QAD Enterprise Applications
Enterprise Edition

Installation Guide

QAD Enterprise Edition 2011.1 EE Installation Guide for Progress Database

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Contents

QAD Enterprise Edition 2011.1 EE Installation Guide for Progress Database Change Summary

The following table summarizes significant differences between this document and the version released with QAD 2011 Enterprise Edition.

Date/Version	Description	Reference
September 2011/2011.1 EE	Rebranded for QAD 2011.1 EE	--
September 2011/2011.1 EE	Documented Red Hat 6 installation considerations	page 4, page 12
September 2011/2011.1 EE	Documented a consideration for configuring Enterprise Edition installation on Windows	page 20
September 2011/2011.1 EE	Documented the Advanced Database Configuration screens	page 28
September 2011/2011.1 EE	Documented considerations for cloning an Enterprise Edition Windows installation	page 30
September 2011/2011.1 EE	Documented a new requirement to enter port values when installing QXtend in Windows environments	page 32

Chapter 1

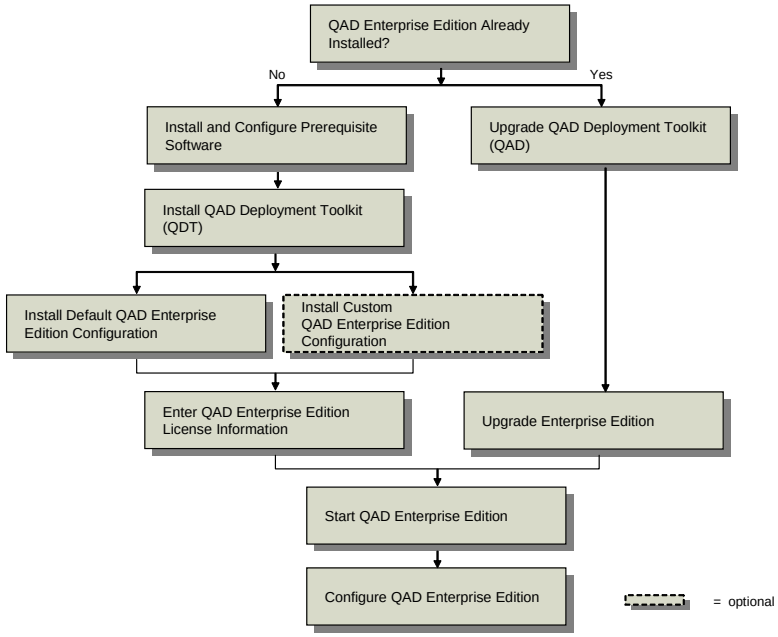
Installation Summary and Requirements

This chapter describes the QAD Enterprise Edition installation process, system requirements, and software prerequisites.

Installation Summary

QAD Enterprise Edition is installed with the QAD Deployment Toolkit (QDT). QDT automates much of the installation process on properly configured systems. The following figure represents the overall flow of the installation process.

Fig. 1.1
QAD Enterprise Edition Installation Process



The procedure for installing QAD Enterprise Edition is as follows:

1. Set up systems according to the hardware and software requirements defined in this chapter or with the assistance of QAD Global Services.
2. Install and launch QDT.
3. QDT reads the product image on the distribution media and displays a choice of products and components to install.
4. You select the appropriate products and components.
5. QDT automatically discovers system information, such as the location of required software, by reading environment variable settings.
6. QDT installs and configures the selected products and components using default configuration values (generated during the auto-discovery process) or using your custom configuration values.
7. You start up a character-based user interface (CHUI) session to enter license information.
8. You launch your new Enterprise Edition installation and log in.
9. You complete any necessary post-deployment configuration.

System Components

A QAD Enterprise Edition system consists of:

- A Progress database server containing QAD Enterprise Edition software
- A Progress Enterprise Application server
- A Tomcat Web server
- Multiple client workstations (with QAD .NET User Interface software), as needed

Additionally, the Georgia SoftWorks Windows Telnet Server is required for Windows server implementations.

The database, application, and Web servers are all installed on the same machine in a single-tier environment. The QAD .NET User Interface clients are installed on the machines that will access the QAD Enterprise Edition environment.

Source File Location

In QAD 2010.1 Enterprise Edition and earlier, all of the product source files were located under `<qad_install_directory>` in `us/xrc`. Beginning with QAD 2011 Enterprise Edition, the product files are located in the `xrc`, `trigger`, and `validation` subdirectories; the remainder of the files are located under `xrc/us` in a series of two-letter subdirectories whose names mirror those of the R-code subdirectories.

You must update custom programs that reference QAD include files and/or sub-procedures to prefix these references with the two-letter subdirectory structure described above. Nearly all references in custom programs to QAD source files must be prefixed with `us/<2_letter_subdirectory>/`.

For example, custom program `xxabcdrp.p` is a menu-level report that uses QAD's `mfdtitle.i`. Before QAD 2011 Enterprise Edition, this line of code would have appeared as:

```
{mfdtitle.i}
```

After implementing QAD 2011 Enterprise Edition, this same line of code must read as:

```
{us/mf/mfdtitle.i}
```

Some include files are located in `xrc/us/bbi` rather than their two-letter subdirectory. Check the `xrc/us/bbi` directory for the list of those include files. Following implementation of QAD 2011 Enterprise Edition, references in custom programs to include files in that subdirectory require a prefix of `us/bbi/`. For example:

```
{us/bbi/pxmsg.i &MSGNUM=4874 &ERRORLEVEL=1}
```

After custom programs are updated, you must recompile them with your custom code directory and the `<qad_install_directory>/xrc` directory in the `PROPATH` definition.

Sizing and Capacity Planning

The database server contains QAD Enterprise Edition and Progress server software, as well as your production data. Before you begin an installation, estimate the eventual size of your production database and the demands expected of the different database components.

QAD Enterprise Edition needs a minimum of 8 GB to install and configure the product as-is for one environment. That does not include the additional space required for multiple languages, Warehousing, major changes to the production databases, or the cloning of environments.

For assistance with hardware sizing and capacity requirements planning, contact QAD Services.

General Prerequisites

The following general prerequisites apply:

- If you are a new Enterprise Edition customer, you must have a QAD Enterprise Edition DVD and the latest QDT and application patches from the QAD Download Center.
- You must have a valid QAD product license key for each module you have purchased to use QAD Enterprise Edition.
- The system administrator must be an experienced Progress database administrator who can manage Progress client processes.
- A 100 Mbps Ethernet or faster network is required to run QAD Enterprise Edition.

Software and Hardware Prerequisites

The following sections describe the software and hardware requirements for the prerequisite components of your QAD Enterprise Edition installation.

Note

For the most current requirements information, refer to the Product Availability Guide on the QAD Online Support Center at:

http://support.qad.com

Refer to the Progress documentation for the complete requirements for Progress components. When installing Progress components, always select a Complete installation, not a Typical or Custom installation.

Important These components must be installed before beginning the installation of QAD Enterprise Edition.

UNIX and Linux Considerations

X terminal

Verify that X terminal is installed. It is required for QAD Enterprise Edition UNIX installations.

Red Hat 6

Red Hat 6 does not contain the korn shell by default. This prevents use of `./install.ksh` to start up QDT and subsequent QAD Enterprise Edition installation. To use QDT and install Enterprise Edition in Red Hat 6 environments, run the following command as root:

```
yum install compat-libstdc++-296
```

Installation of QAD Enterprise Edition in Red Hat 6 environments requires use of the `qadinst_RH6_64bit` (64-bit) or `qadinst_RH6_32bit` (32-bit) executable.

Installation Group and User

UNIX installations require a group called `qad` and a user called `mfg` on the database server. All installation and maintenance programs store pertinent information under the `mfg` user home directory. This enables QAD scripts to automatically and reliably find data about installed products and lets you maintain your system without having to log on as root.

1. Using your UNIX system administration utility, create a group called `qad` with a group ID (gid) of `65535` (`65535` is the user ID of the files on the QAD media).
2. Create a user called `mfg` with a user ID of `65535`.
   a. Assign the Korn shell to this user. All of the scripts delivered on QAD media use Korn shell (ksh) syntax.
   b. For the `mfg` user, set the `$HOME` environment to a user directory to which working and temporary files can be written.
   c. Assign the standard `umask` of `022` to set permissions and security.

Environment Variables

Update the `mfg` user `.profile` to include the `DLC` and `PATH` variables. Set the variables as follows:

- `DLC`: Progress installation directory
- `JAVA_HOME`: Java directory location
- `CATALINA_HOME`: Tomcat installation directory
- `PATH`: To include `$DLC/bin`, `$JAVA_HOME/bin`, `$CATALINA_HOME/bin`

Depending on your flavor of UNIX, you may also need to set the following variables for the shared library path and ID library path:

- `SHLIB_PATH`
- `LD_LIBRARY_PATH`

Expat XML Parser (HP-UX Only)

If you are installing on an HP Platform running HP-UX, you must install a C library for parsing XML. The Expat XML Parser is a free, open source application that provides this functionality.

You can obtain the source code using the project's SourceForge page at:

http://expat.sourceforge.net/

Precompiled depot files for HP are available at:

http://hpux.connect.org.uk/hppd/hpux/Development/Tools/expat-2.0.1/

Because of a limitation of the QAD Deployment Toolkit on HP ia64 (Itanium) platforms, you should install depot files for both the Itanium 2 and PA-RISC 2.0 before installing QAD software.

Database Server

The following table lists the software and hardware requirements for the database server.

Table 1.1
Database Server Requirements

Software	Hardware	Notes
Progress OpenEdge 10.2B0109, including the following: • Latest Progress version-specific patches with a minimum patch of 10.2B0109 • Enterprise DB Server for the appropriate number of users • 4GL Development, one license • Progress Enterprise application server Progress language-specific releases for each language in multi-language installation Java J2SE 5.0 or higher Graphical Web browser Operating system patches	4 GB free disk space for single-language installation. 700 MB free disk space for each additional language. Operating system patches Approximately 10 GB free disk space for data structures. This estimate is based on a 5 to 7 GB production database. 100 Mbps network card ISO 9660 DVD drive Two disk controller channels (minimum) Internet connection	Perform a Complete installation, not a Typical or Custom installation of Progress components. If Progress installs its own version of Java and it differs from the version required by the Web server (see below), do not remove the Progress-installed Java version when installing the Web server version.

Application Server

The following table lists the software and hardware requirements for the application server.

Table 1.2
Application Server Requirements

Software	Hardware	Notes
Progress OpenEdge 10.2B0109, including the following: • Latest Progress version-specific patches with a minimum patch of 10.2B0109 • Enterprise DB Server for appropriate number of users • 4GL Development, one license • Progress AdminServer Java J2SE 5.0 or higher Operating system patches	4 GB free disk space for single-language installation 700 MB additional free disk space for each additional language	Perform a Complete installation, not a Typical or Custom installation of Progress components If Progress installs its own version of Java and it differs from the version required by the Web server (see below), do not remove the Progress-installed Java version when installing the Web server version. Depending on your Progress release, you may need to install Java before installing the Progress component. If so, use Java J2SE 5.0 or higher.

Web Server

The following table lists the software and hardware requirements for the Web server.

Table 1.3
Web Server Requirements

Software	Hardware	Notes
Tomcat 5.5.20 or higher Progress WebSpeed with sufficient WebSpeed agent licenses to support expected transaction volume Java J2SE 5.0 or higher	10 MB free disk space for Tomcat installation files 100 MB free disk space for WebSpeed 100 MB free disk space for QAD user interface client application	Tomcat 5.5.23 is included on the QAD Enterprise Edition installation media and contains relevant configuration information.

Installing the Web Server

Locate the Tomcat distribution contained in the `mfgprouitc/zips` directory in the media. Using an unzip utility, unpack Tomcat to `$CATALINA_HOME` (see “Environment Variables” on page 5).

Ensure that the `mfg` user (see “Installation Group and User” on page 5) has permission to read all files and folders in `$CATALINA_HOME`; can create and modify files in the `logs`, `webapps`, `temp`, and `work` subfolders; and can execute files in the `bin` subfolder.

QAD recommends that before installing Enterprise Edition, you become familiar with starting and stopping the Tomcat Web server and connecting to the Tomcat manager.

Telnet Server (Windows Only)

The following table lists the software and hardware requirements for the telnet server.

Note The telnet server is only required for Windows-based QAD Enterprise Edition installations.

Table 1.4
Telnet Server Requirements

Software	Hardware	Notes
Georgia SoftWorks Telnet Server	Refer to the Georgia SoftWorks documentation.	QAD provides this software on the Enterprise Edition installation media.

Chapter 2

QAD Deployment Toolkit Installation

The QAD Deployment Toolkit (QDT) is a streamlined, complete tool set for product installation and configuration. This chapter covers QDT installation, startup, and configuration.

Overview

The QAD Deployment Toolkit (QDT) is used to install QAD Enterprise Edition and other QAD products. It streamlines the installation process by automatically finding system information (such as component locations) and appropriately modifying the QAD Enterprise Edition configuration profile.

With QDT, there are two QAD Enterprise Edition installation options:

- Default Installation, which other than setting up connection information, uses the default configuration values without modification.
- Custom Installation, where in addition to setting up connection information, one or more of the default configuration values are modified.

QDT must be installed before QAD Enterprise Edition installation.

Note Before installing QDT and QAD Enterprise Edition, verify the environment variables for the prerequisite Java and Tomcat installations on your target system are set. See Chapter 1, “Installation Summary and Requirements,” on page 1 for more details on software requirements.

Installing QDT

QDT is installed from the application media shipped by QAD. For example, if you are installing QAD Enterprise Edition, you perform the QDT install from the installation media.

Note You must have a graphical environment with full X-Windows capability.

QAD recommends that you shut down any virus protection programs. This can significantly reduce the time required for installation and implementation.

If you received separate media containing an updated QDT version, install QDT from that media. Otherwise, install QDT from the product media.

To install QDT:

1. Verify the Progress OpenEdge Admin and Name Servers are up and available. They must be up and available even if they are not initially providing App or WebSpeed servers and brokers.
2. Verify the Tomcat server container is installed, but *not* running (this applies to installation and configuration).
3. Mount the QAD product media or separate media containing an updated version of QDT.
4. Access the `install` directory within the newly mounted location.
5. Launch the installation using the appropriate file for your operating system. A command window displays informing you that you are installing QDT.

Fig. 2.1
Installation Window for a UNIX/Linux Installation

6 The license agreement displays. Press Enter followed by the spacebar to advance through it or press `q` to skip the agreement and continue the installation.

7 The installer prompts you to accept the agreement. Select `y` to continue or `n` to exit the installation.

8 The installer prompts you to enter the QDT install location. The default is `c:\qdt` on Windows and `/usr/local/qdt` on Linux and UNIX. Accept the default location or specify a different directory. Press Enter.

9 The installer prompts you to enter the location for creation of the log directory. The default is `c:\<target_directory>\logs` on Windows and `/<target_directory>/logs` on Linux and UNIX. Accept the default location or specify a different directory. Press Enter.

10 If the `logs` directory does not exist, you are prompted to create it.

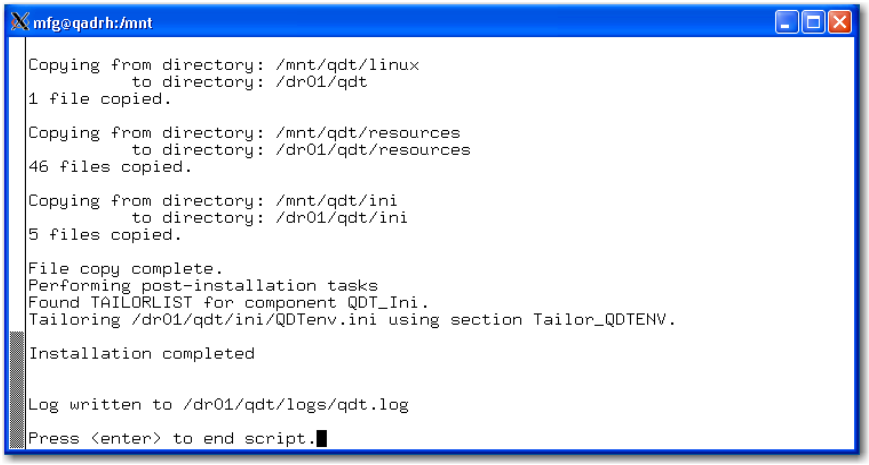
11 The installer prompts you to enter the location where to install the QDT XML files. On Windows, the default is: `c:\<target_directory>\xml`. On Linux and UNIX, the default is `/<target_directory>/xml`. Accept the default location or specify a different directory. Press Enter.

12 On Windows, you are prompted for a folder name for the QDT shortcut. The default is QAD Deployment Toolkit. Accept the default location or specify a different directory. Press Enter.

13 A summary of the install displays. The installer prompts you to continue with the install. To proceed, press Enter.

14 The installation runs.

Fig. 2.2
Installation Summary



15 Press Enter to exit the installation script.

16 Wait for the install to finish. Then review the log file for installation errors.

On Windows, the default log file location is `c:\qdt\logs\qdt.log`. On Linux or UNIX, the default location is `/usr/local/qdt/logs/qdt.log`.

Look for lines beginning with five asterisks or two asterisks (`*****` or `**`). Five asterisks indicate QDT errors; two asterisks indicate Progress errors.

17 Correct any errors and attempt the QDT installation again. Otherwise, proceed to “Starting QDT” on page 12.

Starting QDT

To start QDT on Windows, select Start|All Programs|QAD Deployment Toolkit|Start QDT.

Note For Linux or UNIX installations, verify that your environment variables were properly set as described in “Environment Variables” on page 5.

To start QDT on Linux or UNIX, go to <*`qdt_install_directory`*> and run the `./qadinst` installation script.

To start QDT in Red Hat 6 environments, run the `qadinst_RH6_64bit` (64-bit) or `qadinst_RH6_32bit` (32-bit) executable.

The QAD Deployment Toolkit displays. It contains information about the current host including the operating system and currently installed Progress, Java, and Tomcat versions.

Fig. 2.3
QAD Deployment Toolkit Main Screen

QDT has two modules:

- Install

  The Install function moves files from the product delivery media onto the target host drive. Within the Install module, you can select a default or custom install. A default installation uses the default configuration values without modification to automatically install QAD Enterprise Edition. A custom installation requires manual intervention to modify one or more default configuration values while installing QAD Enterprise Edition.

- Admin

  Admin completes the installation process and provides tools for updating and configuring the products installed by QDT. When the install is complete, you use the Admin function to create databases, compile application code, and create server start and stop scripts for the installed products.

  Note The Admin function is similar to what was formerly called MFG/UTIL in previous QAD application versions.

  Important Although the process used with MFG/UTIL is similar, it is not valid for this install. Continue reading this guide for instructions.

Each of the functions is accessed by clicking a button on the QDT main screen.

To view information about the host machine on which QDT is installed, select Edit|Preferences.

Configuring QDT

You may need to perform some additional actions to configure QDT. These include:

- Setting system defaults (including port settings)
- Adding additional authorized users

Setting System Defaults

If the environment variables on your host machine were previously set at the operating system level, QDT automatically discovers and displays relevant system information on its main screen.

If the QDT main screen fails to display system information, or if it displays incorrect information, you must set these system defaults through QDT's Edit System Default Settings menu item.

Important Port settings, such as Tomcat and Progress AdminServer ports, are automatically set to default values within QDT. If you are not using the default values for these ports or are installing multiple environments (which requires multiple Tomcat environments), use QDT's Edit|System Default Settings menu item to set the correct port values.

To set system defaults (including port settings):

1. On the QDT main screen, pull down the Edit menu and select System Default Settings. The QDT Setup screen displays.
2. Enter changes to the appropriate settings.
3. Select OK to close the screen and save the changes.

Adding Users

The person who initially installs QDT is the only person able to use it. All others who attempt to use the toolkit will receive errors and cannot run it. To allow additional users to run QDT, do the following:

1. Click Admin on the QDT main screen. The QDT Admin screen displays.
2. Drop down the Edit menu and choose User Maintenance. The User Maintenance screen displays.
3. Add the additional users.
4. Select OK to close the screen and add the users.

Note Authorized user information is stored in the *`qdt_install_directory`* `/xml/users.xml` file. If you have many users to add, you can edit this file directly.

Next Steps

You can use QDT to perform a default install using default configuration values or a custom install in which you modify the default configuration values.

See Chapter 3, "QAD Enterprise Edition Installation," on page 15 for descriptions of these processes.

Chapter 3

QAD Enterprise Edition Installation

This chapter describes how to install QAD Enterprise Edition using default and customized configuration settings. It also discusses installation in multiple environments and cloning an environment.

Overview

QAD Enterprise Edition is installed using the QAD Deployment Toolkit (QDT). The QDT automatically finds the previously defined system information needed to configure a QAD Enterprise Edition installation. In most cases, you can use this information without modification to perform a default installation. Some situations require modification of the default configuration data, resulting in a customized installation.

Important Modifying default configuration settings may create problems. Proceed with care.

Note The default language setting for a default installation is US English. If you need to install additional languages, see “Adding Languages to an Existing Configuration” on page 50.

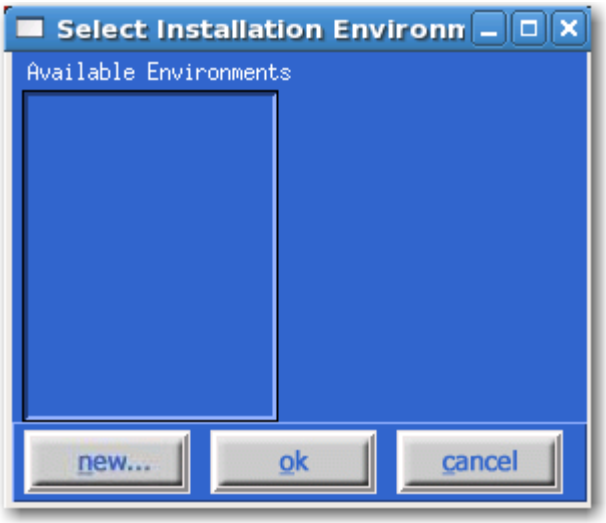
Initiating an Installation

Note Installation is performed using QDT. See Chapter 2, “QAD Deployment Toolkit Installation,” on page 9 for details on installing and starting QDT.

To install QAD Enterprise Edition with default configuration information, do the following:

1. Start the Progress admin server using the same user name that was used to run QDT.
2. If you installed an updated version of QDT from separate media, mount the media containing the Enterprise Edition release. Otherwise, proceed directly to step 2.
3. Launch QDT.
4. On the QDT main screen, click Install. The Select Installation Environment window displays.

Fig. 3.1
Select Installation Environment Window



5. Click New to display the Enter Environment Name screen. Use the environment name to segregate multiple environments installed on a single machine (for example, production and test). Accept the default environment name or specify a new name.
6. Click OK to close the screen and save the environment name.

Fig. 3.2
Enter Environment Name Screen

7 Under Available Environments, select the appropriate environment name. Click OK to close the screen and select the installation environment.

8 The system reads the list of available product components from the installation media and displays the product component selection tree. Everything is selected by default.

Note For QAD Enterprise Edition, the QAD EE User Interface, QAD EE Database, and QAD EE Application components must all be installed at the same time during the initial installation. If you deselect any of these components now, you cannot select and install them later.

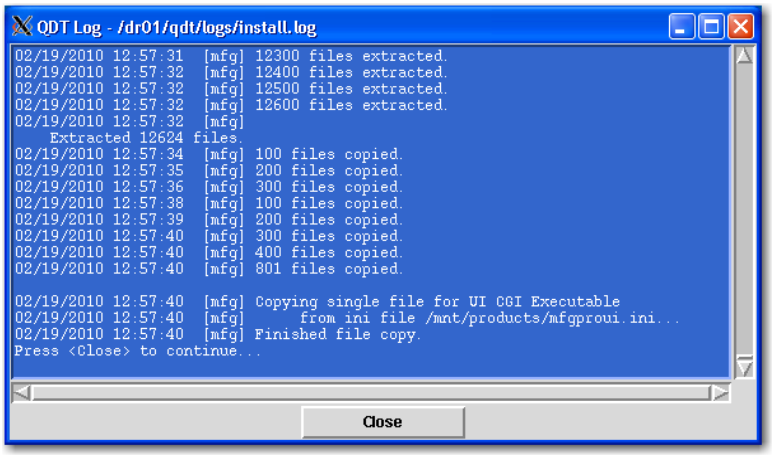
You can customize the installation destination (QAD EE folder) by selecting Edit following this step.

9 Click Install to continue. The installation launches. A window displays the `install.log` file, which provides the installation progress.

10 Review the `install.log` file for errors in the installation process.

11 When the installation completes successfully, click Close to exit.

Fig. 3.3
Completed Install Process



12 Unmount the media.

Multiple Environments and Cloning

You can install QAD Enterprise Edition in multiple environments (test and production environments, for example). To do so, you can clone an existing environment to create a copy that contains the same environment, system, and language details. With the cloning option, you can use the same Tomcat Web server directory and port as the original environment.

Note If you install QAD Enterprise Edition in multiple environments or create clones of a QAD Enterprise Edition environment, you must perform the applicable configuration procedures in this chapter separately for each environment. You also must perform the applicable procedures in Chapter 6, “Starting QAD Enterprise Edition,” on page 37 and Chapter 7, “QAD Enterprise Edition Configuration,” on page 41 separately for each environment.

Next Steps

Proceed to Chapter 7, “QAD Enterprise Edition Configuration,” on page 41 for details on configuring your installation.

Chapter 4

QAD Enterprise Edition Environment Configuration

This chapter describes how to configure QAD Enterprise Edition following installation and how to clone an environment.

Overview

After QDT installs the QAD Enterprise Edition files on your server, you must configure the environment. You can then customize your QAD Enterprise Edition configuration.

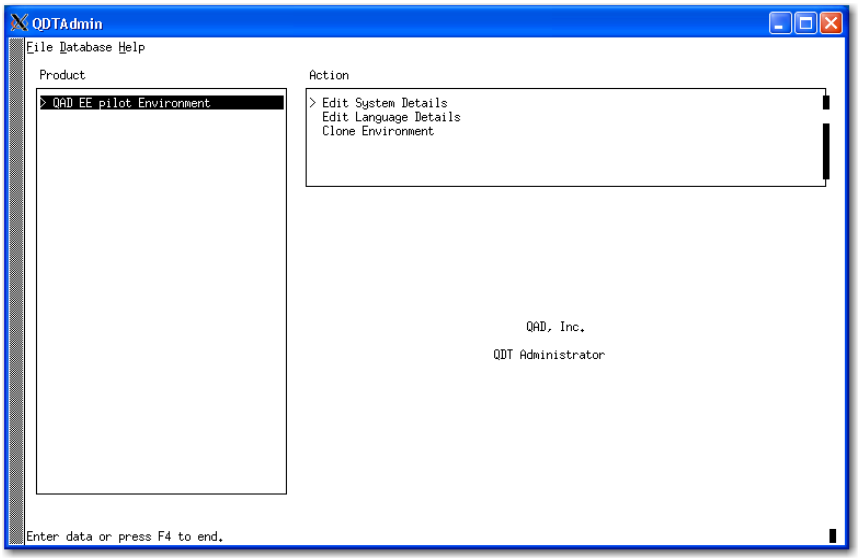
Required Configuration

All installations (default or custom) require definition of the Connection Manager telnet user settings. In addition, installations on Windows require you to specify database service names or ports. These tasks are done as follows:

1. Return to the QDT main screen and click Admin. This action takes you to the QDT Administrator window.
2. Select QAD <*environment_name*> under Product.
3. If you are installing QAD Enterprise Edition on Linux or UNIX, skip to step 4.

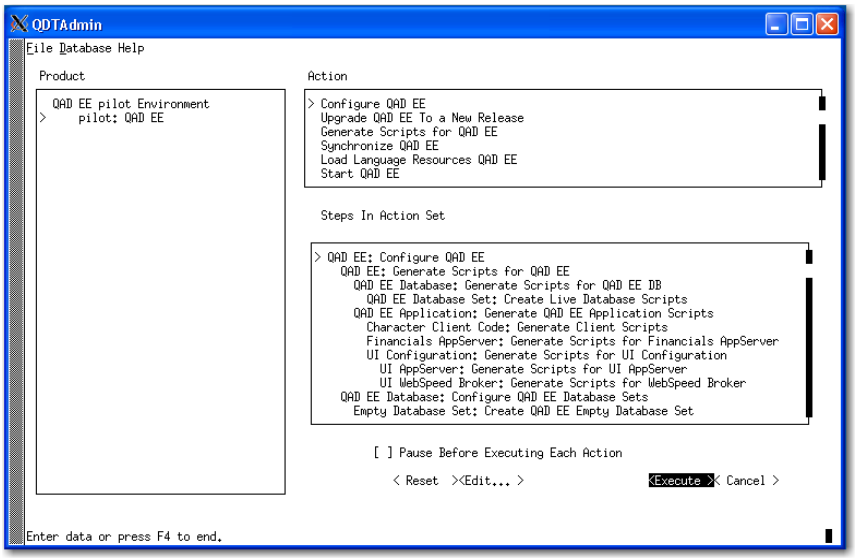
   If you are installing QAD 2011.1 Enterprise Edition or above on Windows, you must specify a service name or port for each database. This is due to the Progress Admin Server database maintenance limitation.

Fig. 4.1
QDT Admin



4. Select Configure QAD EE. The configuration steps appear in the Steps in Action Set pane.

Fig. 4.2
Configure QAD EE Screen with Update UI Configuration Action Step

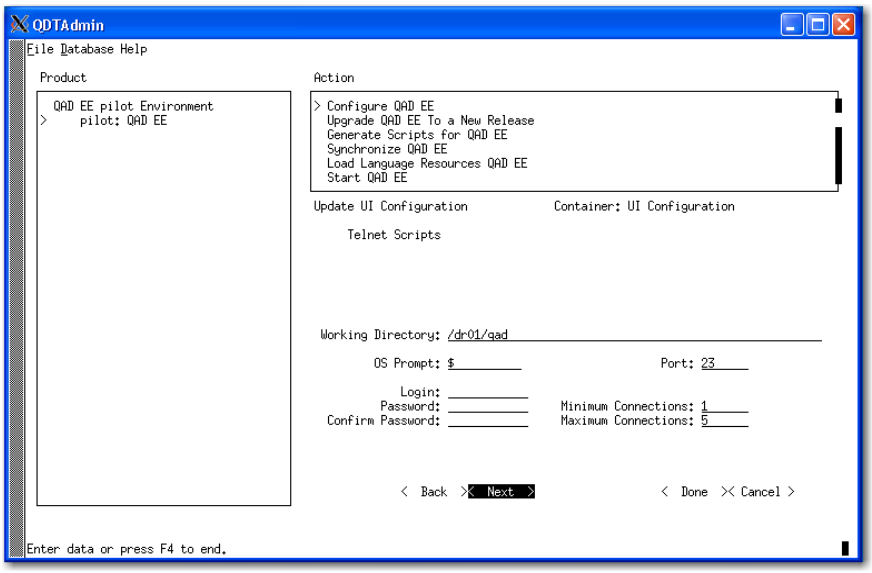


5 Select UI Configuration: Update UI Configuration under Steps in Action Set and press Enter. The Update UI Configuration screen displays.

You use the UI Configuration to create the connection manager telnet login script.

Note The user is an operating system user and must have privileges to run the `connmgr.<environment_name>` script found under `<qdt_install_directory>/envs/<environment_name>/scripts/`.

Fig. 4.3
Update UI Configuration Screen



6 Type a valid login ID and password. Type the password again to confirm it.

7 Modify or accept the default values for the telnet port and minimum and maximum connections for the UI Connection Manager.

Important To proceed with the configuration process, you must provide a valid entry for each value on this screen.

8 Select Done to close the screen and save the values.

9 Select Execute to begin the configuration process.

10 The system prompts you to confirm execution of the configuration process. Click Yes.

11 You are prompted to clear the log. Type yes.

12 The configuration process begins. The installation script launches. Select Close to continue. A window displays the `qdtadmin.log` file, which records the configuration progress.

Note A message displays during full synchronization that says a default set of roles was not provided for the installation. Use of this capability is optional. The warning is for information purposes only and will not impact the system.

13 Wait for the configuration process to finish. Then review the `qdtadmin.log` file for errors.

14 Correct any errors and attempt the configuration again. Otherwise, select Close to exit.

Custom Configuration

The QDT application allows you to modify one or more of the default QAD Enterprise Edition installation parameters to create an installation that is tailored to meet your requirements.

To create a QAD Enterprise Edition custom configuration, use the following procedure:

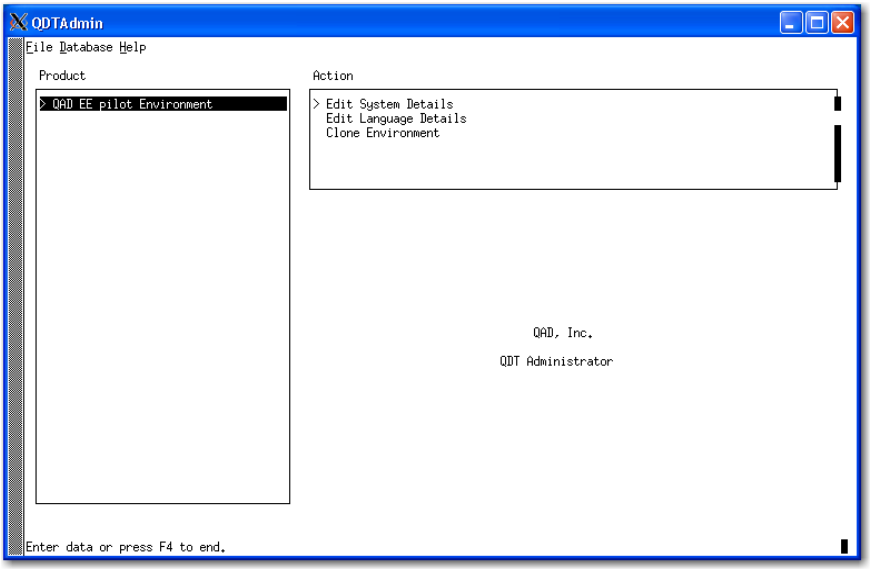
1 Return to the QDT main screen and click Admin. This takes you to the QDT Administrator window.

You can navigate from pane to pane in this window using the Tab key and within a pane using the up- and down-arrow keys.

The screen has multiple panes that contain lists of configuration options. You can vary the level of detail presented in the lists by highlighting and selecting these options.

2 The Product pane lists the available environments. Select the environment to configure.

Fig. 4.4
QDT Admin



Each selection in the Product pane displays a corresponding list of items in the Action pane.

In the Action pane of the QDT Administrator window, you have the following options:

- Edit System Details

  With this option, you can change the overall settings for your environment, including the Host ID, Host Name, Host URL, Log Directory, and Environments Directory. You can also modify settings for your Progress AdminServer, Java Runtime Environment, Progress NameServer, and Tomcat WebServer.

  See “Editing System Details” on page 24 for more information about these options.

- Edit Language Details

  With this option, you can install and configure the languages your QAD Enterprise Edition installation uses.

  Note The default QAD Enterprise Edition language is US English. If you are using only US English in your installation, you do not need to install it. If you require languages other than US English, you must install them.

  See “Editing Language Details” on page 24 for more information.

- Clone Environment

  With this option, you can create a copy of the selected environment, including all of its settings.

  See “Cloning an Environment” on page 30 for more information.

Make a selection in the Action pane to display the Steps In Action Set pane. It lists the tasks that will be performed for the current Action pane selection.

Select an item in the Steps in Action pane, select Edit, and press Enter to display a screen that allows you to enter or modify parameters associated with the item.

You can perform a custom configuration by beginning at the top-level item in the Steps In Action list, clicking Edit, and using the Next button to step through each screen in sequence.

Select a second-level item from the list to step through all of the screens under that topic in sequence. Select a third-level indented item and you can only access that item.

Select Execute to configure the installation using the settings from all of the items in the Steps In Action Items list.

Editing System Details

The Editing System Details function allows you to specify the versions of prerequisite third-party software and its location on the system. Under normal circumstances, the system automatically gathers this information and nothing needs to be changed.

You can edit system details as a whole by highlighting the environment. Edit component details by highlighting the component. For example, selecting QAD EE allows for the sequential editing of all system details. However, highlighting `<environment_name>:database server` just edits the database setting.

Editing Language Details

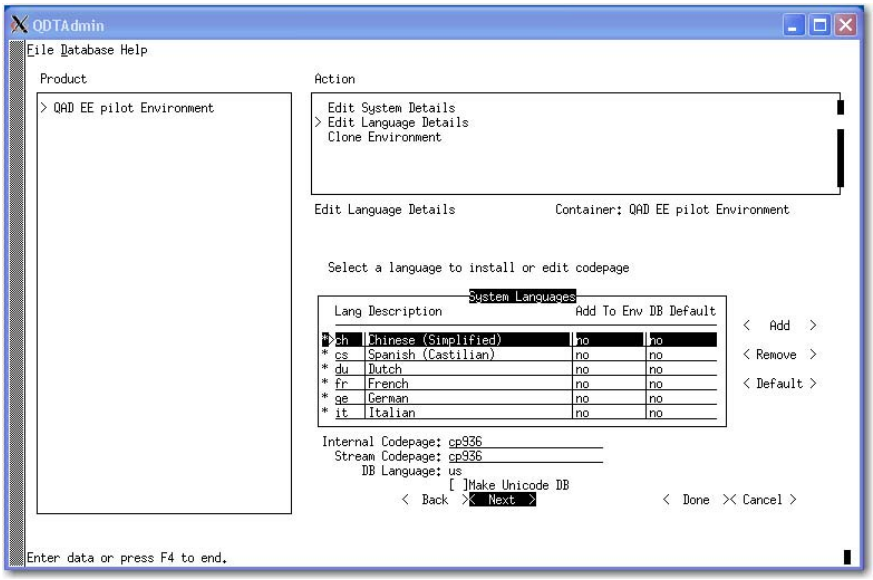
This screen allows you to add a language for this environment. The languages selected in this section are configured later during the database server creation step.

The default QAD Enterprise Edition language is US English. If you are using only US English in your installation, you do not need to install it and you can skip this section. If you require languages other than US English, you must install them. This is done using the following procedure:

Note When selecting two or more languages with conflicting code pages, the system is automatically configured for a Unicode installation.

1. Select QAD <*environment_name*> under Product.
2. In the Action pane, select Edit Language Details.
3. In the Steps In Action Set pane, select QAD <*environment_name*>: Edit Language Details.
4. The Edit Language Details Screen appears. Highlight the language you want to install and select Add. The Add to Env and DB Default columns change from No to Yes.

Fig. 4.5
Edit Language Details Screen



5 Modify the code page settings by entering the new information in the Internal Codepage or Stream Codepage fields.

Note You should limit modifications to the code page settings. Erroneous modifications can result in unexpected behavior.

6 Repeat steps 2 through 5 for each language to add or modify.

7 To define a language as the default language for the QAD Enterprise Edition installation, select it and select Default.

8 Select Done to complete the changes.

Edit System Details Process

To edit the system details, use the following steps:

1 Select QAD <*environment_name*> under Product.

2 In the Action pane, select Edit System Details.

3 Select QAD <*environment_name*>: Edit System Details in the Steps In Action Set pane.

4 For each of the following screens, review the information, make any required entries or changes, and select Next:

- Edit Database Location - Database Server
- Edit Database Properties - Empty Main Database
- Edit Structure File Information - Empty Main Database
- Edit Schema File Information - Empty Main Database
- Edit BI Truncation Parameters - Empty Main Database
- Edit Database Properties - Empty Single R-code Database

- Edit Structure File Information - Empty Single R-code Database
- Edit Schema File Information - Empty Single R-code Database
- Edit Data Load Options - Empty Single R-code Database
- BI Truncation Parameters - Empty Single R-code Database
- Edit Database Properties - Empty Admin Database
- Edit Structure File Information - Empty Admin Database
- Edit Schema File Information - Empty Admin Database
- Edit BI Truncation Parameters - Empty Admin Database
- Edit Database Properties - Empty Help DB
- Edit Structure File Information - Empty Help Database
- Edit Schema File Information - Empty Help Database
- Edit BI Truncation Parameters - Empty Help Database
- Edit Database Properties - Live Main Database
- Edit Structure File Information - Live Main Database
- Edit Data Load Options - Live Main Database
- Edit BI Truncation Parameters - Live Main Database
- Edit Database Properties - Live Admin Database
- Edit Structure File Information - Live Admin Database
- Edit Data Load Options - Live Admin Database

Note Entering an OID seed value into the OID generator field in Edit Data Load Options - Live Admin Database has no effect on the QAD Enterprise Edition configuration.

- Edit BI Truncation Parameters - Live Admin Database
- Edit Database Properties - Live Help Database
- Edit Structure File Information - Live Help Database
- Edit BI Truncation Parameters - Live Help Database
- Compiler Settings - Character Client Code
- AppServer UBroker Properties - Financials AppServer
- Build UI Configuration - UI Configuration
- AppServer UBroker Properties - UI AppServer
- WebSpeed UBroker Properties - UI WebSpeed Broker
- Update UI Configuration - UI Configuration

Note Update UI Configuration is the only mandatory task.

5 If you have no further configuration changes, select Execute.

6 The system prompts you to confirm execution of the configuration process. Select Yes.

7 The system prompts you to clear the log file. Select Yes.

8 Select Close.

9 The configuration process begins. The installation script launches. A window displays the `qdtadmin.log` file, which records the configuration progress.

Note A message displays during full synchronization that says a default set of roles was not provided for the installation. Use of this capability is optional. The warning is for information purposes only and will not impact the system.

10 Review the `qdtadmin.log` file to check for errors in the configuration process.

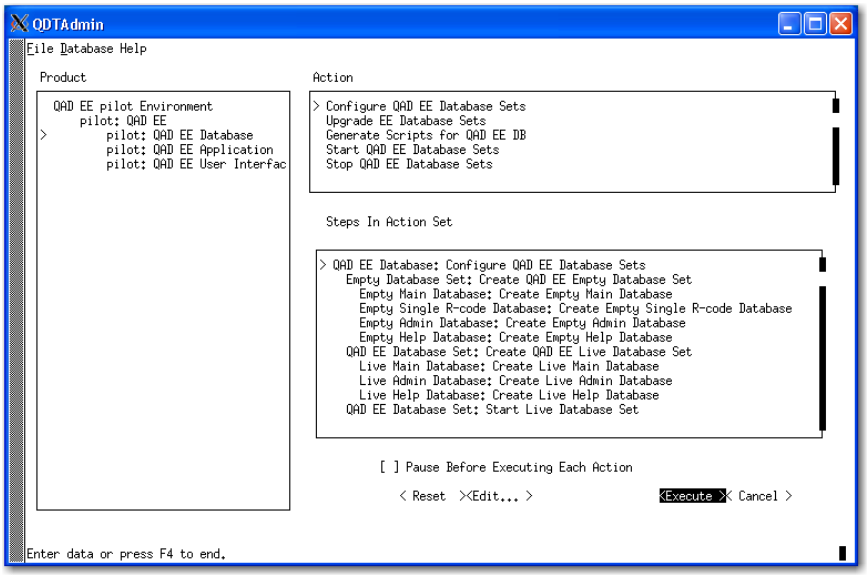
11 When the configuration completes successfully, select Close to exit.

Configuring Databases

There are four QAD Enterprise Edition databases:

- Main
- Single R-Code
- Admin
- Help

Fig. 4.6
Configure QAD EE Database Action Steps



If you select Pause Before Executing Each Action, the system will wait after performing each action. This is primarily used to create a conversion restore point. For more information, refer to the *Conversion Guide: Enterprise Edition - Progress Database*.

Warning When renaming a database, do not exceed the Progress database name size limit of 11 characters. Also, database names must begin with an alphabetic character and can contain only alphanumeric characters.

Advanced Database Configuration

The Advanced Database Configuration screens allow you to specify or change database settings as needed to improve database performance. For more information regarding these settings, refer to the Progress documentation.

The settings are saved to the `conmgr.properties` file, which allows you to manage the database with the Progress Explorer Utility.

Editing Structure File Information

The structure file defines how the database is created on the disk (the storage areas, their sizes, locations, and whether they are fixed or not).

The Structure File Record Detail screen lets you edit the Storage Area Path and the Extent Size for fixed-length extents.

- Use the Extent Pathname to distribute your database onto drives to maximize performance and optimize disk access.
- Use the Extent Size on fixed-length extents to control the size of each storage area. This field does not appear for variable-length extents.

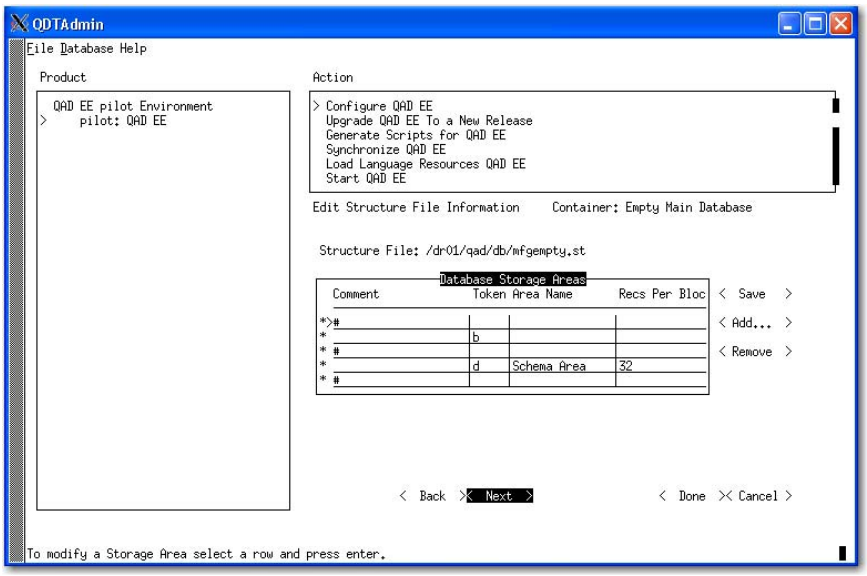
Note Most storage areas consist of two extents: one of fixed length and the other of variable length to allow for growth. Also, for performance reasons, the goal is to keep all of the data in fixed database extents. QAD Global Services can assist with optimizing the structure file configuration.

Warning

- Do not edit the Comment line in a storage area. This converts the storage area definition to a comment and nullifies the storage area. To add a comment to the file, select a comment line (#) from the Database Storage Area's selection list and press Enter.
- Do not change the storage Area Name. This name matches the Area definition in the data definition files (`.df`) for the database. When Progress encounters data files without defined storage areas, it creates them in the system storage area, which is also used to maintain the database structure.

The first configuration screen is Edit Structure File Information.

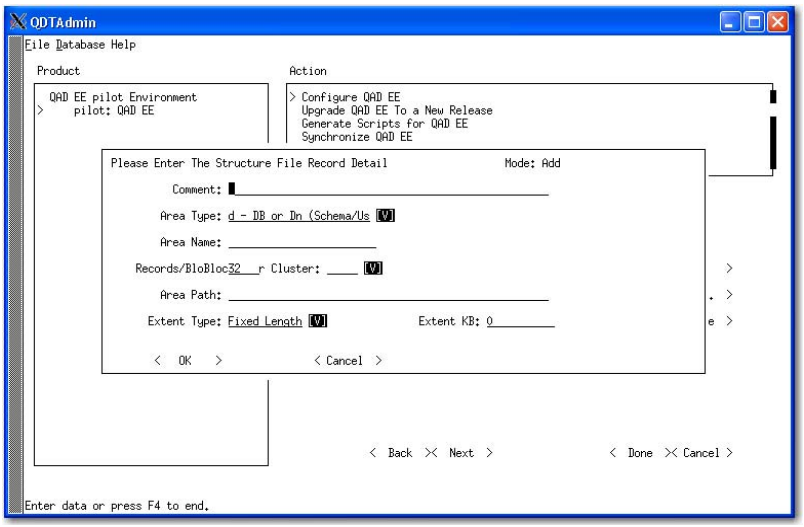
Fig. 4.7
Edit Structure File Information Screen



This screen allows you to scroll through the Progress structure file line-by-line and make modifications. You can add lines by selecting Add or edit the content of any line by selecting the line so that the line detail displays.

The second screen is the Edit Structure File Detail Screen. It is used to specify additional parameters.

Fig. 4.8
Edit Structure File Detail Screen



Editing Data Load Options

Note Not all databases have data load options. The Edit Data Load Options screen does not display for these databases.

The data load options are database-specific. Other databases, such as admin, have different paths and most do not require an object identifier (OID) value.

AIA Compression

Beginning with QAD 2011 Enterprise Edition, you can enable or disable the use of AIA compression. This is done as follows:

1. Select QAD <*environment_name*> under Product.
2. In the Action pane, select Configure QAD EE.
3. Select UI Configuration: Build Configuration UI in the Steps In Action Set pane.
4. Select Enable AIA Compression.
5. Select Done.
6. Select Execute.
7. After you exit QDT, go to `$TOMCAT/conf/server.xml`.
8. Locate the compression setting. In many cases, AIA compression is enabled by default. To use compression, verify that the compression setting says `compression="on"`.

   To disable AIA compression, change the compression setting to `compression="off"`.

   Note You can use AIA or SSL, but not AIA and SSL at the same time.

Cloning an Environment

You can create a copy of a QAD Enterprise Edition environment and its configuration information using the cloning function.

The cloning process creates a copy of the existing environment as it was before it was configured. In other words, any configuration done to the existing environment is not carried over to the cloned environment. You will need to configure the new environment using the steps in this guide.

To clone an environment, do the following:

1. Select QAD <*environment_name*> under Product.
2. In the Action pane, select Clone Environment.
3. The Steps In Action Set pane displays. Select Edit.
4. The Clone Environment pane appears. Use this pane to enter the values for the new environment while observing the following rules:
   - The destination environment name cannot already exist or be blank.
   - The UI configuration cannot already exist or be blank.
   - The target environment directory cannot be the same as the source or be blank.
   - The target environment directory must not exist or be empty.
   - The target database directory cannot be the same as the source or be blank.
   - The target database directory must not exist or be empty.
   - If you are cloning a Windows configuration, you must enter service names that are different from those used in the original environment. Otherwise, errors will occur during configuration of the cloned environment.

- If your initial installation defined service ports as port numbers, the cloning process applies an offset to the existing numbers to create the new port numbers. If your initial installation defined service ports as service names rather than port numbers, you must access each screen containing a port setting and change the name. For a record of port number changes, refer to the `qdtadmin.log` file.

5 When the values are correct, select Next or Done. The values are checked and a dialog appears if any errors occur.

6 If you have no further configuration changes, select Execute to clone the environment.

7 The system prompts you to confirm execution of all of the steps for the cloning process. Accept the default (Yes).

8 The system prompts you to clear the log. Enter Yes.

The cloning process begins. A window displays the `qdtadmin.log` file, which records the cloning progress.

Note that this process will take a while.

9 Wait for the cloning process to finish. Then review the `qdtadmin.log` file for errors.

10 Correct any errors and attempt the cloning again. Otherwise, configure the cloned environment using the environment configuration steps in this chapter.

Note A custom or default installation is possible from this point.

QXtend Configuration

Following Enterprise Edition installation, QDT provides the option to install QXtend using default values. The resulting QXtend installation is automatically configured and ready to use.

Note Attempts to install QXtend on systems using Tomcat 6 on Windows Server 2008 may fail due to a known Tomcat problem. The problem occurs because the `tomcat-users.xml` file references an invalid code page. To prevent this problem, change the `codepage` value in `tomcat-users.xml` to `utf-8` or `windows-1252`. For further information, refer to:

https://issues.apache.org/bugzilla/show_bug.cgi?id=46908

To install and configure QXtend, do the following:

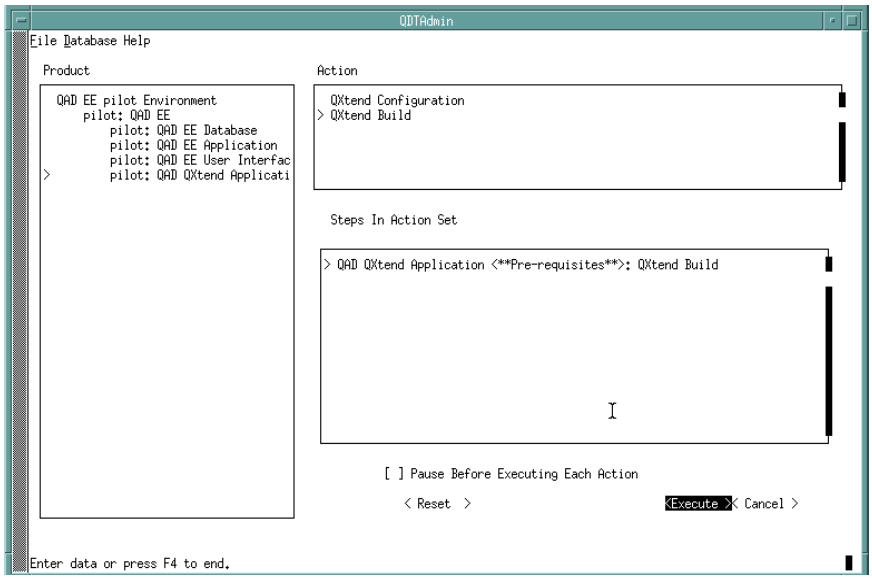
1 Verify the following are running:

- Tomcat
- Progress admin server
- Progress name server

2 Select QAD <*`environment_name`*> |QAD QXtend Application under Product.

3 In the Action pane, select QXtend Configuration.

Fig. 4.9
QXtend Configuration



4 Press Enter.

5 To install a QXtend configuration using default values, go to step 7. Otherwise, select Edit.

6 In the dialog box, make the following entries:

- QXtend Directory: Type the QXtend installation directory (you cannot edit the path if it was previously used for a successful QXtend installation).
- QXtend Interface: This field is automatically populated with existing QXtend installations. If multiple environments exist, they are listed under this field in a drop-down menu.
- Tomcat Admin User ID: Type the Tomcat Admin User ID as specified in *tomcat_install_directory*`/conf/tomcat-users.xml`. The default is `admin`.
- Tomcat Admin Password: Type the Tomcat Admin Password as specified in *tomcat_install_directory*`/conf/tomcat-users.xml`. The default is `mfgpro`.
- For Windows, enter port values for the QXEvents DB Service Port and the QXOutbound DB Service Port. The ports specified here must be present in the Services file.

Select Next and proceed to step 7.

7 Select Execute.

8 QDT prompts you to execute all of the steps listed for QXtend Configuration. Select Yes.

9 QDT prompts you to clear the log. Select Yes.

10 The log file is displayed. It provides the status of the QXtend installation. Select Close to proceed.

11 In the QDT Action pane, select QXtend Build.

12 Press Enter.

13 Select Execute.

14 QDT prompts you to execute all of the steps listed for QXtend Configuration. Select Yes.

15 QDT prompts you to clear the log. Select Yes.

16 QDT prompts you to start Tomcat and click OK once it has fully started. Click OK.

17 Select Close.

18 If the installation is successful, the message “QXtend Configuration completed successfully” is displayed.

The QXtend installation is integrated within QDT and should occur successfully. However, user errors such as providing incorrect installation parameters or changing the environment (for example, shutting down Tomcat during the installation) can result in an unsuccessful QXtend installation.

Two files are key to resolving an unsuccessful QXtend installation:

- `<qxtend_install_directory>/repository.xml` controls the QXtend installation. It holds all of the installation configuration parameters propagated from QDT. It also holds the Progress information about which components have completed.
- `<qdt_install_directory>/envs/<environment>/scripts/antCmd.log` records all of the QXtend status installation output information.

If you first look at `<qxtend_install_directory>/repository.xml`, you can identify which components are marked as “Incomplete” and which subsequent routines have a status of “error.” Once the problem routine is identified, you can look for it in the log file.

There are three ways to correct an unsuccessful installation. The first is to reattempt the QXtend installation from QDT.

Another option is to totally remove QXtend and use QDT to install QXtend again. This is done as follows:

1 Move `$TOMCAT/webapps/qxo.war` to `<qdt_install_directory>\build\QXRepository\Outbound\qxo-ui.war`.

2 Move `$TOMCAT/webapps/qxi.war` to `<qdt_install_directory>\build\QXRepository\Inbound\qxtendserver.war`.

3 Remove the qxi and qxo Web applications. This includes the `qxi` and `qxo` directories under the Tomcat `webapp` directory and `qxi.war` and `qxo.war`.

4 Remove the QXtend destination directory. This is the directory for qxodb and qxoserver.

5 Remove the QXtend adapter. This is the `qxtend` directory under `QAD_HOME`.

6 Remove the qxevents database. This is in the `QAD_HOME db` directory.

7 Remove the `<qdt_install_directory>\envs\<environment_name>\scripts\antCmd.log` file.

QDT checks the log file for errors.

Note If you encounter an error on the initial run, successive runs will add lines to the bottom of the log. This causes previous errors to remain in the log file where they can incorrectly be interpreted as real errors when you rerun the process.

8 Attempt to reinstall QXtend using QDT's QXtend Configuration option.

The final option is to install QXtend using the stand-alone QXtend installer (not QDT) to resume the QXtend installation at the point where it failed. This approach provides more visibility into the installation process, but without the benefits offered by QDT.

The QXtend installer is available from the QAD download center. See *Installation Guide: QAD QXtend* for information about how to point to your configuration as a local file (`<qxtend_install_directory>/repository.xml`).

Note You can change the parameters or configuration defined by QDT, but only using the QXtend installer's GUI mode. See *Installation Guide: QAD QXtend* for more information.

Custom Programs

If you have created custom programs that reference QAD's standard code, you must update the programs to use the two-letter directory structure introduced in QAD 2011 Enterprise Edition before proceeding. See "Source File Location" on page 3 for further information.

Next Steps

See Chapter 6, "Starting QAD Enterprise Edition," on page 37 for details on starting your QAD Enterprise Edition installation.

Note If you have installed QAD Enterprise Edition in multiple environments or created clones of a QAD Enterprise Edition environment, you must perform the applicable procedures in Chapter 6, "Starting QAD Enterprise Edition," on page 37 and Chapter 7, "QAD Enterprise Edition Configuration," on page 41, separately for each environment.

Chapter 5

Upgrading QAD Enterprise Edition

This section discusses upgrading the components of an existing QAD Enterprise Edition installation.

Overview

QAD 2010 Enterprise Edition introduced the ability to easily upgrade the components of a previous release using the installer's upgrade feature. To upgrade from a previous Enterprise Edition release, download the latest conversion-enabled QDT from the QAD Download Center and refer to the upgrade chapter in *Conversion Guide: Progress Database - Enterprise Edition*.

Chapter 6

Starting QAD Enterprise Edition

This chapter describes how to start, register, and exit QAD Enterprise Edition; load online help; and back up the database.

Overview

This chapter describes the tasks typically required or performed following QAD Enterprise Edition installation, initial configuration, or upgrade.

Starting QAD Enterprise Edition

UNIX and Linux Installations

To start QAD Enterprise Edition, use the following steps:

1. To start all database, WebSpeed, and AppServer processes, enter:

   ```
   ./startenv.<environment_name>
   ```

   Note You do not need to start any of the processes if you have completed configuration of QAD Enterprise Edition and you have not stopped the processes. They automatically start during the configuration process.

2. Start a character client session. Enter:

   ```
   ./client.<environment_name>
   ```

   Note If more than one language is installed, you will have a `./client-lang.<environment_name>` script (for example, `client-us.pilot`).

Windows Installations

To start QAD Enterprise Edition, do the following:

1. Select Start or All Programs|QAD Applications|QAD EE|<*environment_name*>|Start <*environment_name*> Environment.

2. Select QAD Applications|QAD EE|<*environment_name*>|Character Client for <*environment_name*> (*language*).

   QAD Enterprise Edition starts.

Registering QAD Enterprise Edition

You must register your QAD Enterprise Edition license the first time you log in. These steps require that you have the license code sheet included with your release media.

Note You must complete registration with the character-based user interface (CHUI).

To register QAD Enterprise Edition:

1. Launch the character client by pointing to:

   ```
   <qdt_install_directory>/<envs>/<environment_name>/scripts
   /client-lang.<environment_name>
   ```

2. At the Sign On screen, enter `mfg` and press Enter. Leave the password field blank. You are then logged in to the default system domain.

3 In the License Details screen, select Register.

4 In the Registered Products screen, select Add.

5 In the Add Product screen, complete the License Code fields by entering the codes from the license code sheet included with your release media. Select OK.

6 When the Registered Products screen reappears, select OK. Your license code and details display in the License Detail screen.

7 Select OK at the License Detail screen. You are returned to the operating system. To begin a session, restart QAD Enterprise Edition and log in.

Loading Online Help

You can load online help data at any time after you create your databases.

To load online help, follow these steps:

1 From the QAD Enterprise Edition Main Menu, open Field Help Load (36.4.13.14).

2 In the Language field, enter the QAD Enterprise Edition language code for the help that you are loading, and press Enter.

3 Skip to Field Help Load File, leaving all other fields blank, and enter the two-letter language code directory followed by the name of the help file (`fieldhlp.fhd`, `fieldhlp_cbf.fhd`, and so on). For example, for US English, enter `db/us/fieldhlp.fhd`.

4 Install the following `.fhd` files:

- `fieldhelp.fhd`, which contains the help records for non-component based functions
- `fieldhelp_cbf.fhd`, which contains the help records for component-based functions
- `Warehouse.fhd`, if you plan to use QAD Warehousing

Note Non-component-based programs use traditional procedural, Progress-based technology. All Standard and Enterprise Edition programs are not component-based, except QAD Enterprise Financials. Component-based programs use business component-based technology. QAD Enterprise Financials is component-based, has additional features and utilities, and is navigated differently from non-component based programs.

5 Accept the default values in all other fields.

6 Select Go to begin the load process.

As the load proceeds, the number of records read and loaded displays at the bottom of the screen.

7 Load help for any other languages in your environment using the appropriate language code and help file.

Exiting QAD Enterprise Edition

To exit QAD Enterprise Edition, select End on the QAD Enterprise Edition Main Menu.

Backing Up the Database

At this point you should do a complete backup of the entire database and directory structure. See the Progress documentation for further information.

Next Steps

Proceed to Chapter 7, “QAD Enterprise Edition Configuration,” on page 41 for information regarding completing the installation.

Chapter 7

QAD Enterprise Edition Configuration

This section describes the activities to perform after completing an installation to ensure that the application is ready for use.

Overview

Following Enterprise Edition installation, you configure the application to make it ready for use. This chapter describes how to complete the following configuration tasks:

- Prepare telnet UI Connection Scripts (required)
- Set Up SSH
- Install .NET UI Client
- Install QAD Warehousing
- Adding Languages to an Existing Configuration
- Configure Application Daemons
- Set Up the Reporting Service

Prepare Telnet UI Connection Scripts

QDT creates scripts used by Connection Manager for managing the back-end telnet connections that support the QAD .NET UI. However, you must also define telnet scripts within the application for running terminal sessions within the QAD .NET UI. In addition, the QAD .NET UI reads the port value defined in this program to determine which port to use to connect to the server for terminal programs.

Configure these settings in User Option Telnet Maintenance (36.4.14) by completing the following tasks:

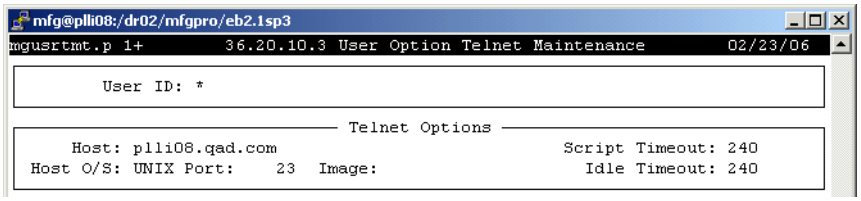
- Specify telnet server settings
- Define the login sequence script lines
- Configure the telnet connection settings
- Verify the login sequence

Specify Telnet Server Settings

Use the following instructions to configure telnet server settings:

1. Log in to your QAD EE application and access User Option Telnet Maintenance, (`36.4.14, mgusrtmt.p`).
2. In the User ID field, enter `*` to specify a generic record and select Go.

Fig. 7.1
User Option Telnet Maintenance, Telnet Options



3. Use the following descriptions to complete the Telnet Options fields:

Host. Enter the fully qualified machine name or telnet server IP address. The script uses this information to establish the telnet connection.

Host O/S. Enter `UNIX` for UNIX systems. Enter `NT` for Windows systems.

Port. Enter the port number for the telnet server. The default value is 23, the value normally used unless you plan to use SSH. In this case, the port value is 22. See “Set Up SSH” on page 46.

Image. Leave this field blank; it is currently unused.

Script Timeout. Enter the number of seconds (1 to 999) the system waits for the telnet login script to execute. Exceeding this value displays a time-out message and closes the session.

Idle Timeout. Enter the number of seconds (1 to 999) the system waits after a telnet session begins for a program to execute.

Note Idle timeout is not used in the QAD .NET UI.

4 Select Go to continue.

Define the Login Sequence Script Lines

For the system to log into and begin a session on the telnet server, you must provide the sequence of telnet server login prompts and responses. The last value in the sequence specifies the telnet script created by QDT.

The name of the script generated by QDT is `telnet-lang.<environment_name>` or `telnet.<environment_name>`.

You do not receive `telnet-lang.environment` scripts if all of the installed languages use the same code page (for example, if you installed us, fr, and ge).

Following the instructions is a set of sample script values for Windows and UNIX systems.

Important In the QAD .NET UI, the login sequence must be specified, but the values are ignored. In terminal mode, the user’s QAD .NET UI user ID and password must exactly match the UNIX user ID and password.

When defining paths for scripts used in the QAD .NET UI, avoid using relative paths since each user’s access may be different.

To define the login sequence script lines, use these steps:

1 Specify the telnet login sequence number in the Script Lines frame. For each telnet command, enter a sequence number beginning with 1, and select Go.

2 In the next frame, enter the following:

Script Pattern. Enter the prompt generated by the telnet server when a telnet login occurs. The values in this field must be identical to the prompts the telnet server displays when users log in.

Script Value. Enter the response to the telnet login prompt defined in Script Pattern.

Script Status. Optional. Enter a description of the prompt and response (for example, Logging In).

If tracing is enabled and the Java console displayed, the description in the Script Status field displays in the Java console on the client when an error occurs during the execution of the prompt and response. You can use these descriptions as an aid in troubleshooting telnet session issues.

Note When you enter a password as a script value, only blanks display. When you select Go at the end of the sequence, you are prompted to confirm the password.

3 Select Go after entering the sequence values. You return to the Sequence field to enter the next sequence number and values.

4 After entering the final sequence, select Go to return to the Sequence field.

5 Select End to move to the Telnet Connections fields.

Configure Telnet Connection Settings

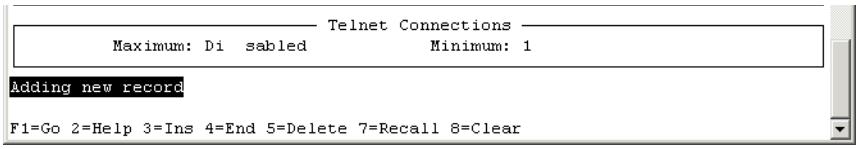
Once you configure and verify your telnet login sequence, access the Telnet Connections frame and specify telnet connection settings. These settings define the maximum and minimum number of telnet connections available to the associated user.

Note These settings apply to telnet and HTML maintenance programs in QAD .NET UI; they are ignored in the QAD .NET UI. The maximum number of open connections in the QAD .NET UI is determined by the `MaximumDesktopsPerWorkspace` setting in *`qaduiConfig`*`.xml`, which is located in:

`tomcat_install_directory``/webapps/qadhome/client/plugins/mfgpro`

The recommended settings are 10 or more for Maximum; 1 for Minimum.

Fig. 7.2
Telnet Connections



Maximum. This value specifies:

- The maximum number of concurrent embedded telnet screen connections this user can have open per session
- The maximum number of detached windows running HTML programs allowed for the user. If a specific record does not exist for a user with this setting defined, that user can continue opening detached windows until the maximum number of sessions allowed for the entire pool is reached.

This setting applies separately to HTML telnet sessions and standard telnet sessions in the QAD .NET UI. For example, if Maximum Telnet Settings is 5, a user can have five HTML maintenance programs running and five telnet programs running in one QAD .NET UI session before an error displays.

Note Max Web Connections in User Option Telnet Maintenance determines the maximum number of concurrent browses. The valid values are:

- Unlimited: The associated user can have an unlimited number of concurrent telnet connections open.
- Disabled: The associated user cannot log in through QAD .NET UI. Until you create a login script to initiate telnet sessions for this user, you cannot set this field to any value other than Disabled.
- Any value from 1 to 99.

Minimum. Enter a value from 0 to 9 to indicate the minimum number of telnet connections to be available to the associated user at all times.

Set this value to the number of telnet programs the user is likely to run simultaneously. Specifying a value here can dramatically reduce the wait time for these programs to display in the QAD .NET UI. However, setting this value too high depletes system resources.

QAD recommends that you set Minimum to 0 (zero) for most users, including the generic user—defined with an asterisk (*). If users access QAD .NET UI telnet maintenance programs extensively, set Minimum to 2.

6 Select Go to save the record.

Sample Scripts

Review the following sample login scripts to become familiar with the configuration process. Then create your login sequence based on your environment. For reference purposes, record your scripts in the table provided. View the field help for additional field-specific details.

Note Windows login scripts typically include the login domain. Domain names should adhere to Internet Engineering Task Force (IETF) published standards. For more information, refer to document RFC1035 at the following URL:

http://ietf.org/rfc/rfc1035.txt?number=1035

Table 7.1 illustrates sample script lines for a Windows system.

Table 7.1
Sample Windows Script Values

Seq	Script Pattern	Script Value	Script Status	Notes
1	login:	`user1`	Logging In	This ID must correspond to a local user account on the Windows server.
2	password:	`pswd`	Supply Password	Enter the password assigned to the user ID specified in step 1.
3	domain:	`domain1`	Supply Domain	Enter your Windows telnet server's domain, if required.
4	>	`c:\telnet\user1`	Start GTNTS as user1	Enter the user- or group-specific directory below the telnet directory.
5	>	`telnet-us-Prod.bat`	Launching script to connect to Prod	This is the telnet script generated by QDT.

Table 7.2 illustrates sample script lines for a UNIX system. Record your login script values in Table 7.3.

Table 7.2
Sample UNIX Script Values

Seq	Script Pattern	Script Value	Script Status	Notes
1	login:	`user1`	Logging In	This ID must correspond to a local user account on the UNIX server.
2	Password:	`pswd`	Supply Password	Enter the password assigned to the user ID specified in step 1.
3	$	`cd /qad/EE/`	Accessing DBServer Dir	Change directories to the database server administration directory. Depending on how you set up your UNIX telnet environment, the response you enter varies. For example, for maximum security, you might enter a command to change to a restricted shell before changing to the directory containing the telnet script.
4	$	`./telnet-us.Prod`	Launching script to connect to Prod	Launch the telnet connection script.

Use Table 7.3 to record your telnet server login information.

Table 7.3
Telnet Login Script Information

Seq	Script Pattern	Script Value	Script Status
1			
2			
3			
4			
5			

Your completed table for the telnet script should be similar to Table 7.4.

Table 7.4
Sample Telnet Login Script for UNIX/Linux

Seq	Script Pattern	Script Value	Script Status
1	Login	*`UserID`*	Logging in
2	Password	*`UserPassword`*	Supply the password
3	`$`	`cd /qad/EE/`	Accessing DBServer Dir
4	`$`	`./telnet-us.Prod`	Launching Prod telnet connect script

Verify the Login Sequence

To verify the login sequence, attempt to log in to the telnet server from a remote machine. Use the login sequence you configured in the application. After the telnet connection script launches, you should receive a blank telnet screen.

Set Up SSH

For terminal mode display, you can use SSH (Secure Shell) rather than standard telnet. SSH is a protocol that can create a secure connection between a QAD .NET UI client and the server.

The safeguards provided by SSH include:

- User authentication and key exchange
- Negotiate encryption, compression, and message integrity verification
- All data is encrypted using a symmetric key algorithm and verified against a keyed-hash message authentication code (HMAC).

To set up SSH, follow these steps:

1. Download `granados200.tar.gz` from the following link to a temporary directory:

   `http://www.routrek.co.jp/en/product/varaterm`

   Note This file is not included with QAD software because of encryption export laws.

2. Extract `Routrek.granados.dll` from the archive using `gunzip` and `tar`. You must use version 2.0.0.0 of the DLL signed by Routrek Networks or SSH will not work.

   The `gunzip` and `tar` programs are UNIX utilities. Some WinZip versions support `*.tar.gz` files.

   a. Create `granados200.tar`:

      ```
      gunzip granados200.tar.gz
      ```

   b. Extract the tar archive:

      ```
      tar -xf granados200.tar
      ```

   The DLL file is located in the temporary directory's `/bin` directory.

3. Copy the DLL to *`tomcat_install_directory`*`/webapps/qadhome`. This is the default location.

4. Open *`qaduiConfig`*`.xml` in *`tomcat_install_directory`*`/webapps/qadhome/client/configs` where *`qaduiConfig`* is your QAD UI configuration name.

   Note The client session file defines the client session characteristics of the QAD .NET UI. By default, the file is located in:

   `tomcat_install_directory``/webapps/qadhome/configurations/default/client-session.xml`

   In the following step, the elements you must edit in `client-session.xml` include <*`ssh_provider_url`*> and <*`terminal_protocol`*>.

5. Make the following changes:

   a. Update the DLL file location:

      ```
      <add key="SshProviderUrl" value="${HomeServer}/ Routrek.granados.dll"
      />
      ```

      `${HomeServer}` is automatically replaced with the `HomeServer` configuration value defined at installation time. All `${<variable>}` references are resolved against other configuration keys. If a key is not found, the string is not replaced.

   b. Change the terminal protocol entry from telnet to SSH1 or SSH2 (SSH2 is preferred because it is more secure):

      ```
      <add key="TerminalProtocol" value="SSH2" />
      ```

6. Save the configuration file.

7 Repeat these steps for `default.xml` in the same directory.

8 In User Option Telnet Maintenance (36.4.14), change the port from 23 to 22. This is the default port for SSH.

Install QAD .NET UI Client

Important Refer to the *QAD .NET UI Release Notes* and *QAD User Interfaces Guide* for complete information about the QAD .NET UI client.

The following steps describe how to install and start the QAD .NET User Interface (UI) client on workstations that will connect to the QAD Enterprise Edition installation and how to point that client to the installation.

Before installing the QAD .NET UI, verify you have completed QAD Enterprise Edition installation and configuration.

Note When installing the QAD .NET UI client on Windows Vista, all users must install it as an Administrator user. In Windows Vista, a user must right-click the Internet Explorer icon, and select Run as Administrator.

To install and use the QAD .NET UI client, use the following procedure:

1 Open an Internet Explorer 5.5 Service Pack 2 or higher browser.

2 Enter the following URL and press Enter:

`http://<your_server_name.domain.com:tomcatport>/qadhome`

Example `http://plli32.qad.com:8080/qadhome`

Note If you are connecting to a URL with secure HTTP (`https://`), be aware that Microsoft changed how Internet Explorer 7 (IE7) connects with secure HTTP compared to Internet Explorer 6 (IE6). For your default browser and the QAD .NET UI to display data, you must configure the browser to accept the secure HTTP security certificate. The steps for accepting a security certificate differ for IE6 and IE7. Contact your system administrator for details.

3 The installation screen displays and the installation starts automatically. If it does not, click the Install link on the displayed page.

4 If you have already installed the QAD .NET UI, the installation program prompts you to modify, repair, or remove it.

Note If you have previously installed the QAD .NET UI client and want to determine the URL that you installed it from, select Help|View Configuration and type “homeserver” in the Search field.

5 If the install does not detect Macrovision installed on your system, you are prompted to confirm this portion of the installation.

6 Select Install to continue.

7 InstallShield starts and displays a security warning. To continue the install, select “I understand the security risk” and select Next.

8 InstallShield sets up the installation environment.

9 On completion, you are prompted to create launch icons on your desktop and under Start|Programs. Select the desired options and select Install.

10 The installation begins. A progress screen displays.

11 When the client installation finishes, a confirmation screen displays. Select Finish.

12 If the client installation includes QAD .NET UI plug-in updates, you are prompted to accept the updates. Select OK.

13 To launch the client, select the QAD Applications icon or menu item under Start|Programs.

The login screen displays.

Install QAD Warehousing

To install and configure QAD Warehousing, you must have an existing Enterprise Edition installation. QAD Warehousing and Enterprise Edition are released on separate media. The two media must be for the same QAD product release.

To perform an initial QAD Warehousing installation, use the following steps:

1 Verify that you have a properly installed and configured QAD Enterprise Edition installation.

2 Verify that the QAD Enterprise Edition and Warehousing versions are for the same product release.

3 Mount the Warehousing media or `cd` to the image directory.

4 Start QDT.

5 On the Main Menu, choose Edit|Installation Media Location.

6 Point to the Warehousing media.

7 Select Install.

8 Select the environment to receive the Warehousing installation.

9 On the QDT Installation screen, select Warehousing EE. Use the default installation directory or specify a different directory.

10 Select Install.

11 When the process finishes, close the displayed log file.

12 Check `<qdt_logs>/install.log` for errors.

13 Select Admin on the QDT main screen.

14 Under Product, select QAD `<environment_name>: Warehousing xxxx`.

15 In the Action pane, select Configure Warehousing Application.

16 Select Execute.

17 Close the displayed log file.

18 Confirm the RF Client (the only Warehousing client) start-up scripts (for example, `clientaimrf-us.pilot`) were created.

19 Start the RF client by running appropriate the Warehousing script (such as `clientaimrf-us.pilot`).

Adding Languages to an Existing Configuration

If you need to use a language that is not included on the QAD Enterprise Edition installation media, contact QAD to see if the language is available by special order.

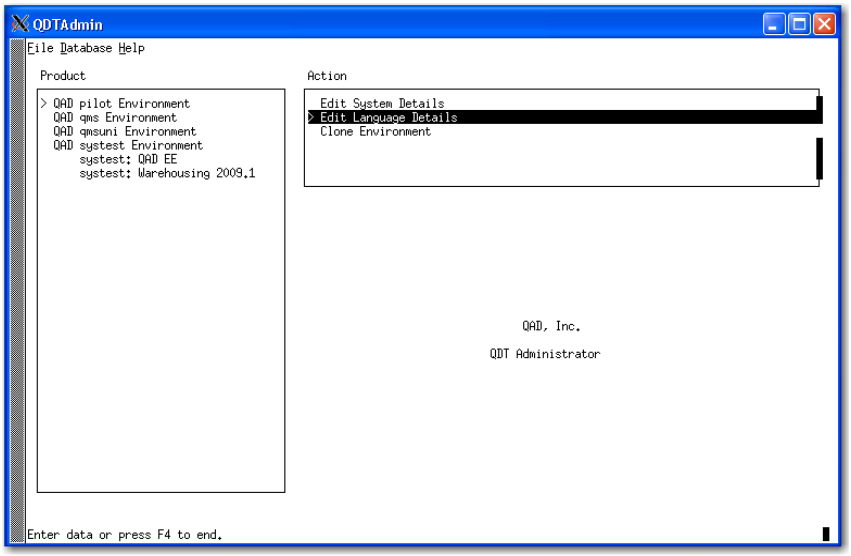
If the additional language is available, and a corresponding Financials patch is also available, install the language and the Financials patch. Otherwise, only install the additional language.

If you install an additional language to an existing installation, you must also re-install Enterprise Edition and reconfigure the environment.

Use the following procedure to add languages to an existing QAD Enterprise Edition configuration:

1 Select the environment to update from the Product panel and then select Edit Language Details.

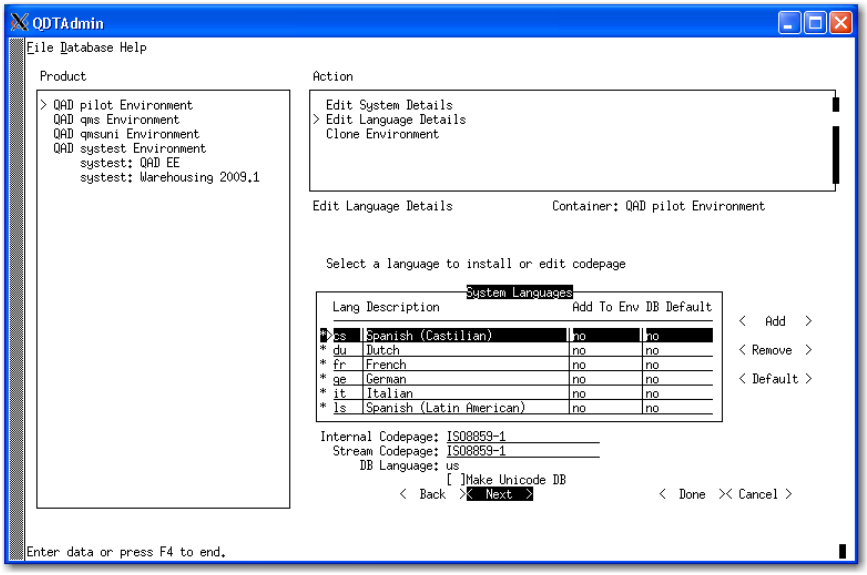
Fig. 7.3
Select Edit Language Details



Only languages that are compatible with the existing database language are displayed.

2 Add the desired languages and select Done.

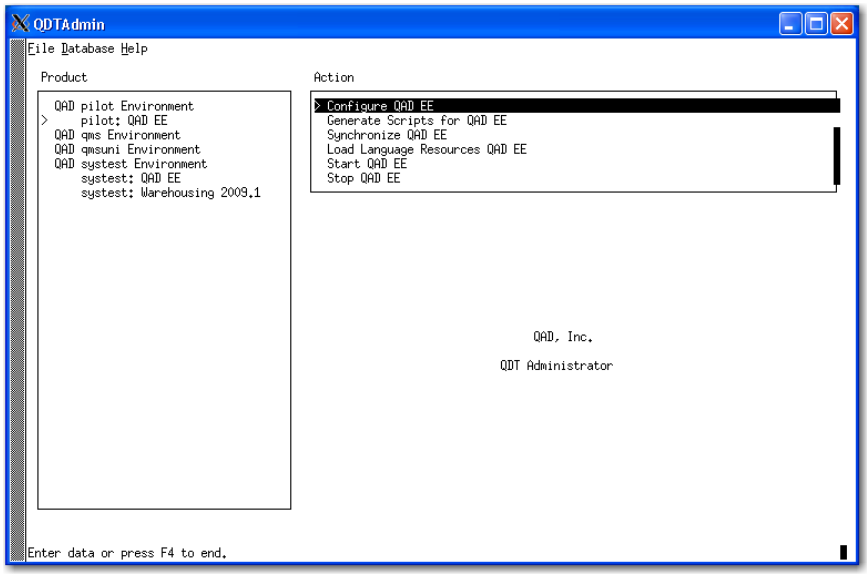
Fig. 7.4
Adding Languages



3 When the process completes, select Close.

4 Add the language(s) to the configuration. Select Configure QAD EE. When it executes, it loads the language data and resources, generates the necessary scripts, and updates the UI configuration.

Fig. 7.5
Updating the UI Configuration



Notice that specific UI configuration listings no longer say “complete.”

5 Select Execute to rebuild the necessary UI components on the Server. This will not impact reinstallation of the UI client.

Configure Application Daemons

The QAD Financials module requires that several daemons be configured and running. Daemons are server-based processes that run background tasks. They can run on the same application server as the QAD Financials, or you can specify a different AppServer for each daemon.

Some daemon processes must be running to ensure the integrity of the application; others are optional depending on which parts of the application you are using. You should ensure that the required processes are configured to start when the database starts. If necessary, you can start multiple instances of a daemon.

The following table describes the system daemons.

Table 7.5
System Daemons

Daemon	Required	Comments
Balance	After GL Implementation	Updates the supplier and customer balances and history for invoice changes If unprocessed records exist, the supplier and customer balances may be inaccurate.
Budget	After GL Implementation	Allocates postings to budgets and allocations. It is only needed if these are used.
Cross-Company	After GL Implementation	Processes automatic cross-company postings that cannot be performed manually
Event	No	Publishes events, required for integration with QXtend
History	After GL Implementation	Populates the database with condensed GL transaction data and updates GL and SAF balances for each period
Replication	Yes	Makes domain shared set data available to the operational functions and replicates the data to the appropriate operational domain
Report	No	Only if submitting Financial reports in batch
Scan	No	Only if importing scanned documents
Time Out	No	Only if the Time Out setting is defined in Security Control (36.3.24)
XML	No	Only if you are importing data from XML files

For detailed information about setting up and monitoring daemon activity, see the *User Guide: QAD Enterprise Edition System Administration.*

Set Up the Reporting Service

This section contains information to help you install, configure, and troubleshoot the QAD Reporting Service. QAD Enterprise Edition uses this service to distribute financial reports to application users. The QAD Reporting Service must be installed on a Windows computer.

If your users want to submit batch jobs to generate Financials reports, you must install and configure the QAD Reporting Service. This service invokes a Crystal Reports generator.

The server reporting service must run on a Windows Server machine. The service needs to connect to the Financials AppServer (`qadfin<environment_name>`). It does this by obtaining the AppServer URL from the configuration for the environment held under QAD Home. After connecting to the AppServer, the AppServer spawns a reporting service daemon that connects back to the Windows Reporting Service using the configuration in the following configuration file:

```
c:\Program Files\QAD\QAD.CBFReportingService\
QAD.CBFReportingService.exe.config
```

The required setup steps are:

- Determine if Microsoft .NET Framework Version 2.0 is installed.
- Download and install the reporting service.
- Configure it for your environment.
- Test to ensure the service is working correctly.

Prerequisites

The QAD Reporting Service depends on Microsoft .NET Framework Version 2.0. This product is automatically distributed with Microsoft Vista, but must be installed on earlier Windows versions.

1. To determine if the framework is installed, run the Add or Remove Programs control panel applet and look for an entry for any of the following:
   - Microsoft .NET Framework 2.0
   - Microsoft .NET Framework 2.0 Service Pack 1
   - Microsoft .NET Framework 3.0
   - Microsoft .NET Framework 3.5
2. If an acceptable framework version is not installed, you must install one on the target computer before running the QAD Reporting Service installer.

   To download the framework, go to:

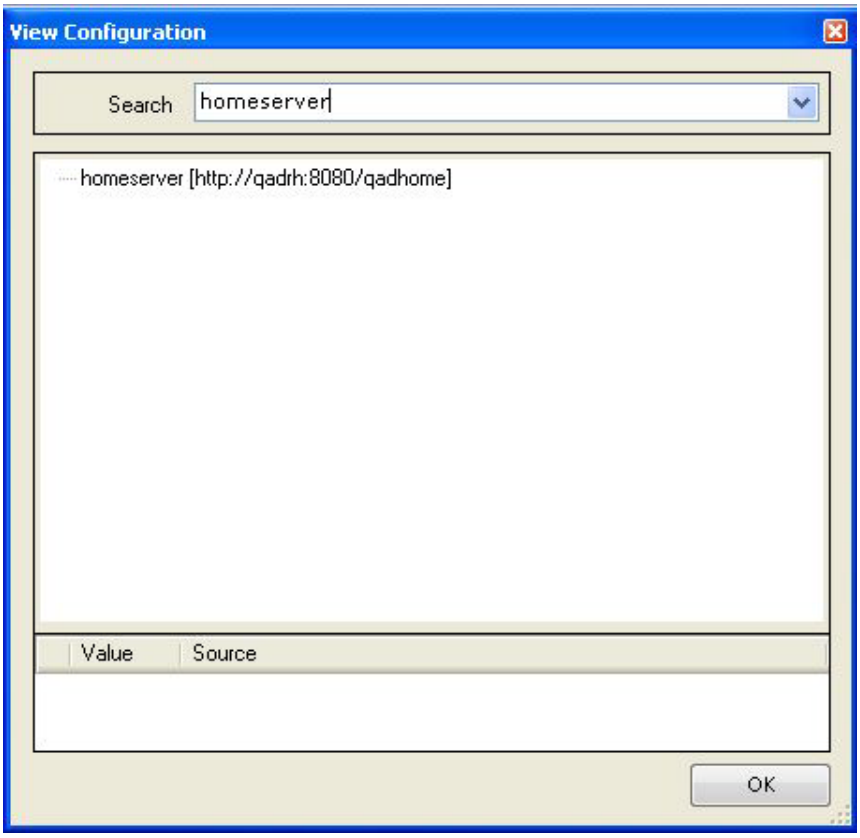
   http://www.microsoft.com/downloads/details.aspx?familyid=0856eacb-4362-4b0d-8edd-aab15c5e04f5&displaylang=en

Installation

The Reporting Service is installed with an installer hosted by the QAD Applications Home Server.

1. You can display the location of the QAD Applications Home Server from the QAD Applications Client by choosing View Configuration from the Help menu in the client and typing “homeserver” in the search text box.

Fig. 7.6
QAD Applications Home Server

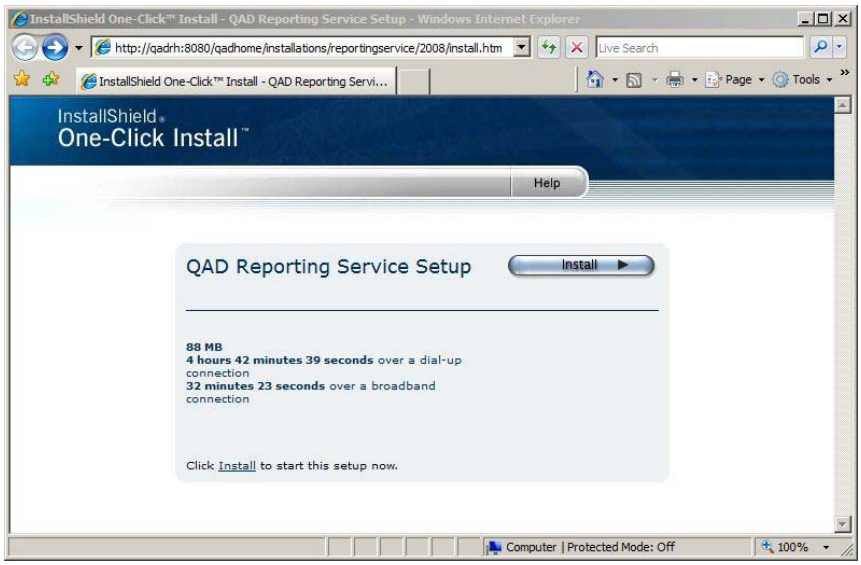


2 Go to the Windows server where you will install the QAD Reporting Service. Use Internet Explorer to connect to the setup. Navigate to:

```
<home_server>/installations/reportingservice
/year_of_qad_installation/install.htm
```

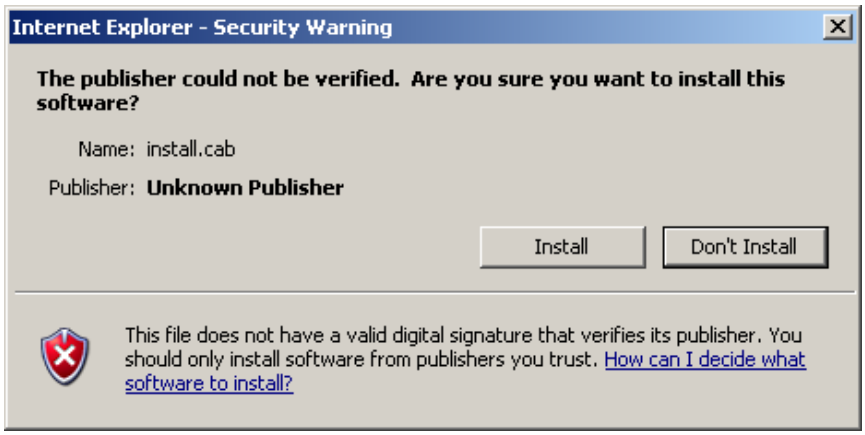
3 Click the Install button.

Fig. 7.7
QAD Reporting Service Installation



4 You may get the following security dialog box, depending on how Internet Explorer is configured.

Fig. 7.8
Internet Explorer Security Warning

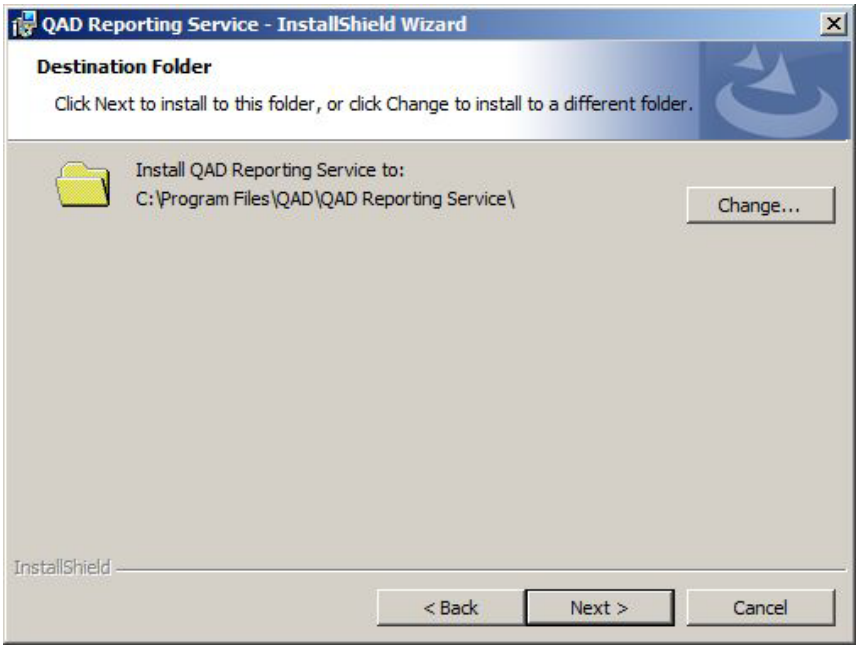


If you see this dialog box, click Install to continue.

Fig. 7.9
InstallShield Wizard

5 Click Next.

Fig. 7.10
Destination Folder Selection

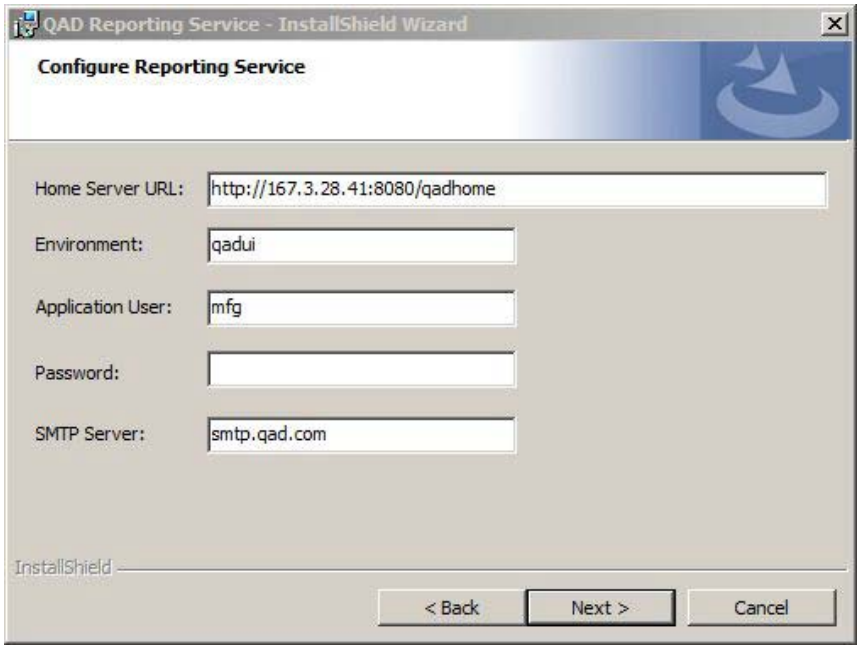


6 Click Next and provide the configuration parameters listed in the following table.

Table 7.6
Reporting Service Configuration Settings

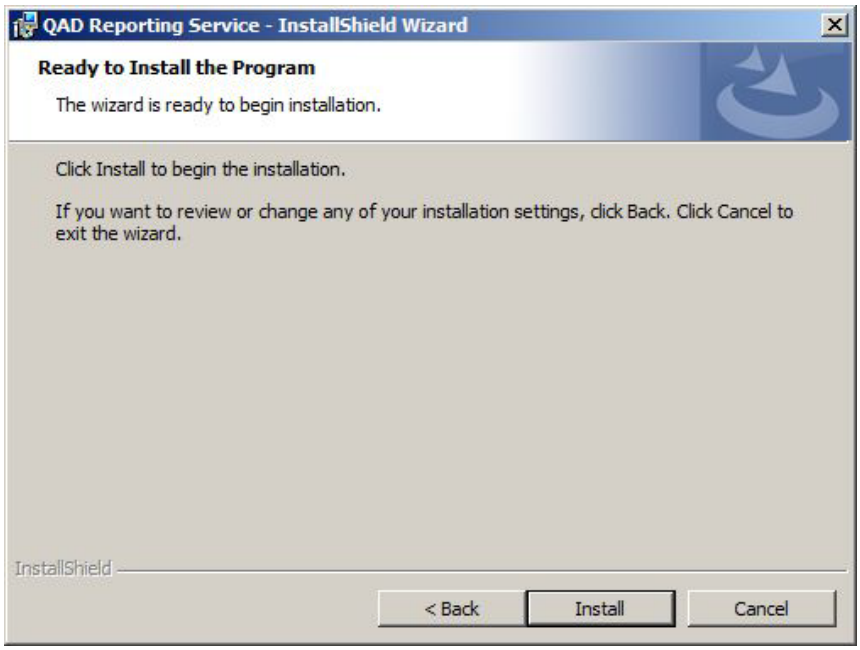
Parameter	Description
Home Server URL	The URL to the QAD Applications Home Server as described above.
Environment	The name of the Home Server environment for which this instance will provide reporting services. The environment name displays in the title of the QAD Applications Client. It is the value to the left of the colon (:).
Application User	The QAD user account the service will use to connect to other QAD services.
Password	The password associated with the application user account.
SMTP Server	The IP address or hostname of a server supporting the Simple Mail Transfer Protocol on port 25

Fig. 7.11
Configure Reporting Service Screen



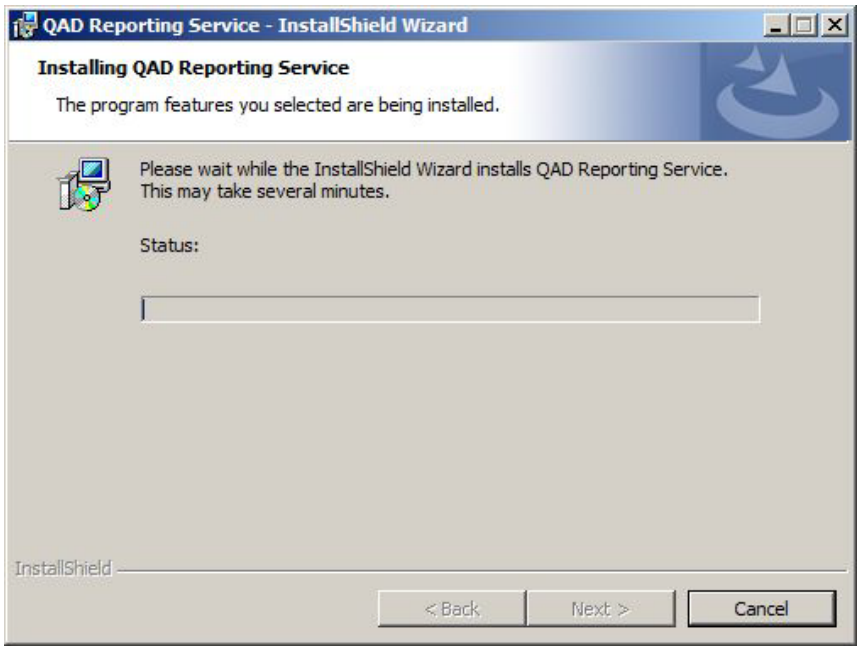
7 Click Next.

Fig. 7.12
Installation Prompt



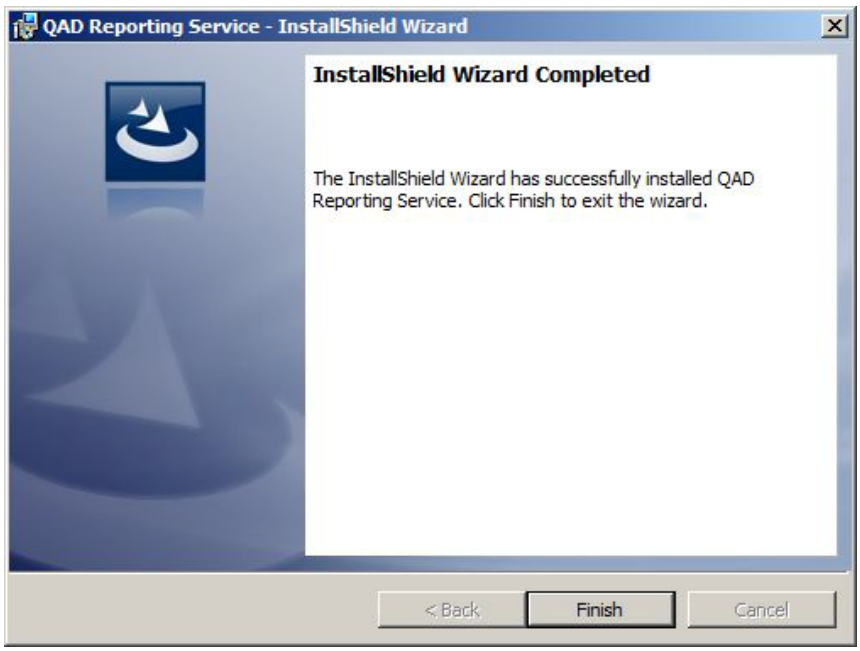
8 Click Install.

Fig. 7.13
Installation Progress Screen



9 Click Finish.

Fig. 7.14
Installation Completed Screen



The installer configures the Reporting Service as a Windows Service named “QAD Reporting Service” running on TCP/IP port 4331 and creates shortcuts to start, stop, and monitor the service.

Fig. 7.15
Reporting Service Shortcuts

Configuration

QAD Reporting Service

You can change the configuration values defined during the installation by editing the file:

```
<ReportingService>\service\ QAD.CBFReportingService.exe.config
```

<ReportingService> is the location where the service was installed, which defaults to:

```
C:\Program Files\QAD\QAD Reporting Service
```

To change the configuration value, do the following:

1. Edit the Reporting Service configuration file.
2. Save the changes.
3. Stop and restart the service using the shortcuts created by the installer or the Windows Services application.

Application Server

The application server manages a pool of report daemons (background processes) that send financials reports to the QAD Reporting Service for distribution. By default, the application server is configured with an empty pool. To support sending reports through the QAD Reporting Service, the number of instances in the pool must be set to a number greater than 0.

To increase the number of report daemon instances in the pool, do the following:

1. Start a QAD Applications Client that is connected to the same Home Server and environment as the QAD Reporting service being configured.
2. Run the program Report Daemon Configure.
3. Change the number of instances from 0 to 1.
4. Save the changes.

Testing

To test the Reporting Service, use the following steps:

1. Start a QAD Applications Client that is connected to the Home Server and environment for which the QAD Reporting service you are testing provides reporting services.
2. In the client, select the menu item that corresponds to a financials report (for example, a GL Transaction Report).
3. At the bottom of the report, click the down arrow associated with the Server Output Processing section to expand the section.
4. Enter a suitable e-mail address and subject for the test.

Fig. 7.16
Server Output Processing Configuration

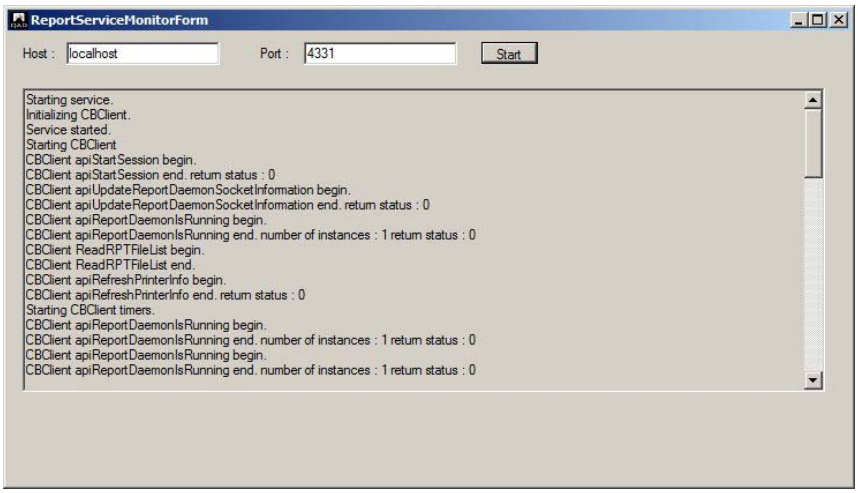
5. Click Execute to send the report to the configured e-mail account using the QAD Reporting Service.

Monitoring

The QAD Reporting Service is distributed with a utility to monitor the service. To start the utility, do the following:

1. Click on the Monitor Service shortcut created by the installer.
2. Type `localhost` into the Host text box.
3. Click the Start button to begin monitoring the local service.

Fig. 7.17
Reporting Service Monitor



QAD Reporting Service Does Not Start

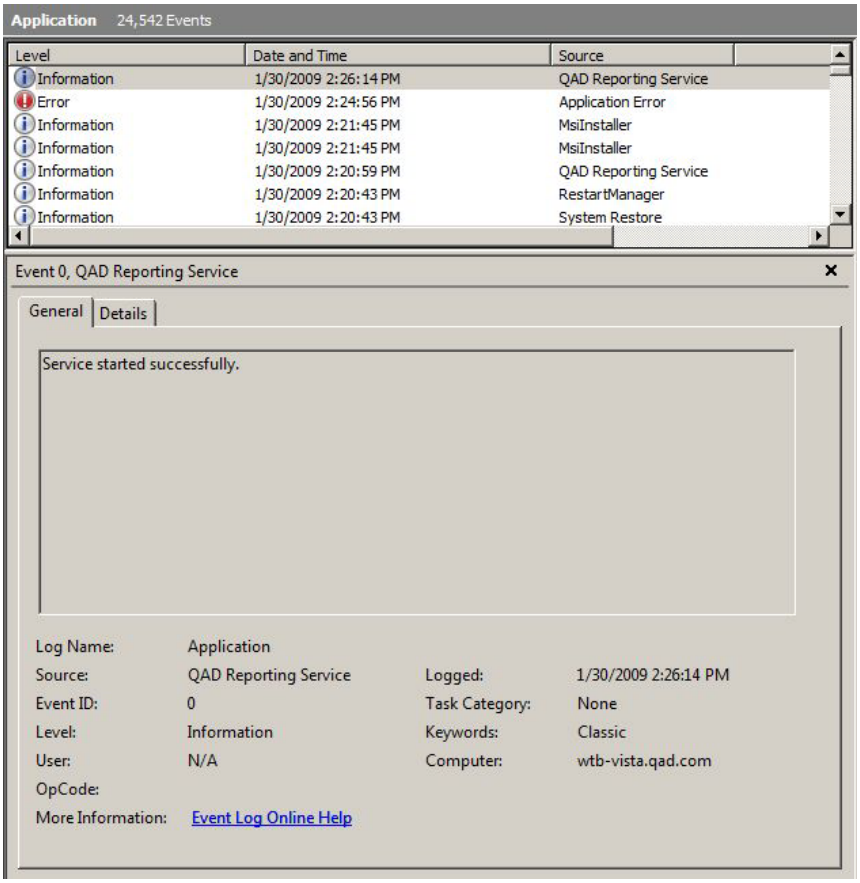
The QAD Reporting Service is designed to run as an unattended Windows Service. To determine if the service is running, check the entry for the QAD Reporting Service in the Windows Services application.

Note Press function key F5 within the Windows Services application to ensure that you are presented up-to-date information.

Fig. 7.18
Windows Service Entry for Reporting Service

Errors that occur while running the service are written to the Windows Event Log, which can be viewed with the Windows Event Viewer.

Fig. 7.19
Windows Event Log



You can run the service as a stand-alone console application to bypass the Windows service layer while testing. To run the QAD Reporting Service from the console, start a command prompt and type the following:

1. `cd <ReportingService>\service`
2. `QAD.CBFReportingService.exe –configfile QAD.CBFReportingService.exe.config –noservice`

To stop the service, use CTRL+C.

QAD Reporting Service is Not Communicating with the Application Server

One way to determine if the reporting service is communicating with the application server is to attempt to send a test report (see “Testing” on page 60). If you receive warning message QADFC-610, it indicates that the reporting service and the application server cannot communicate. After a period of time (usually five minutes or less), you can review the Windows Event Log on the server where the QAD Reporting Service is installed for a more detailed explanation of the failure.

QAD Reporting Service to Application Server

The QAD Reporting Service obtains the address of the application server from the configuration associated with the Home Server environment with which it is associated. In a typical deployment, an XML document specifies this configuration:

`<home_server>/configurations/<environment_name>/client-session.xml`

In this document, the following fragment defines the address of the application server:

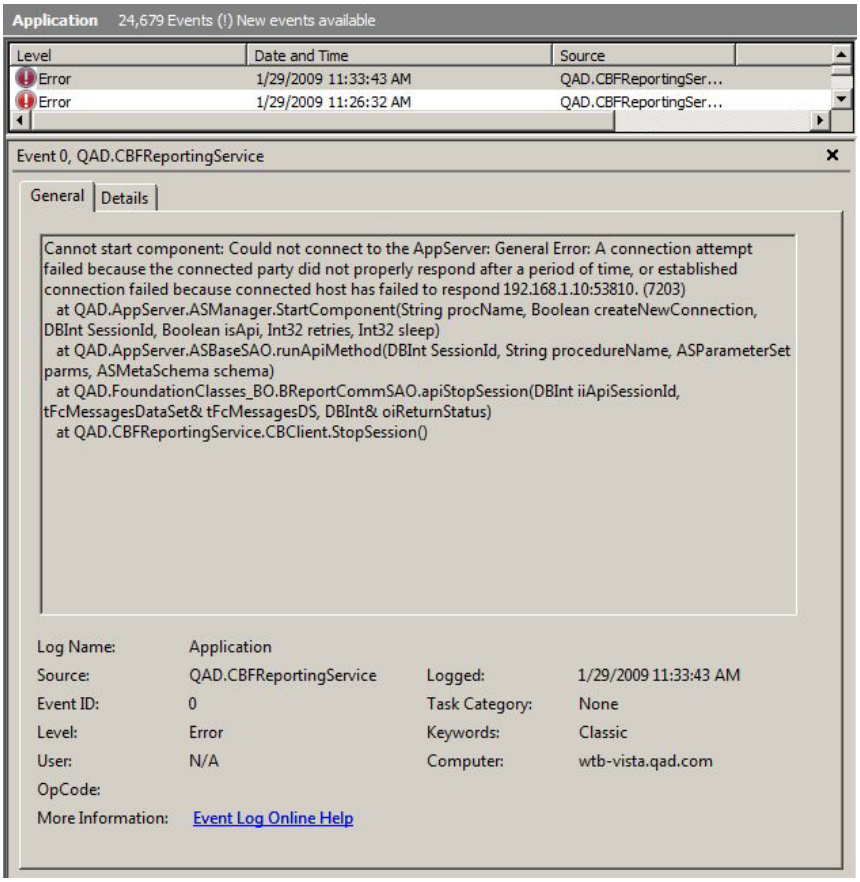
Example:

```
<qad.appserver url="appserver://qadrh:5162/qadfinqad2009"/>
```

Note If a host name is specified (for example, `qadrh`) instead of an IP address, the Windows server on which the QAD Reporting Service is installed must be able to resolve the host name.

In some network deployments, the Progress NameServer may return an IP address that cannot be routed.

Fig. 7.20
Progress Server Error Listings



As a test, you can change the configuration to bypass the Progress Name Server using a direct connection to the application server.

Example:

```
<qad.appserver url="appserverdc://167.3.28.41:53810/qadfinqad2009"/>
```

Application Server to QAD Reporting Service

By default, the QAD Reporting Service is configured to send the name of the Windows server to the application server. The host where the application server is installed must be able to resolve this name, or the QAD Reporting Service must be configured to send its IP address. To send the IP address rather than the host name, edit the QAD Reporting Service configuration file (as described in “Configuration” on page 59) by setting the value of the key `ExternalHostName` to the Windows server IP address. Then stop and start the service to activate the change.

For example:

```
<add key="ExternalHostName" value="167.3.215.50"></add>
```

Reporting Service Cannot Connect to SMTP Server

If the SMTP server is identified by a host name, the Windows server where the QAD Reporting service is installed must be able to resolve the host name and the SMTP server must be listening on TCP/IP port 25.

Note Many anti-virus programs block TCP/IP port 25 to protect against malicious programs that use e-mail as part of their attack strategy. McAfee, for example, blocks Port 25 for all processes, except those specified in a configurable list of exclusions. Programs that work like McAfee can be configured with the process name `QAD.CBFReportingService.exe` to allow the mail to be sent.

Invalid E-mail Addresses

If a report request contains an invalid sender (From) or recipient (To) address, the detailed error is logged in the Windows Event Log. The application server is informed that the request failed. You can review the failure from the QAD Applications Client using the program Report Daemon Monitor.

Note The sender e-mail address is the e-mail address associated with the user account that is executing or scheduling the report. The e-mail address for a user account is specified with the User Maintenance program.

Appendix A

QAD Reporting Service Scripts

This appendix describes the QAD Reporting Service scripts.

Overview

QAD Enterprise Edition includes the following scripts to make the installation and use of the QAD Reporting Service easier:

- `create-instance.bat`
- `register-instance.bat`

The scripts are automatically placed in the following locations during QAD Enterprise Edition installation:

`$<install_directory>\utilities\create-instance.bat`

`$<install_directory>\utilities\register-instance.bat`

Example:

```
C:\Program Files\QAD\QAD Reporting Service\utilities\create-
instance.bat
C:\Program Files\QAD\QAD Reporting Service\utilities\register-
instance.bat
```

create-instance.bat Script

The QAD Reporting Service installer can only install a single instance of the service on a target computer. The `create-instance.bat` script creates a new instance of the QAD Reporting Service by copying an existing instance.

To create additional QAD Reporting Service instances, do the following:

1. Use the QAD Reporting Service installer to install the first instance of the service on the target computer.
2. To create the new instance, start the `create-instance.bat` script and respond to the script prompts.
3. Edit the configuration file:

   `<install_directory>\service\QAD.CBFReportingService.exe.config`
4. Change the `TCPPort` value to an available TCP/IP port.
5. Edit the `homeserver` and `environment` settings to specify the environment the instance will service.

After editing the configuration file, you can start the service through the Windows Services control panel applet.

register-instance.bat Script

This script is used to register or unregister a QAD Reporting Service instance as a Windows service.