:

- “Integrating QAD CRM with QAD SE” on page 45
- “Configuring the Environment for Sales Order Integration” on page 66

Note *QADCRMInstallDir* refers to the newly installed CRM 6.6.1 folders on your Windows Deployment server.

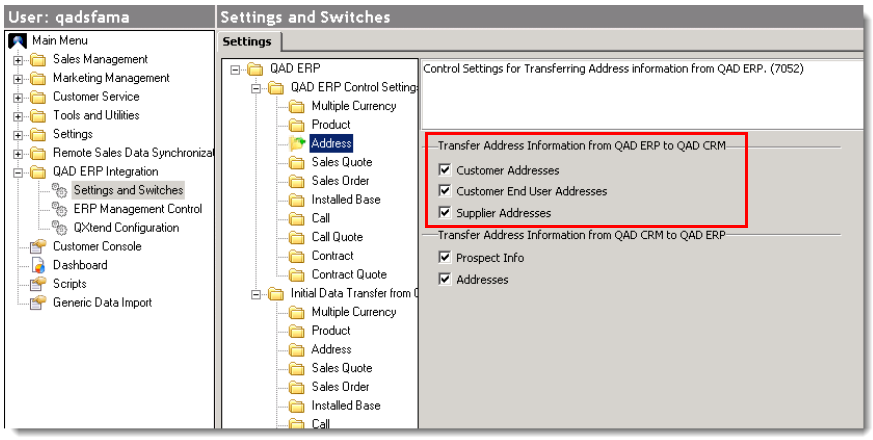
Note When you define the PROPATH in the configuration files, make sure you refer to the correct *QADERPInstallDir*/qadcrm/*<New CRM6.6.1 env name>* folder that you created earlier in the section “Copying QAD Backend Programs on the Application Server” on page 34.

On the first use of an upgraded CRM 6.6.1 application on any client, run Initial Address Data Load to bring all the necessary county data from the QAD SE system to the CRM 6.6.1 application.

Important Do the following steps only once.

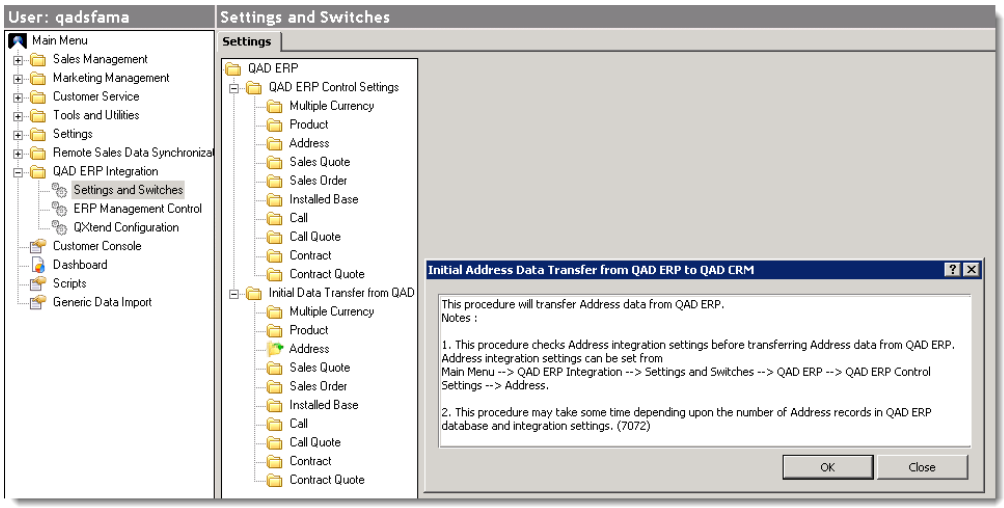
1 Go to QAD ERP Integration|Settings and Switches|QAD ERP|QAD ERP Control Settings|Address. Make sure that you check all your required options under Transfer Address Information from QAD ERP to QAD CRM.

Fig. 4.9
QAD ERP Control Settings - Address



2 Go to QAD ERP Integration|Settings and Switches|QAD ERP|Initial Data Transfer from QAD ERP|Address. The Initial Address Transfer from QAD ERP to QAD CRM screen pops up.

Fig. 4.10
Initial Address Transfer from QAD ERP to QAD CRM Screen



3 Click OK on the pop-up screen to finish the address data load.

Integrating with QAD EE

If you need to integrate CRM 6.6.1 with your QAD EE system, you need to implement the steps under the following sections:

- “Integrating QAD CRM with QAD EE” on page 48
- “Configuring QXtend for Integration” on page 50

- “Configuring the Environment for Sales Order Integration” on page 66

Note *QADCRMInstallDir* refers to the newly installed CRM 6.6.1 folders on your Windows Deployment server.

Note When you define PROPATH in configuration files, make sure that you refer to the correct *QADERPInstallDir*/qadcrm/*<New CRM6.6.1 env name>* folder that you created earlier in the section “Copying QAD Backend Programs on the Application Server” on page 34.

Installing QAD CRM on End User PC

Use the same steps in “Installing QAD CRM on End User PC” on page 68.

Note *QADCRMInstallDir* refers to the newly installed CRM6.6.1 folders on your Windows Deployment server.

Post-Upgrade Tasks

Re-create remote nodes for your users if applicable.

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