QAD Enterprise Applications
Enterprise Edition

Installation Guide
Progress Database

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Progress Database Change Summary

The following table summarizes significant differences between this document and previous versions.

Date/Version	Description	Reference
September 2016/2015 EE-Rev3	Added Progress requirements to disable after-imaging and 2phase.	page 5
September 2015/2015 EE-Rev2	Numerous editorial changes	---
	Revised the Korn Shell section	page 5
	Added the Red Hat Enterprise Linux 7 (64-bit) section	page 5
March 2015/2015 EE-Rev 1	Documented 2015 EE Progress OpenEdge 11.4 hotfix requirements	page 7
	Updated database server requirements	page 7
	Updated applications server requirements	page 8
March 2015/2015 EE	Numerous editorial changes	---
	Documented Korn shell considerations	page 5
	Documented AIX maximum file size considerations	page 6
	Removed Red Hat 6 considerations section	page 5
	Documented that use of 2015 EE with Progress OpenEdge 11.4 requires HotFix 10 for OpenEdge 11.4	page 7
	Updated database server requirements	page 7
	Documented a functionality change that affects the selection of components for installation	page 21
	Revised the procedure for enabling AIA compression	page 36
	Revised the QXtend Configuration section	page 36
	Added text to “Next Steps” section to back up environment installation and configuration settings	page 39
	Removed references to Windows Vista	page 52, page 55
September 2014/2014 EE-Rev 1	Numerous editorial changes	---
	Revised Installing QDT	page 12
	Revised Configure Telnet Connection Settings	page 48
	Revised Setting Up the Reporting Service to mention setting up multiple Reporting Service instances	page 55
	Revised the procedure in create-instance.bat Script to better describe how to set up multiple Reporting Service instances	page 71

Date/Version	Description	Reference
March 2014/2014 EE	Numerous editorial changes	---
	Added information on starting QDT in AIX environments	page 6, page 14
	Updated OpenEdge requirements	page 7
	Updated supported Java versions	page 7
	Updated the Tomcat Web server information	page 8
	Editing Database Locations section added	page 33
	Revised Bulk Data Load procedure	page 35
	Revised Set Up the Reporting Service	page 55
September 2013/2013.1 EE	Numerous editorial changes	---
	Revised Figure 1.1	page 2
	Added section for Supported Installation	page 3
	Updated Database Server and Application Server OpenEdge requirements	page 7 page 8
	Documented Data Bulk Load feature	page 35
	Added section for Adding Custom Databases	page 36 page 70
	Added section for Citrix Configuration	page 54
March 2013/2013 EE	Documented that QAD UI Process Maps are deployed as a separate WebApp and the related QDT Process Navigation field in System Default Settings GUI	page 16 page 29
	Described the Connection Method field in the Update UI Configuration screen	page 24
	Documented configuration required to use QXtend with Tomcat 6.0.30 and later and Tomcat 7	page 36
	Revised the Set Up SSH section	page 50
January 2013/2012.1 EE	Revised Web Server Tomcat requirements	page 8
September 2012/2012.1 EE	Documented Database Type pull-down menu	page 21
	Reorganized Environment Configuration chapter	page 23
	Documented RAM Disk support	page 30
	Revised QXtend installation and configuration section	page 36
March 2012/2012 EE	Described ability to specify <*qadhome*> and <*qadui*> WebApp names	page 16
	Documented Thai language support	page 28
	New customization scripts documented	page 70
September 2011/2011.1 EE	Documented Red Hat 6 installation considerations	page 6 page 14
	Documented a consideration for configuring Enterprise Edition installation on Windows	page 24
	Documented the Advanced Database Configuration screens	page 33

Date/Version	Description	Reference
	Documented considerations for cloning an Enterprise Edition Windows installation	page 29
	Documented a new requirement to enter port values when installing QXtend in Windows environments	page 37

Chapter 1

Installation Summary and Requirements

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

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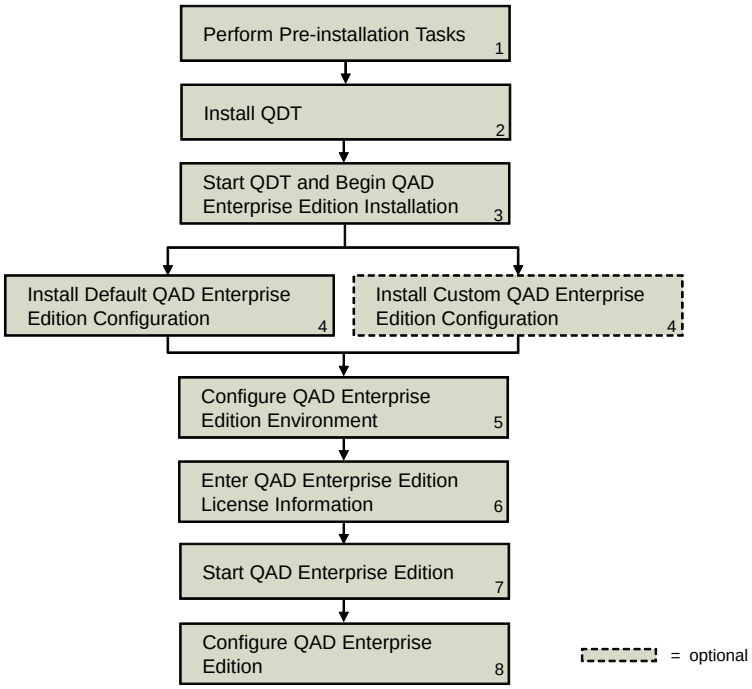
Overview

The following sections describe the QAD Enterprise Edition installation process and installation prerequisites and considerations.

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 shows the overall installation workflow.

Fig. 1.1
QAD Enterprise Edition Installation Process



The procedure for installing QAD Enterprise Edition is as follows:

1. Determine if your system hardware, software, and configuration meet the requirements for Enterprise Edition installation. Then set up your system according to the requirements defined in this chapter or with the assistance of QAD Services.
2. Install QDT.
3. Launch QDT. It reads the product image and displays a choice of products and components to install.

   Select the appropriate products and components.

   QDT automatically discovers system information, such as the location of required software, by reading environment variable settings.

4. Perform a default or custom Enterprise Edition installation. 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.
5. Configure the Enterprise Edition environment.
6. Start a character-based user interface (CHUI) session and enter license information.
7. Start your new Enterprise Edition installation and log in.
8. Perform any needed 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 access the QAD Enterprise Edition environment.

Supported Installations

QDT only supports single-tier Enterprise Edition installations. For information regarding multi-tier installations, contact QAD Services.

Source File Location

In QAD 2010.1 Enterprise Edition and earlier, all of the product source files were located under `<qad_install_directory>` in the `xrc` directory (or `src` if you purchased full source code). Beginning with QAD 2011 Enterprise Edition, source files are located in `xrc/us` in a series of two-letter subdirectories with names that mirror the R-code subdirectories.

Update custom programs that reference QAD include files and/or subprocedures to prefix these references with the two-letter subdirectory structure. Most references in QAD source files to custom programs require a `us/<2_letter_subdirectory>` prefix.

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, 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 of disk space to install and configure the product as-is for one environment. This disk space requirement 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 media or product download and the latest QDT and application patches from the QAD Store.
- To use QAD Enterprise Edition, you must have a valid QAD product license key for each module you have purchased.
- The system administrator must be an experienced Progress database administrator who can manage Progress client processes.
- A 100 Mbps 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.

For the most current requirements information, refer to the Product Compatibility Guide in the QAD Store at:

http://store.qad.com

Important You must install these programs before beginning QAD Enterprise Edition installation.

Progress Requirements

Progress requires that `after-imaging` and `2phase` be disabled for the index rebuild process to complete properly. You must disable these features in your environment before you start the installation process.

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.

Unzip Utilities

The QAD Store provides product downloads as compressed ISO files in `.zip` or `.7z` format. The `.7z` format is used to overcome a limitation that prevents creation of a `.zip` file larger than 2 GB.

To unzip `.7z` files, use the free 7-Zip utility. Windows, Linux, and UNIX versions of this utility are available from:

http://www.7-zip.org

Unzipping the compressed product file using the appropriate utility yields an uncompressed ISO file.

Linux and UNIX Considerations

X terminal

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

Korn Shell

All of the scripts delivered on QAD media use Korn shell (ksh) syntax. The Korn shell must be installed in the default location (`/bin/ksh`) and available to the user account being employed to install QAD Enterprise Edition. If the Korn shell is not present in your system, you must install it before proceeding. The installation process varies by platform; for example, for Red Hat Enterprise Linux, you run the following command as root:

```
yum install ksh
```

Red Hat Enterprise Linux 7 (64-bit)

Red Hat Enterprise Linux 7 64-bit lacks some compatibility libraries that are required to install QDT. You can install these libraries by running the following command as a root user:

```
yum install glibc.i686
```

Attempting to run `./install.ksh` without these libraries can fail and produces an error message similar to the following:

```
./install.ksh[21]: exec: ./install_linux: not found
```

Red Hat 7 64-bit may lack the compatibility libraries required to run QDT (qadinst). Install the missing libraries if you encounter the following problem:

```
ERROR:
qadinst_RH6_64bit: symbol lookup error: auto/Tk/PNG/PNG.so: undefined
symbol: Perl_xs_apiversion_bootcheck.
```

The OS packages required to resolve this issue are:

- `libX11-1.6.0-2.2.el6.x86_64`
- `libX11-1.6.0-2.1.el7.i686`

AIX

If Concurrent I/O (CIO) is enabled, you cannot launch QDT on AIX. Disable CIO or move QDT to another file system on the server and launch QDT from the new location.

By default, AIX limits user files to a maximum size of 1 GB. You must increase this limit to at least 2 GB for the user account being employed to install QAD Enterprise Edition on AIX.

Installation Group and User

Linux and 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 information 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 Linux or 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 variable to a user directory to which working and temporary files can be written.
   c. Assign the standard `umask` permissions and security setting of `022`.

Environment Variables

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

- `DLC`: Progress OpenEdge installation directory
- `JAVA_HOME`: Java Development Kit installation directory
- `CATALINA_HOME`: Tomcat installation directory
- `PATH`: To include `$DLC/bin`, `$JAVA_HOME/bin`, and `$CATALINA_HOME/bin`

Depending on your flavor of Linux or UNIX, you may also need to set the following variables for the shared 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-2.1.0/

The QAD Deployment Toolkit has a limitation when it is used on HP ia64 (Itanium) platforms. Install the depot files for the Itanium 2 and PA-RISC 2.0 before you install the QAD software.

OpenEdge 11.4 Hot Fix

To install 2015 EE with Progress OpenEdge 11.4, you must install the appropriate hotfix for your platform:

- Linux: OE11.4 Hotfix10 minimum
- Windows or UNIX: OE11.4 Hotfix14 minimum

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 11.4 including the following: • Latest Progress version-specific patches • Linux: Minimum version HotFix 10 for OpenEdge 11.4 • Windows/UNIX: Minimum version Hotfix14 for OpenEdge 11.4 • 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 Development Kit 7 Graphical Web browser Latest operating system patches	4 GB free disk space for single-language installation. 700 MB free disk space for each additional language. 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 that the Web server requires, 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 11.4 including the following: • Latest Progress version-specific patches • Linux: Minimum version HotFix 10 for OpenEdge 11.4 • Windows/UNIX: Minimum version Hotfix14 for OpenEdge 11.4 • Enterprise DB Server for the appropriate number of users • Application DB Server • 4GL Development, one license • Progress AdminServer Java Development Kit 7 Latest 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 that the Web server requires, 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 7.

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 7 Progress WebSpeed with sufficient WebSpeed agent licenses to support expected transaction volume Java Development Kit 7	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 is no longer included on QAD installation media. See “Installing the Web Server”.

Installing the Web Server

Download and install Tomcat from http://tomcat.apache.org. Set the `$CATALINA_HOME` environment variable to the installed Tomcat directory.

Ensure that the `mfg` user 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. See “Installation Group and User” on page 6 for more information.

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 QAD Enterprise Edition installations.

Table 1.4
Telnet Server Requirements

Software	Hardware	Notes
Georgia SoftWorks Telnet Server	Refer to the Georgia SoftWorks documentation.	Download the latest Telnet Server version from: http://www.georgiasoftworks.com

Upgrading QAD Enterprise Edition

QAD 2010 Enterprise Edition introduced the ability to easily upgrade the components of a previous release using the installer's upgrade feature. For more information on upgrading from a previous Enterprise Edition release, see *QAD Progress Database Conversion Guide*.

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.

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Overview

The QAD Deployment Toolkit (QDT) is installed before QAD Enterprise Edition. QDT streamlines the installation of QAD Enterprise Edition and other QAD products by automatically finding system information (such as component locations) and appropriately modifying the QAD Enterprise Edition configuration profile.

QDT provides 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.

You must install QDT before attempting to install QAD Enterprise Edition.

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 about software requirements.

Installing QDT

QDT is installed from an ISO file downloaded from the QAD Store or QAD physical product media.

If you received separate physical media containing an updated QDT version, install QDT from that media. Otherwise, install QDT from the downloaded ISO file or the physical product media.

To install QDT:

1. Open an X-terminal window.
2. Shut down any anti-virus programs running on your system.
3. Verify the Progress OpenEdge Admin and NameServers are up and available. They must be up and available even if they are not initially providing App or WebSpeed servers and brokers.
4. Verify that the Tomcat server container is installed, but *not* running (this requirement applies to installation and configuration).
5. If you are installing from QAD physical product media, go to step 6. Otherwise, download the ISO file from the QAD Store and unzip it using the appropriate utility (see “Unzip Utilities” on page 5).
6. Mount the downloaded ISO file, QAD physical product media, or separate physical media containing an updated version of QDT.
7. Access the `install` directory within the newly mounted location.
8. Launch the QDT installer by going to the `/install` directory and using the `./install.ksh` script for Linux/UNIX or `install.exe` for Windows.

   The QDT installer welcome message appears.

Fig. 2.1
Installation Window for a Linux or UNIX Installation

9 Press Enter to view the license agreement. Press the space bar or press `q` to skip the agreement and continue the installation.

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

11 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. Note this directory for further reference.

12 The installer prompts you to enter the location for creation of the log directory. Accept the default location or specify a different directory. Note this directory for further reference.

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

14 The installer prompts you for the QDT XML files install location. Accept the default location or specify a different directory. Note this directory for further reference.

15 If the `xml` directory does not exist, you are prompted to create it.

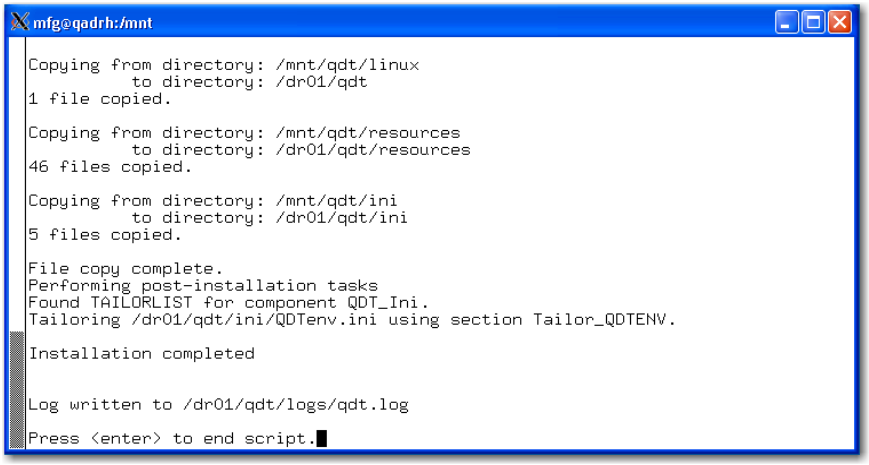
16 On Windows, the installer prompts you for a folder name for the QDT shortcut. The default is QAD Deployment Toolkit. Accept the default location or specify a different directory. Press Enter.

17 The installer prompts you to continue with the install. To proceed, press Enter.

The install begins and installation status messages are displayed.

18 Wait for the installer to say that the installation completed.

Fig. 2.2
Installation Summary



19 Go to the logs directory and review the log files for installation errors.

The `IAerr.txt` and `IAlog.txt` files should be empty if the install was successful. In `qdt.log`, look for lines that begin with five asterisks or two asterisks (`*****` or `**`). Five asterisks indicate QDT errors; two asterisks indicate Progress errors.

20 Correct any errors and attempt the QDT installation again. Otherwise, proceed to “Starting QDT” on page 14.

Starting QDT

To start QDT, do the following:

Windows

Select Start|All Programs|QAD Deployment Toolkit|Start QDT.

Linux and UNIX

1 Verify that your environment variables were properly set as described in “Environment Variables” on page 6.

2 If you did not install QDT in an AIX environment, go to step 3. If you installed QDT in an AIX environment, you must disable Concurrent I/O (CIO). Otherwise, you cannot start QDT.

3 Go to <*`qdt_install_directory`*> and run the `./qadinst` installation script.

To start QDT in Red Hat 6 or 7 environments, run the `qadinst_RH6_64bit` or `qadinst_RH6_32bit` executable.

To start QDT on HP, run `qadinst.ksh`.

QDT Features

The QAD Deployment Toolkit 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 when installing QAD Enterprise Edition.

- Admin

  Admin completes the installation process and provides tools for updating and configuring the products that QDT installs. 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.

  Important The Admin function is similar to what was formerly called MFG/UTIL in previous QAD application versions. Although the process used with MFG/UTIL is similar, it is not valid for this install. Continue reading this guide for instructions.

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

Configuring QDT

You may need to perform the following actions to configure QDT:

- Setting system defaults (including port settings)
- Adding other 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.

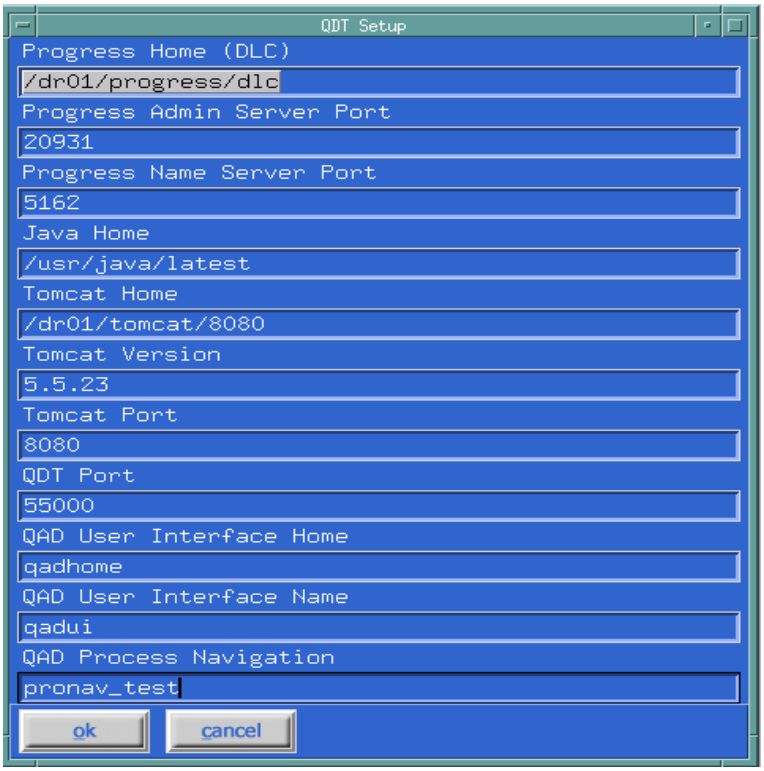
If the QDT main screen fails to display system information, or if it displays incorrect information, set the system defaults through QDT's Edit System Default Settings menu item.

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 port values, 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), use the following steps:

1 On the QDT main screen, select Edit|System Default Settings. The QDT Setup screen displays.

Fig. 2.4
System Default Settings



2 Enter changes to the appropriate settings.

Note Two fields were added beginning with QAD 2012 Enterprise Edition that allow you to change the <*qadhome*> and <*qadui*> WebApp names. These names are only used for the initial environment. If the environment is cloned, you can give the <*qadui*> WebApp a different name. The <*qadhome*> WebApp is shared between environments and cannot be given a different name for the cloned environment. Only change <*qadhome*> and <*qadui*> during initial QDT installation. Changing them during an upgrade can have unintended results.

Beginning with 2013 Enterprise Edition, the QAD UI Process Maps are deployed as a separate WebApp. A field was added to allow you to change the QAD UI Process Maps WebApp name. The default is `pronav`, but you can change the name during initial QDT installation using the QAD Process Navigation field.

3 Select OK to close the screen and save the changes.

Adding QDT Users

The person who initially installs QDT is the only person who can use it. All others who attempt to use the toolkit 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 Select Edit|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 19 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 how to clone an environment.

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Overview

QAD Enterprise Edition is installed using the QAD Deployment Toolkit (QDT). The QDT automatically finds the previously defined system information required 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 the default configuration settings can create problems. Proceed with care.

Note The default language setting for a default installation is US English. To install additional languages, see “Adding Languages to an Existing Configuration” on page 53. The codepage for a database can only be set before the configuration begins. If you plan to install multiple codepages, ensure that you select them before starting the configuration. If the codepages are not compatible, QDT automatically sets them to Unicode (UTF-8). You can manually select Make Unicode DB on the Edit Language Details screen to allow for future conflicting codepage language additions. See the Progress documentation for language codepage and Unicode information.

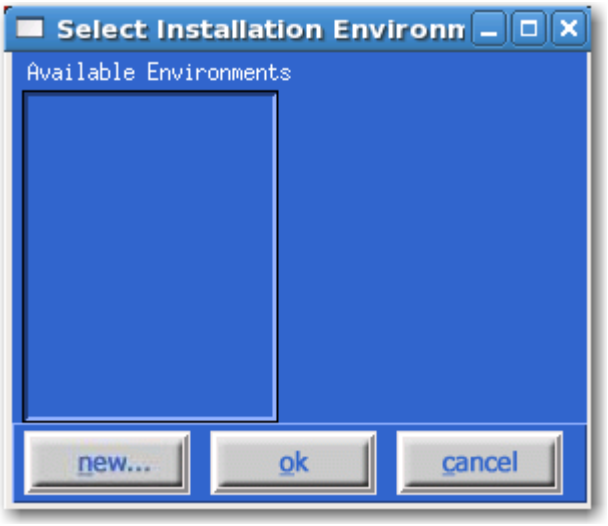
Initiating an Installation

Enterprise Edition installation is performed using the QAD Deployment Toolkit (QDT). See Chapter 2, “QAD Deployment Toolkit Installation,” on page 11 for details on installing and starting QDT.

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

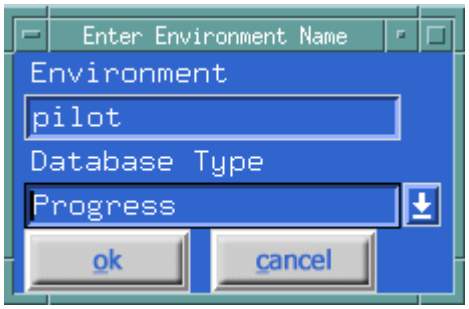
1. Start the Progress admin server using the same user name that was used to run QDT. This precaution allows QDT to start and stop databases without encountering permission problems.
2. If you installed an updated version of QDT from separate media, launch QDT, and select Edit | Installation Media Location. Use the directory tree to locate the root directory of the product installation media. Otherwise, proceed directly to step 3.
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. The default database type is Progress.

Fig. 3.2
Enter Environment Name Screen



6 Click OK to close the screen and save the environment name.

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. Select the desired components for installation.

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

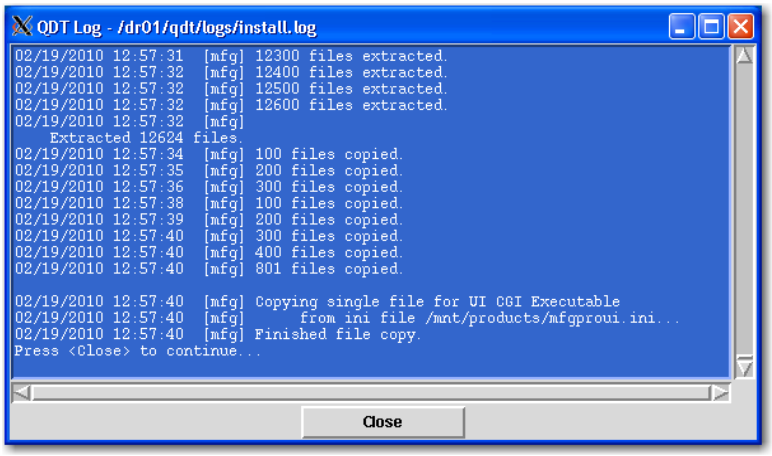
You can customize the installation destination (QAD EE folder) by selecting Edit following this step.

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

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.

If you install QAD Enterprise Edition in multiple environments or clone a QAD Enterprise Edition environment, you must perform the applicable configuration procedures in this chapter separately for each environment. You must also perform the applicable procedures in Chapter 5, “Starting QAD Enterprise Edition,” on page 41 and Chapter 6, “QAD Enterprise Edition Configuration,” on page 45 for each environment.

Next Steps

Proceed to Chapter 4, “QAD Enterprise Edition Environment Configuration,” on page 23 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.

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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

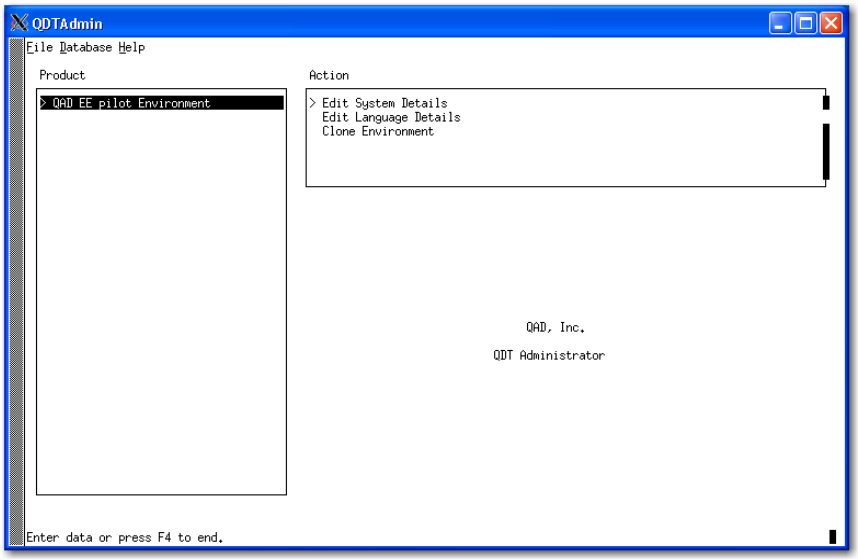
Connection Manager Settings

All installations (default or custom) require that you configure the Connection Manager settings. This configuration is 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.

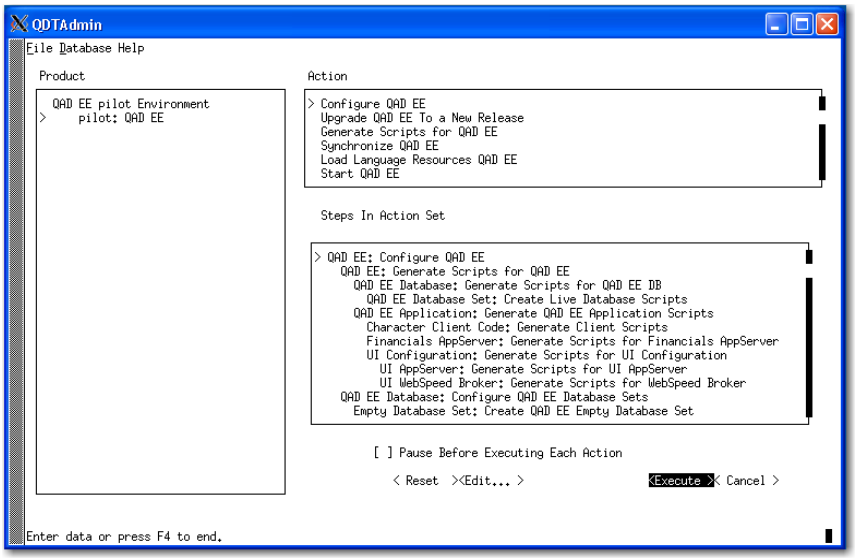
   If you are installing QAD 2011.1 Enterprise Edition or above on Windows, specify a service name or port for each database. This action is required because of a Progress Admin Server database maintenance limitation.

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

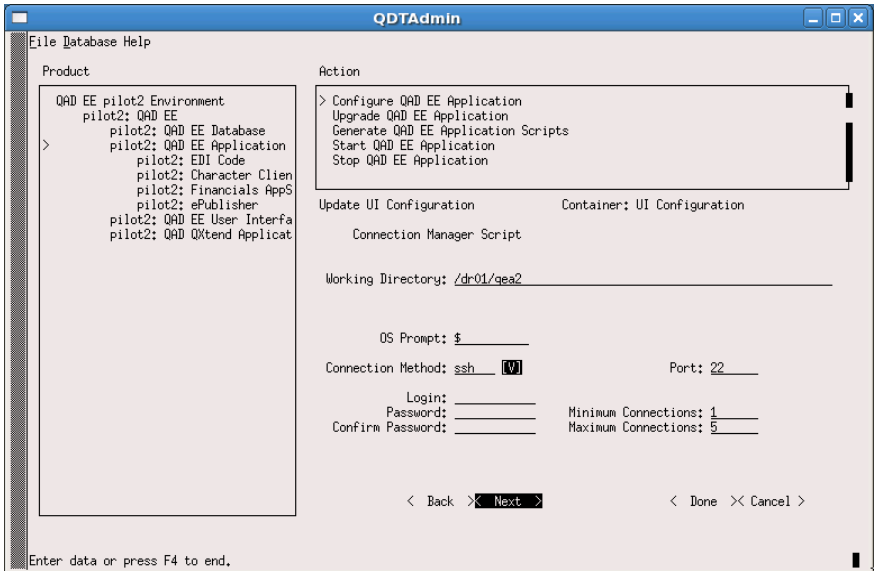


5 Scroll down and select UI Configuration: Update UI Configuration, and press Enter. The Update UI Configuration screen displays.

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

Note The user is an operating system user with 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 Enter a valid login ID and password. Enter the password again to confirm it. Then select Done.

7 Select telnet or SSH for the connection method and modify or accept the default port number. Modify or accept the default values for the minimum and maximum connections for the UI Connection Manager.

Important To proceed with the configuration process, 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. Enter yes.

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

Note A warning 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 message is for information purposes only and does not affect the installation.

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 Programs

If you have created custom programs that reference QAD 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.

System Configuration

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

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

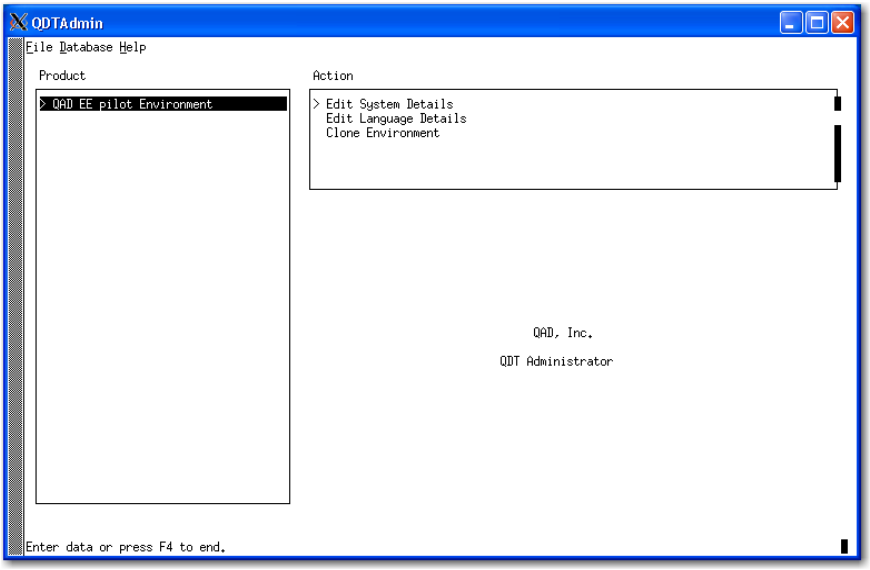
1 Return to the QDT main screen and click Admin. This action takes you to the QDT Administrator window.

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 the 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 the Product Configuration” on page 30 for more information about these options.

- Edit Language Details

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

  See“Editing Language Details” on page 28 for more information.

- Clone Environment

  With this option, you can create a copy of the selected environment, including all of its settings. Certain values will change to ensure that the names and ports are unique.

  See “Cloning an Environment” on page 29 for more information.

Make a selection in the Action pane to display the Steps In Action Set pane. It lists the tasks 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 in sequence under that topic. If you select a third-level indented item, 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

See “Editing the Product Configuration” on page 30.

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.

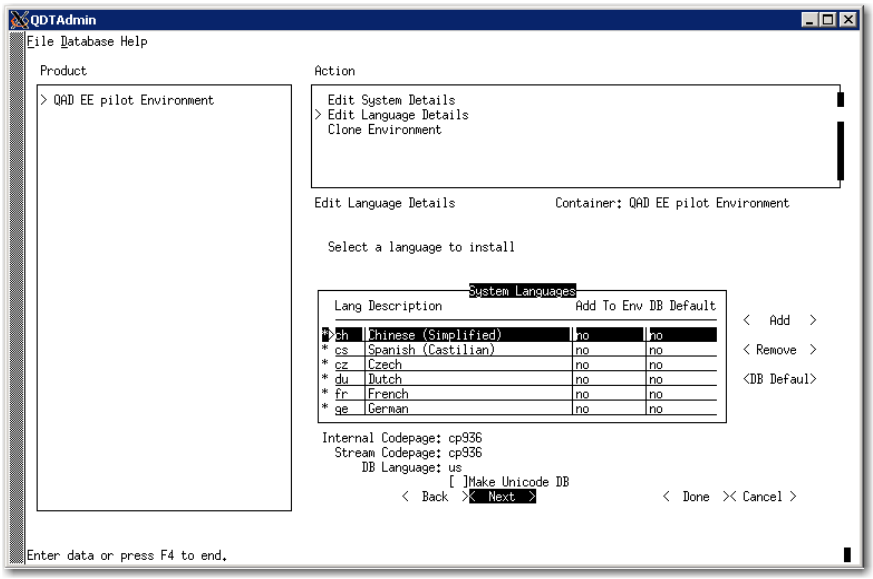
The default QAD Enterprise Edition language is US English. If you are using only US English in your installation, you do not need to install it and you can skip this section. If you require languages other than US English, install them using the following procedure.

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.

   Note Beginning with QAD 2012 Enterprise Edition, you can select the Thai language for use in your environment. This feature allows you to use Thai characters in the data entry fields. The field labels, however, are in US English.

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 Limit your changes. Erroneous code page modifications can cause unexpected behavior.

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

7 To define a language as the default language for the QAD Enterprise Edition installation, highlight the language, select DB Default, and press Enter.

8 Select Done and press Enter to complete the changes.

Cloning an Environment

Cloning creates a copy of the existing environment as it existed after it was configured. The copy also includes any configuration performed during the installation process. In other words, any configuration done to the existing environment during the installation process is carried over to the cloned environment. You must configure the new environment using the steps in this guide.

Installing QAD EE and later adding EAM creates a composite environment. If you clone the composite environment, you must configure both the environment and EAM. Otherwise, the resulting environment may be unstable.

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 screen appears. Use this screen to enter the values for the new environment while observing the following rules:

- The destination environment name cannot exist or be blank.
- The UI configuration cannot exist or be blank.
- The process navigation cannot exist or be blank.
- The target environment directory cannot be the same as the source environment directory or be blank.
- The target environment directory must not exist or be empty.
- The target database directory cannot be the same as the source database directory or be blank.
- The target database directory must not exist or be empty.
- If you are cloning a Windows configuration, enter service names that are different from those service names 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 port numbers. If your initial installation defined service ports as service names rather than port numbers, 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. This process takes 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.

Product Configuration

Editing the Product Configuration

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 no changes are required.

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` only allows you to edit the database setting.

Beginning with 2012.1 Enterprise Edition, QDT supports the writing of temp files to a RAM disk during Enterprise Edition configuration. Use of a RAM disk can greatly accelerate the configuration process by taking advantage of the inherent speed of this type of memory.

Edit Product Configuration 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
- 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 installation script launches and the configuration process begins. A window displays the `qdtadmin.log` file, which records the configuration progress.

Note A warning 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 message is for information purposes only and does not affect the system.

The configuration process can take several minutes.

10 Review the `qdtadmin.log` file to check for errors in the configuration process and/or subsequent log files.

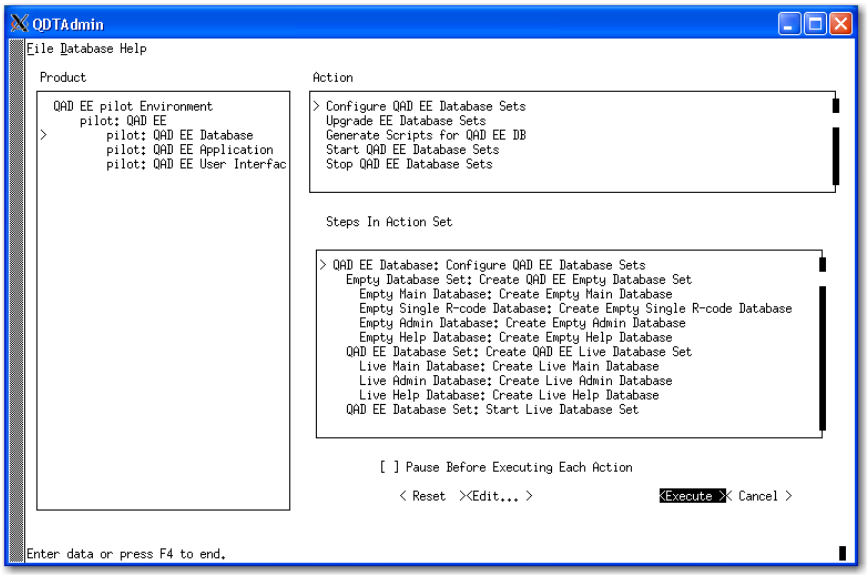
11 When the configuration completes successfully, select Close to exit.

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 feature is primarily used to create a conversion restore point. For more information on Pause Before Executing Each Action, see *QAD Progress Database Conversion Guide*.

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

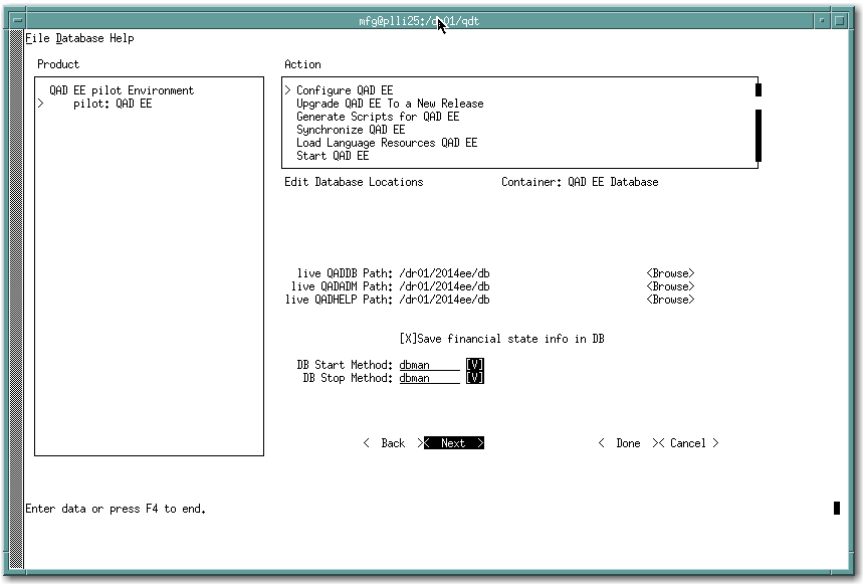
The Advanced Database Configuration screens allow you to specify or change database settings to improve database performance. For more information regarding these settings, refer to the Progress documentation.

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

Editing Database Locations

The Edit Database Locations screen allows you to specify the processes used to start and shut down the live main databases. The options for starting/stopping databases are dbman/dbman and proserve/proshut.

Fig. 4.7
Edit Database Location Screen



Editing Structure File Information

The structure file defines how the database is created on the disk. The file specifies the storage areas, their sizes, locations, and whether the extents are of fixed or variable length.

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.

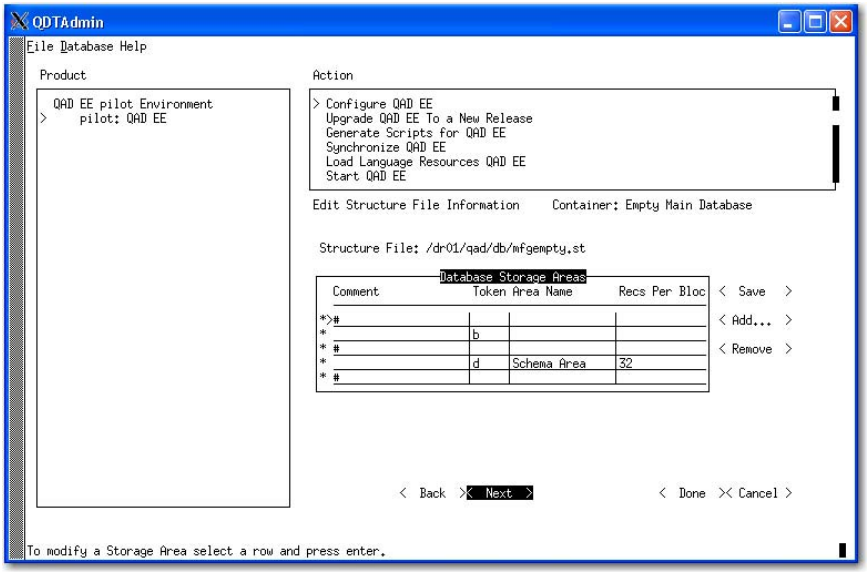
Note Most storage areas consist of two extents. One extent is of fixed length. The other extent is of variable length to allow for growth. For best performance, try to keep all of the data in fixed database extents. QAD Global Services can help you optimize the structure file configuration.

Warning

- Do not edit the Comment line in a storage area. Editing this line 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 (`.df`) files 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.

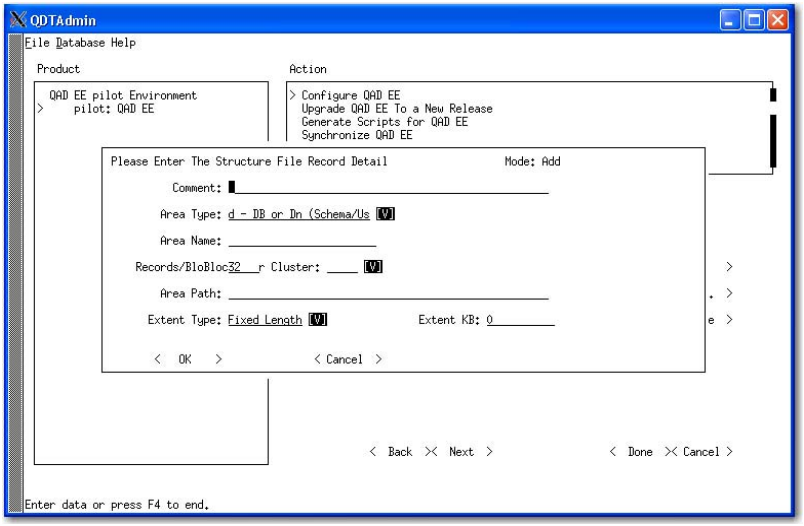
Fig. 4.8
Edit Structure File Information Screen



This screen allows you to scroll through the Progress structure file line-by-line and make any necessary changes. 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. 4.9
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.

Bulk Data Load

If the environment you are configuring will contain a complete data set, you can use the optional bulk data load feature to load the data. This option is only available when loading data that is complete, including OID values. The loading is performed without integrity to speed up the process. Refer to the Progress documentation for more information about the bulk data load process.

When you select Bulk Data Load in the Edit Data Load Options action screen, the main and administrative databases must both use the same data load method. Selecting Bulk Data Load disables OID input. This behavior is expected because the OID is populated with the current values in each data dump file.

To bulk load data, do the following:

1. Select Bulk Data Load for the Main database, point to the mfgdemo database location, and select Next.
2. Select Bulk Data Load for the Admin database, point to the admdemo database location, and select Next.
3. Restart the environment for client use.

AIA Compression

Beginning with QAD 2011 Enterprise Edition, you can enable or disable the use of AIA compression. This configuration 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 UI Configuration in the Steps In Action Set pane.
4. Select Enable AIA Compression.
5. Select Done.
6. Select Execute.
7. The system prompts you to execute all of the steps listed for Configure QAD EE. Select yes.
8. The system prompts you to clear the log. Select yes.
9. After you exit QDT, go to `$TOMCAT/conf/server.xml`.
10. Locate the compression setting. In many cases, compression is enabled by default. To use compression, do the following:
    a. Verify that the compression setting says `compression="on"`.
    b. Add the code **`compressableMimeType="text/html,text/xml,application/xml,application/octet-stream/`** to the file in the location shown below:

```
<Connector port="8080" maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
enableLookups="false" redirectPort="8443" acceptCount="100"
connectionTimeout="20000"
disableUploadTimeout="true" compression="on" compressableMimeType="text/html,text/
xml,application/xml,application/octet-stream/>
```

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

Adding Custom Databases

Beginning with 2013.1 Enterprise Edition, you can add a custom database to the compile by including the database in the `extradbs.pf` file.

QXtend Configuration

Following Enterprise Edition installation, QDT provides the option to install QXtend.

Edit the `tomcat-users.xml` file to add one or more roles for the QAD admin user. For Tomcat 7, add the manager, manager-gui and manager-script roles.

To install and configure QXtend, do the following:

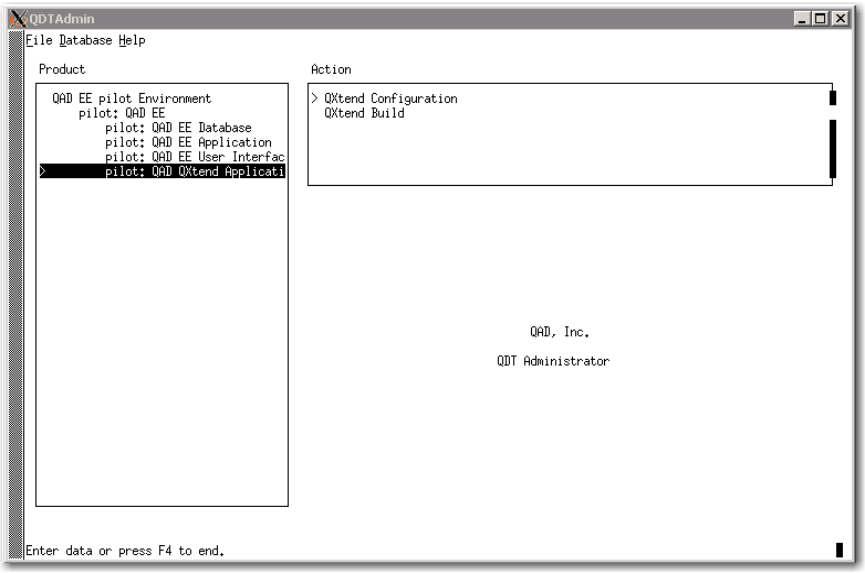
1. Verify the following are running:
    - Tomcat
    - Progress admin server

- Progress name server

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

3 In the Action pane, select QXtend Configuration.

Fig. 4.10
QXtend Configuration



4 Select Edit.

5 Enter the following information in the QXtend Configuration screen:

- QXtend Directory: Enter 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 the current environment name. For multiple installation environments, this field is populated with the environment name where QXtend has already been installed. If multiple environments exist, they are listed under this field in a drop-down menu.
- Tomcat Admin User ID: Enter the Tomcat Admin User ID as specified in <*tomcat_install_directory*>/conf/tomcat-users.xml. The default is admin.
- Tomcat Admin Password: Enter 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.

6 Select Next.

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 QXtend installation status. Select Close.

11 When the processing finishes, select Close.

12 In the QDT Action pane, select QXtend Build.

13 Select Execute.

14 QDT prompts you to execute all of the steps listed for QXtend Build. 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 Wait for the processing to finish. If the installation was successful, the message “QXtend Configuration completed successfully” is displayed. Select Close.

QDT-based QXtend installs usually succeed. However, user errors such as providing incorrect installation parameters, changing the environment, or shutting down Tomcat during the installation can result in an unsuccessful QXtend install.

Two files are key to resolving an unsuccessful QXtend installation:

- *<qxtend_install_directory>*`/repository.xml` controls the QXtend installation. It contains all of the installation configuration parameters propagated from QDT. It also holds the Progress information about which components were installed.
- *<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 you identify the failed routine, you can look for it in the corresponding log files.

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 task 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 and the `qxi` and `qxo` directories under the Tomcat `webapp` directory and `qxi.war` and `qxo.war`.

4 Remove the QXtend destination directory (the qxodb and qxoserver directory).

5 Remove the QXtend adapter from the `qxtend` directory under `QAD_HOME`.

6 Remove the qxevents database from 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 add lines to the bottom of the log. This behavior causes previous errors to remain in the log file where they can incorrectly be interpreted as real errors when you rerun the process.

8 Back up the `ubroker.properties` file and remove references to qxo and qxi from the file.

9 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 greater insight into the installation process, but without the benefits that QDT provides.

The QXtend installer is available from the Download Center in the QAD Store. See *QAD QXtend Installation Guide* for information about how to point your configuration to the QDT-generated configuration (`<qxtend_install_directory>/repository.xml`) as a local file.

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

Next Steps

After you configure your environment, preserve your environment installation and configuration settings by backing up the following directories to a different location:

- `$QDT/xml`
- `$QDT/ini`
- `$QDT/envs`
- `$QDT/logs`

Then see Chapter 5, "Starting QAD Enterprise Edition," on page 41 for details on starting your QAD Enterprise Edition installation.

Note If you installed QAD Enterprise Edition in multiple environments or created clones of a QAD Enterprise Edition environment, you must perform the applicable procedures in Chapter 5, "Starting QAD Enterprise Edition," on page 41 and Chapter 6, "QAD Enterprise Edition Configuration," on page 45. You must perform the procedures separately for each environment.

Chapter 5

Starting QAD Enterprise Edition

This chapter describes how to perform the tasks associated with initial QAD Enterprise Edition startup.

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Overview

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

Starting QAD Enterprise Edition

Linux and UNIX Installations

To start QAD Enterprise Edition, use the following steps:

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

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

Note If you have completed QAD Enterprise Edition configuration and you have not stopped the processes, you do not need to start any of 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 have a `./<client-lang>.<environment_name>` script (for example, `client-us.pilot`).

Windows Installations

To start QAD Enterprise Edition, do the following:

1 To start the databases in Windows, use Progress Explorer. Using Progress Explorer allows the databases to continue to run after the user logs off the system. Progress Explorer uses the database configurations that QDT set up in the `conmgr.properties` file. You should see all databases under the Databases section.

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

3 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, do the following:

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 at any time after you create the databases. If you are going to use a character client, the client and help language must be compatible, otherwise you get an error. For example, you would use `client-jp.<environment_name>` to load Japanese help. This restriction does not apply when using the QAD .NET UI Client, which allows you to load help for any supported language.

Also, the database must support the language being loaded. Otherwise, use the Unicode (utf-8) codepage setting.

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 and 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 Standard and Enterprise Edition programs use a different architecture and are navigated differently than QAD Enterprise Financials. Standard and Enterprise Edition programs use traditional, non-component-based, procedural Progress-based technology. QAD Enterprise Financials uses business component-based technology and has additional features and utilities.

5 Repeat steps 3 and 4 for each desired help file.

6 Accept the default values in all other fields.

7 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.

8 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

Perform a complete backup of the entire database and directory structure. See the Progress documentation for further information.

Next Steps

Proceed to Chapter 6, “QAD Enterprise Edition Configuration,” on page 45 for information regarding completing the installation.

Chapter 6

QAD Enterprise Edition Configuration

This section describes the activities performed after Enterprise Edition installation to ensure that the application is ready for use.

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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 the Connection Manager uses for managing the back-end telnet connections that support the QAD .NET UI. However, you must also define telnet scripts in the application for running terminal sessions within the QAD .NET UI. 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:

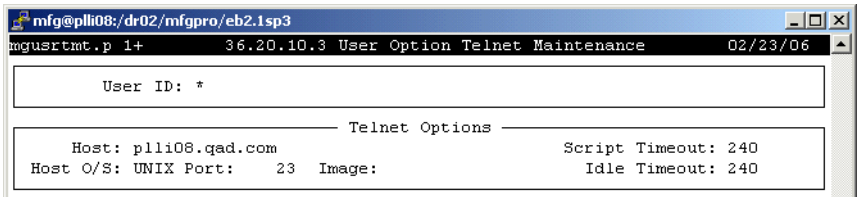
- Specify telnet server settings
- Define the login sequence script lines
- Configure the telnet connection settings
- Verify the login sequence

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. 6.1
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 Linux/UNIX systems. Enter `NT` for Windows systems.

Port. Enter the port number for the telnet server. The default value is 23, the normal setting for non-SSH configurations. If you plan to use SSH, the port value is 22. See “Set Up SSH” on page 50.

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 will wait 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 in 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 that QDT creates.

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

You do not receive `telnet-lang.<environment_name>` 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 Linux/UNIX systems.

Important You must specify the login sequence in the QAD .NET UI, but the values are ignored. In terminal mode, the user’s QAD .NET UI user ID and password must exactly match the Linux/UNIX user ID and password.

When defining paths for the scripts used in the QAD .NET UI, avoid using relative paths because each user’s access can 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 that the telnet server generates when a telnet login occurs. The values in this field must be identical to the prompts that 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 to troubleshoot telnet session problems.

Note When you enter a password as a script value, only blanks are displayed. When you select Go at the end of the sequence, the system prompts you 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.

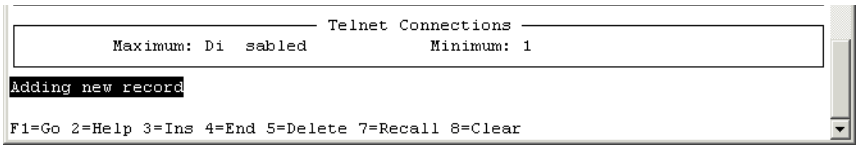
5 Select End to move to the Telnet Connections fields.

Configure Telnet Connection Settings

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

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

Fig. 6.2
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 maintenance 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.

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

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, who is defined with an asterisk (*).

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 future reference, 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. QAD recommends that the domain names follow published Internet Engineering Task Force (IETF) standards. For more information, refer to RFC1035 at:

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

Table 6.1 illustrates sample script lines for a Windows system.

Table 6.1
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	If necessary, enter your Windows telnet server's domain.
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 value is the telnet script that QDT generates.

Table 6.2 illustrates sample script lines for a Linux/UNIX system. Record your login script values in Table 6.3.

Table 6.2
Sample Linux and 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 Linux or 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. Your response varies depending on how you set up your Linux or UNIX telnet environment. For example, for maximum security, you can 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 6.3 to record your telnet server login information.

Table 6.3
Telnet Login Script Information

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

Your completed table for the telnet script looks similar to Table 6.4.

Table 6.4
Sample Telnet Login Script for Linux and UNIX

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 see 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 that SSH provides include:

- User authentication and key exchange
- Negotiated 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. If you installed QAD 2013 EE or later, go directly to step 2. If you upgraded from QAD 2012.1 EE or earlier to the latest EE version, do the following:

   a. Back up the existing `$TOMCAT/webapps/$QADUI/WEB-INF/conf/connectionManagerConfig.xml` file.

   b. Copy the template `$TOMCAT/webapps/$QADUI/WEB-INF/conf/defaults/connectionManagerConfig.xml` to `$TOMCAT/webapps/$QADUI/WEB-INF/conf/connectionManagerConfig.xml`.

c Edit the new `connectionManagerConfig.xml` in the QAD UI: Administration - Connection Manager screen.

2 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 control laws.

3 Extract `Routrek.granados.dll` from the archive using `gunzip` and `tar`. Use version 2.0.0.0 of the DLL signed by Routrek Networks. Otherwise, SSH does not work.

The `gunzip` and `tar` programs are Linux/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` subdirectory.

4 Copy the DLL to <*tomcat_install_directory*>`/webapps/`<*qadhome*>. This path is the default location.

5 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*>.

6 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" />
```

7 Save the configuration file.

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

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

Install QAD .NET UI Client

Important Refer to *QAD .NET UI Release Notes*, *Introduction to QAD Enterprise Applications User Guide*, and *QAD .NET UI Administration Guide* for more 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 connect to the QAD Enterprise Edition installation. They also describe how to point that client to the installation.

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

1. Verify that the QAD Enterprise Edition installation and configuration are complete.
2. Open Internet Explorer.
3. Enter the following URL and press Enter:

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

   Example `http://qadapps.qad.com:8080/<qadhome>`

   Note If you are connecting to a URL with secure HTTP (`https://`), you must configure your browser to accept the secure HTTP security certificate. The steps for accepting a security certificate can vary depending on the Internet Explorer version.
4. The installation screen displays and the installation starts automatically. If not, click the Install link on the displayed page.
5. 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 enter `homeserver` in the Search field.
6. If the install does not detect a Macrovision installation on your system, you are prompted to confirm this portion of the install.
7. Select Install to continue.
8. InstallShield starts and displays a security warning. To continue the install, select “I understand the security risk” and select Next.
9. InstallShield sets up the installation environment.
10. On completion, the installer prompts you to create launch icons on your desktop and under Start|Programs. Select the desired options and select Install.
11. The installation begins. A progress screen displays.
12. When the client installation finishes, a confirmation screen displays. Select Finish.
13. If the client installation includes QAD .NET UI plug-in updates, you are prompted to accept the updates. Select OK.
14. To launch the client, select the QAD Applications icon or menu item under Start|Programs.

    The log in 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. Check the `qdtadmin.log`, `install.log`, and `qdt.log` files to 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 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 the appropriate Warehousing script (such as `clientaimrf-us.pilot`).

Adding Languages to an Existing Configuration

To use a language that is not included on the QAD Enterprise Edition installation media, contact QAD Sales to see if the language is available by special order. The only requirement for adding a language to a database is that the new language and the database's codepage must be compatible.

For information on adding a language to an existing Enterprise Edition installation, see “Editing Language Details” on page 28.

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. 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 6.5
System Daemons

Daemon	Required	Comments
Balance	After GL Implementation	Updates the supplier and customer balances and history for invoice changes The existence of unprocessed records can result in inaccurate supplier and customer balances.
Budget	After GL Implementation	Allocates postings to budgets and allocations. This daemon 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 *QAD System Administration User Guide.*

Citrix Configuration

The Citrix configuration for optimal performance depends on many deployment details, including budget, hardware, software, network topology, number of users, and other applications to be hosted. For assistance with QAD Enterprise Applications deployment, contact QAD Services. To evaluate and troubleshoot a Citrix configuration, see Citrix Support Troubleshooting Tools at:

http://support.citrix.com/article/CTX126294

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 is installed on a Windows machine.

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.

You can configure the QAD Reporting Service installation location. The default location is `Program Files` or `Program Files (x86)`, depending on your Windows machine's operating system.

The server reporting service must run on a Windows Server machine. The service connects to the Financials AppServer (`qadfin<`*`environment_name`*`>`) 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
```

You can only install the QAD Reporting Service once. By default, it creates one Windows service to run the QAD Reporting Service. For information on how to configure multiple Reporting Service instances, refer to "QAD Reporting Service Scripts" on page 71.

The required setup tasks are:

- Determine if Microsoft .NET Framework version 4.0 is installed.
- Download and install the reporting service.
- Configure it for your environment.
- Verify that the service is working correctly.

Prerequisites

The QAD Reporting Service depends on Microsoft .NET Framework Version 2.0.

1. To determine if the framework is installed, run the Add or Remove Programs control panel applet and look for any of the following entries:
   - 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:

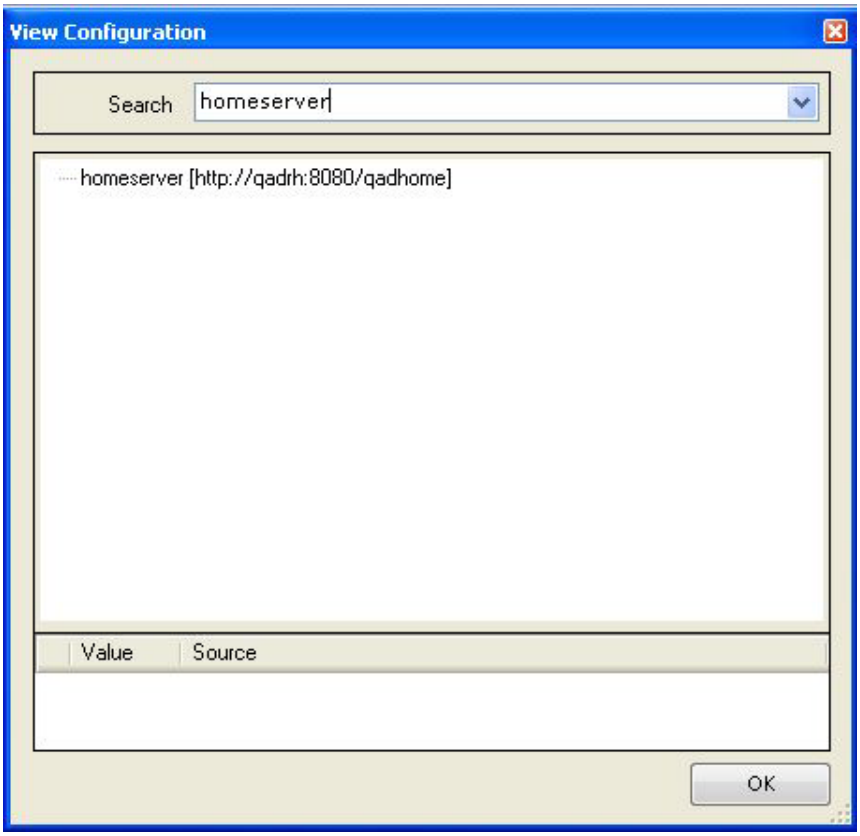
   http://www.microsoft.com/en-us/download/details.aspx?id=17851

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 Help|View Configuration in the client and entering `homeserver` in the search text box.

Fig. 6.3
QAD Applications Home Server

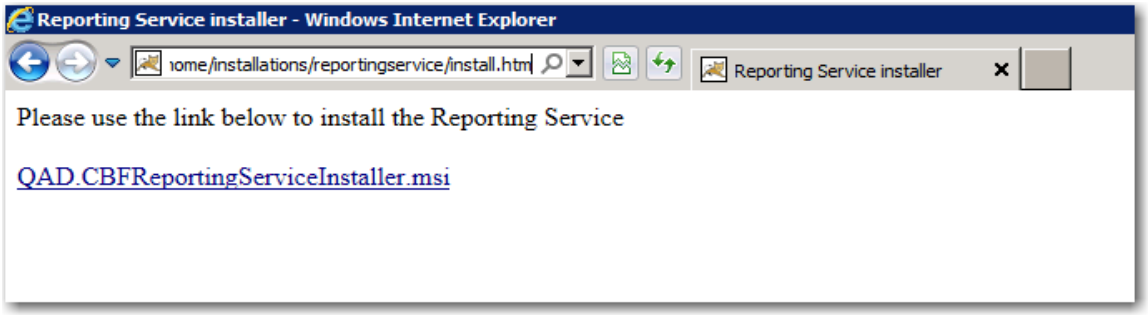


2 Go to the Windows server where you will install the QAD Reporting Service. Use Internet Explorer to connect to the setup. Navigate to:

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

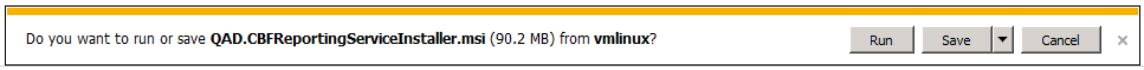
3 Click the Install button.

Fig. 6.4
QAD Reporting Service Installation



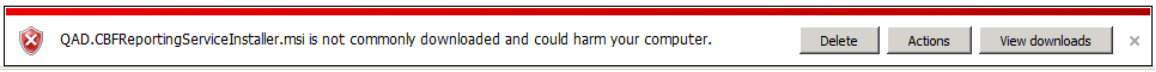
4 You may see the following security dialog box, depending on how Internet Explorer is configured.

Fig. 6.5
Internet Explorer Security Warning



5 If you see this dialog box, click Run to continue.

Fig. 6.6
Internet Explorer Security Warning

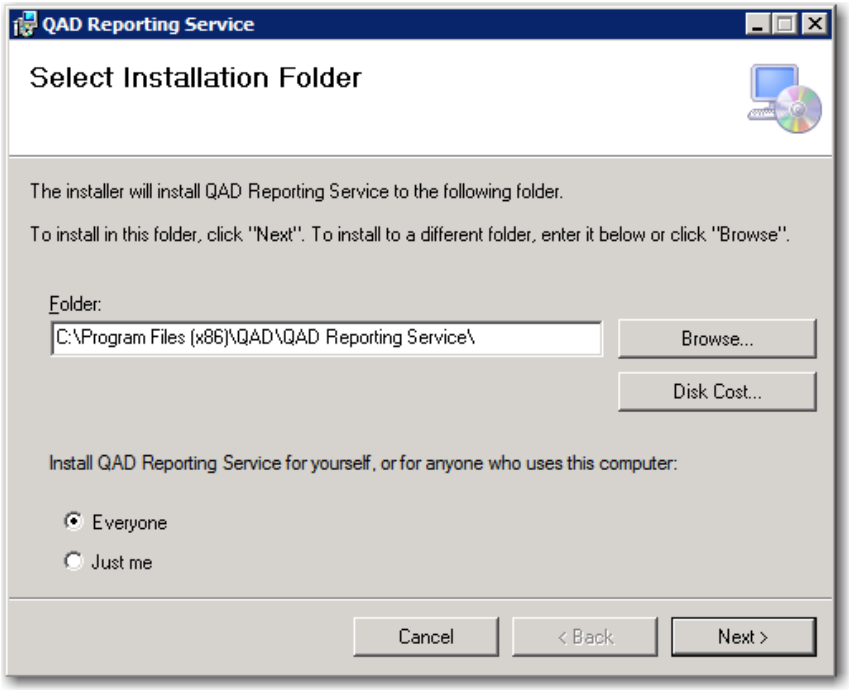


6 If you see this dialog box, click Run to continue.

Fig. 6.7
QAD Reporting Service Setup Wizard

7 Click Next.

Fig. 6.8
Select Installation Folder Screen

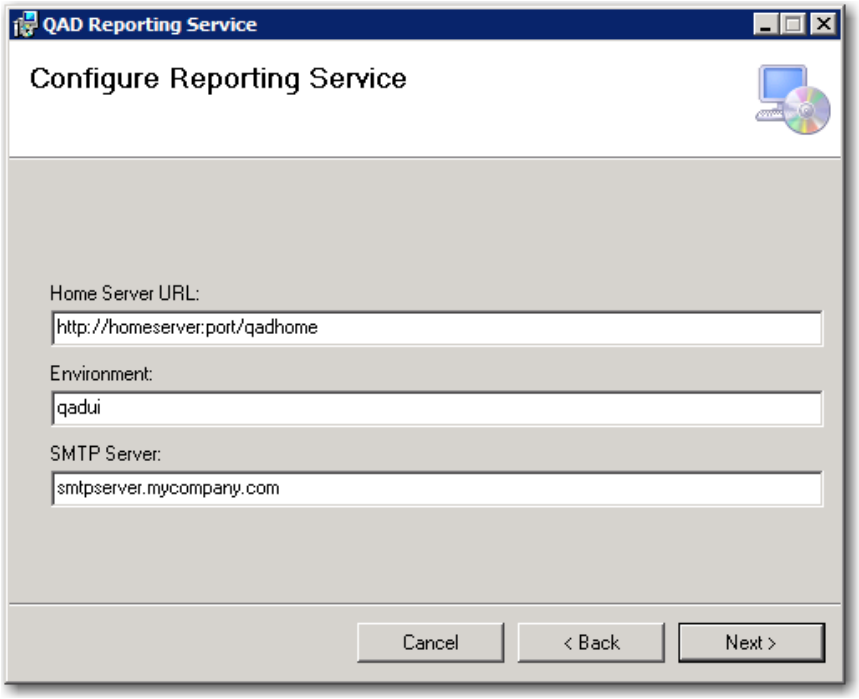


8 Click Next and provide the configuration parameters listed in the following table.

Table 6.6
Reporting Service Configuration Settings

Parameter	Description
Home Server URL	The URL to the QAD Applications Home Server
Environment	The name of the Home Server environment for which this instance provides 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 uses to connect to other QAD services.
Password	The password associated with the application user account.
SMTP Server	The IP address or host name of the server supporting the Simple Mail Transfer Protocol on port 25

Fig. 6.9
Configure Reporting Service Screen



9 Click Next.

Fig. 6.10
Configure Reporting Service Screen

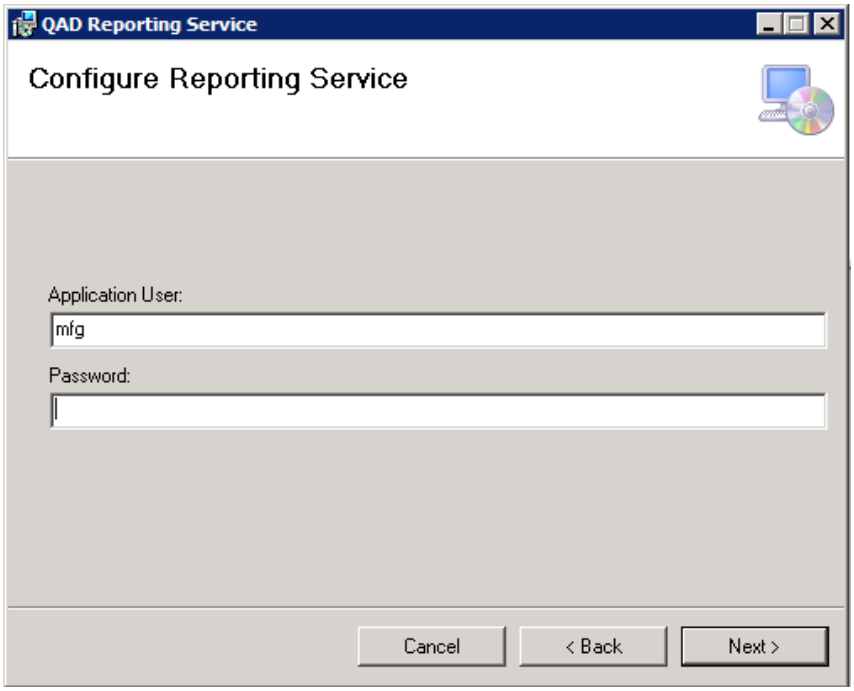
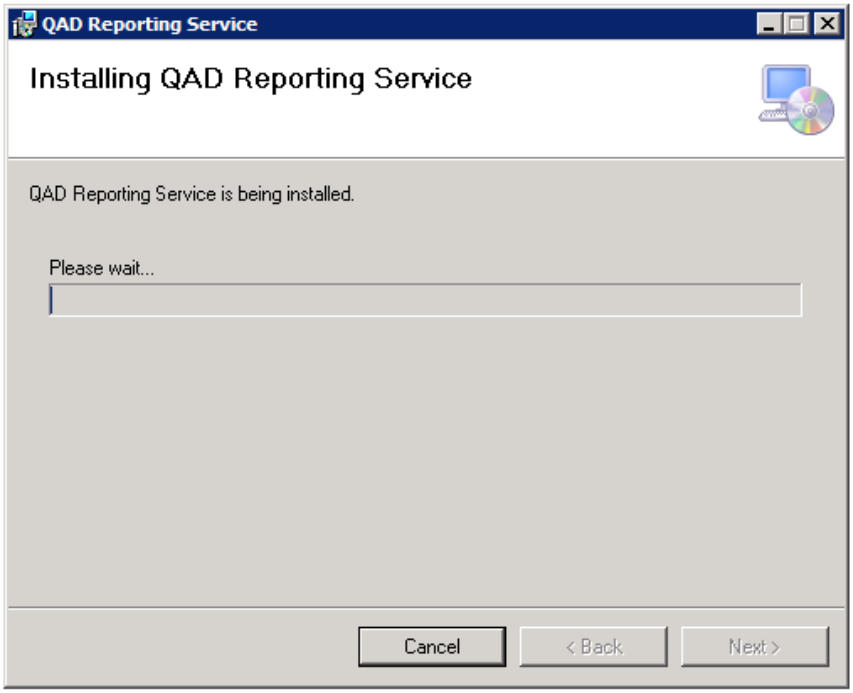
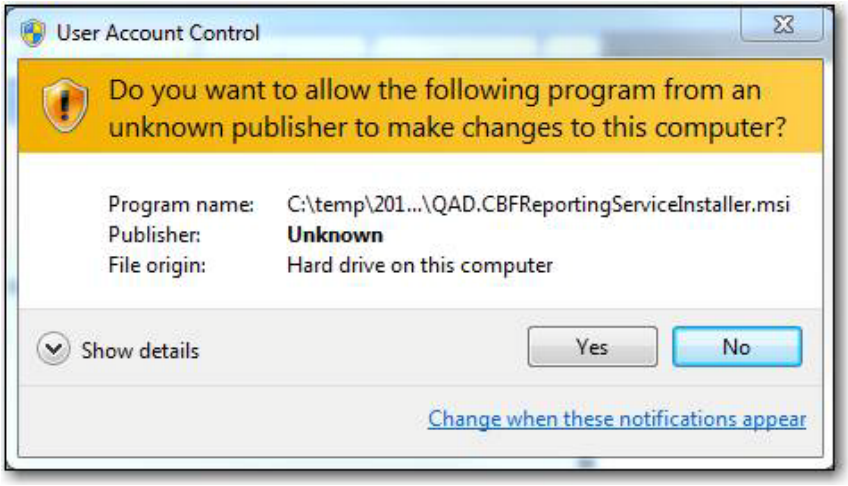


Fig. 6.11
Confirm Installation Screen



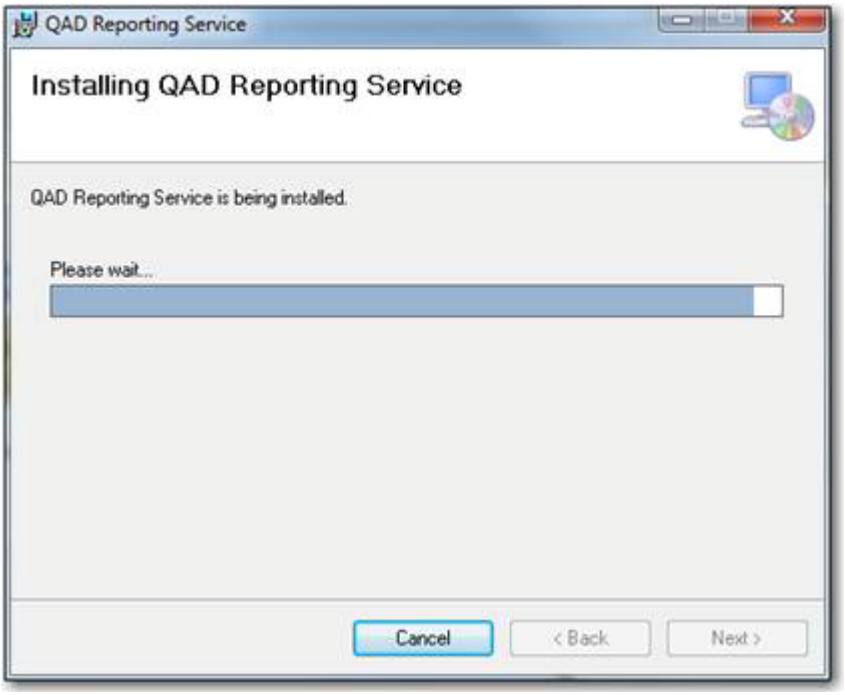
10 Click Next.

Fig. 6.12
User Account Control Screen



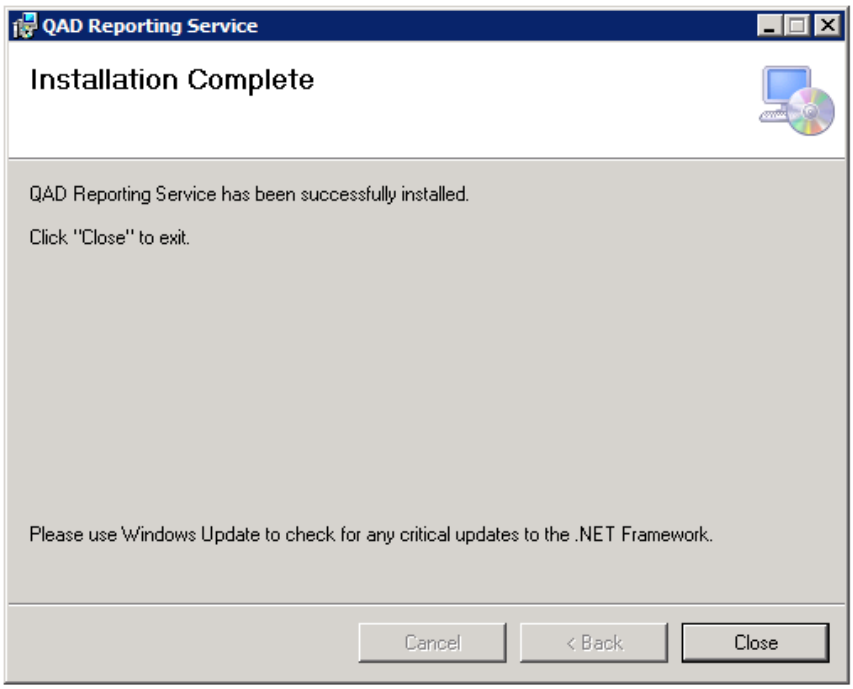
11 Click Yes to continue with the installation.

Fig. 6.13
Installation Progress Screen



12 Click Finish.

Fig. 6.14
Installation Complete 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. 6.15
Reporting Service Shortcuts

Configuration

QAD Reporting Service

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

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

Where <*ReportingService*> is the location where the service was installed. It 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.

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, set the number of instances in the pool to a value 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

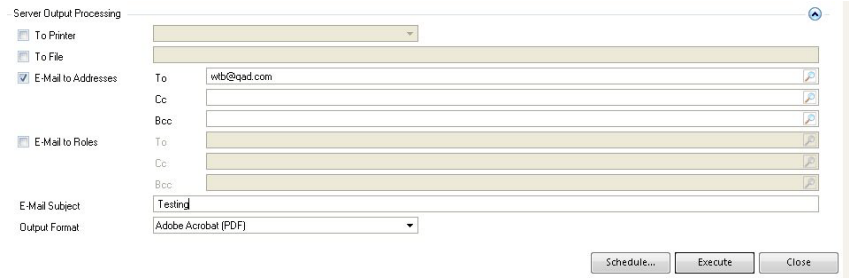
To test the Reporting Service, use the following steps:

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. 6.16
Server Output Processing Configuration



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

Monitoring

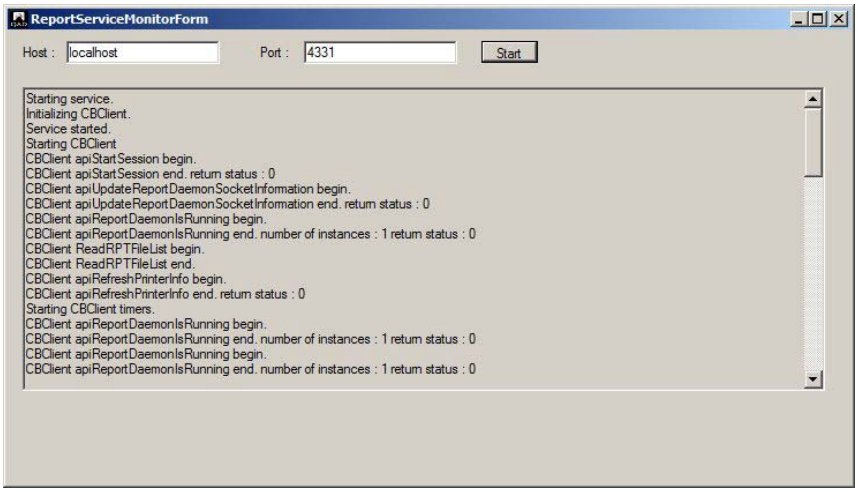
The QAD Reporting Service is distributed with a utility to monitor the service. To start the utility, do the following:

1 Click the Monitor Service shortcut.

2 Enter `localhost` in the Host text box.

3 Click the Start button to begin monitoring the local service.

Fig. 6.17
Reporting Service Monitor

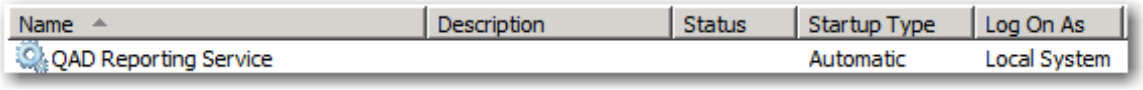


QAD Reporting Service Does Not Start

The QAD Reporting Service is designed to run as an unattended Windows Service. After the Reporting Service is installed, you must start it manually (it is not automatically started during installation). To determine if the service is running, check the QAD Reporting Service entry in the Windows Services application.

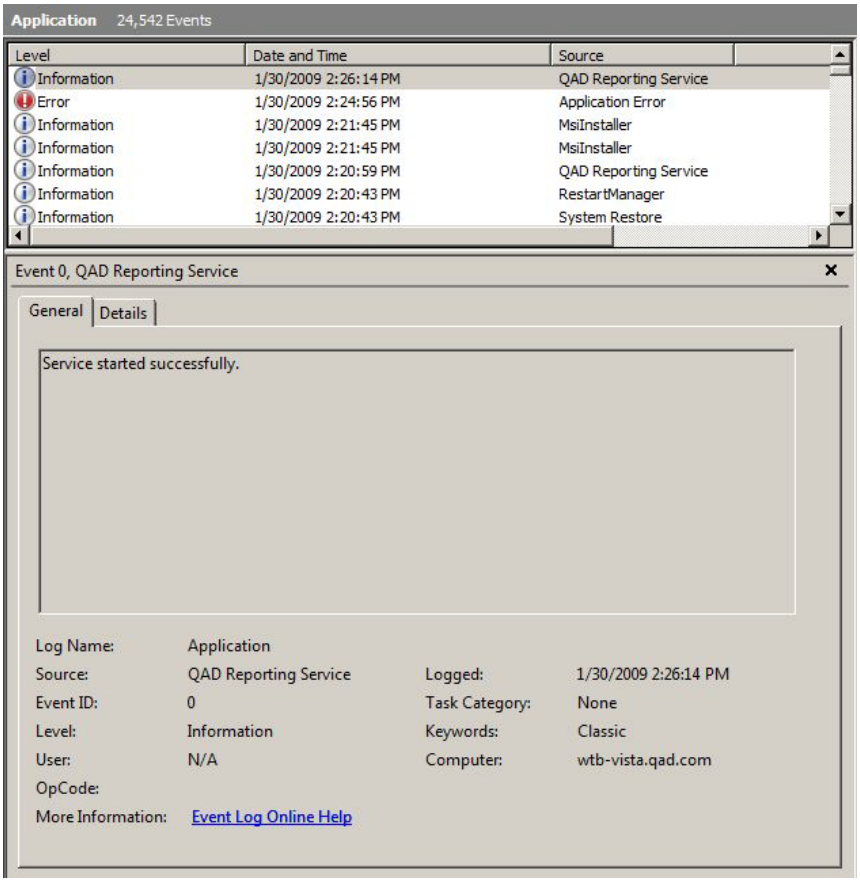
Note Press function key F5 within the Windows Services application to ensure that you are presented with up-to-date information.

Fig. 6.18
Windows Service Entry for Reporting Service



Errors that occur while running the service are recorded in the Windows Event Log, which you can view with the Windows Event Viewer.

Fig. 6.19
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 do the following:

1 Enter:

```
cd <ReportingService>\
```

2 Enter:

```
QAD.CBFReportingService.exe –configfile
QAD.CBFReportingService.exe.config –noservice
```

3 To stop the service, press 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 62). If you receive warning message QADFC-610, it indicates that the reporting service and the application server cannot communicate. After a short time, 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 as:

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

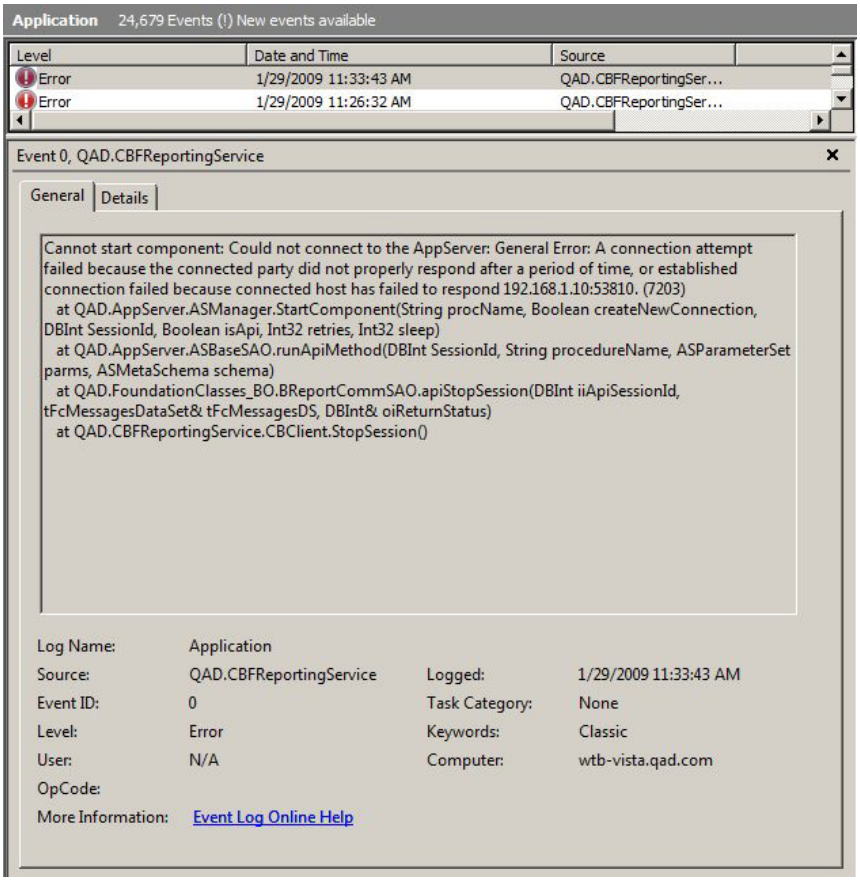
In this document, the following fragment defines the application server address:

```
<qad.appserver url="appserverdc://qadrh.qad.com/pilot"/>
```

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 can return an IP address that cannot be routed.

Fig. 6.20
Progress Server Error Listings



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

For example:

```
<qad.appserver url="appserverdc://qadrh.qad.com/pilot"/>
```

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 62) 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="nnn.nnn.nnn.nnn"></add>
```

Reporting Service Cannot Connect to SMTP Server

If a host name identifies the SMTP server, the Windows server containing the QAD Reporting Service installation 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. For example, McAfee blocks Port 25 for all processes, except those processes specified in a configurable list of exclusions. You can configure programs like McAfee to allow outgoing mail by using the process name `QAD.CBFReportingService.exe`.

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 Report Daemon Monitor.

Note The sender e-mail address is the 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

Scripts

This appendix describes the QAD Enterprise Edition installation, installation customization, and QAD Reporting Service scripts.

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Installation, Environment, and Customization Scripts 70

QAD Reporting Service Scripts 71

Overview

This appendix describes the scripts provided for QAD Enterprise Edition installation, installation customization, and installation and use of the QAD Reporting Service.

Installation, Environment, and Customization Scripts

QAD Enterprise Edition provides scripts for starting and shutting down Linux/UNIX and Windows environments during product installation and configuration.

Beginning with QAD 2012 Enterprise Edition, the product provides several scripts that allow you to add databases and custom PROPATHs and to customize your environment. QDT generates the scripts during installation. The existing Enterprise Edition scripts call the generated scripts. They are not overwritten by QDT.

Table 6.7
Installation, Environment, and Customization Scripts

Script	Description
`base-live-set.pf`	Primary Enterprise Edition script for connecting to databases. Do not modify this script.
`extradbs.pf`	User-modified script for defining custom or add-on database connections. The database connection format is: `-db <database> -ld <logical_name> <optional_parameters>` This script is used by Enterprise Edition during run time and QDT during compile time. The script is referenced from `base-live-set.pf` and `batch-compile.pf`.
`startenv.<environment_name>`	Linux/UNIX start environment script. Do not modify this script.
`startenv-<environment_name>.bat`	Windows start environment script. Do not modify this script.
`startextraapps.bat`	User-modified Windows script used to start custom application processes. Referenced from `startenv-<environment_name>.bat`
`startextraapps.ksh`	User-modified Linux/UNIX script used to start custom application processes. Referenced from `startenv.<environment_name>`
`startextradbs.bat`	User-modified Windows script used to start custom or add-on additional Progress databases. Referenced from `startenv-<environment_name>.bat` Refer to `start-<environment_name>.bat` for an example of the Progress database startup command.
`startextradbs.ksh`	User-modified Linux/UNIX script used to start custom or add-on Progress databases. Referenced from `startenv.<environment_name>` Refer to the `start.<environment_name>` script for an example of the Progress database startup command.
`stopenv.<environment_name>`	Linux/UNIX script used to shut down the environment. Do not modify this script.
`stopenv-<environment_name>.bat`	Windows script used to shut down the environment. Do not modify this script.

Script	Description
`stopextraapps.bat`	User-modified Windows script used to shut down custom application processes. Referenced from `stopenv-<environment_name>.bat`
`stopextraapps.ksh`	User-modified Linux/UNIX script used to shut down custom application processes. Referenced from `stopenv.<environment_name>`
`stopextradbs.bat`	User-modified Windows script used to shut down custom or add-on Progress databases. Referenced from `stopenv-<environment_name>.bat` Refer to the `stop-<environment_name>.bat` script for an example of the Progress database shutdown command.
`stopextradbs.ksh`	User-modified Linux/UNIX script used to shut down custom or add-on Progress databases. Referenced from `stopenv.<environment_name>` Refer to the `stop.<environment_name>` script for an example of the Progress database shutdown command.

QAD Reporting Service Scripts

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

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

The scripts are automatically placed in `$<install_directory>\utilities` during QAD Enterprise Edition installation.

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. You can create additional QAD Reporting Service instances by using the `create-instance.bat` script to copy 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 instance, start the `create-instance.bat` script by right-clicking on the script and selecting Run as Administrator. You can also open a command window as the administrator, go to the directory, and run the script from the command line. After `create-instance.bat` starts, respond to the script prompts.

3 Edit the configuration file:

```
<install_directory>\ 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 that the instance will service.

After you edit 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.

Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

QAD Forums (community.qad.com)
Ask questions and share information with other members of the user community, including QAD experts.

QAD Knowledgebase (knowledgebase.qad.com)*
Search for answers, tips, or solutions related to any QAD product or topic.

QAD Document Library (www.qad.com/documentlibrary)
Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

QAD Learning Center (learning.qad.com)*
Visit QAD's one-stop destination for all courses and training materials.

*Log-in required