QAD Enterprise Applications

Installation Guide
Enterprise Asset Management

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Chapter 1

Installation Overview and System Requirements

This chapter describes the Enterprise Asset Management installation process and provides system requirements and software prerequisites.

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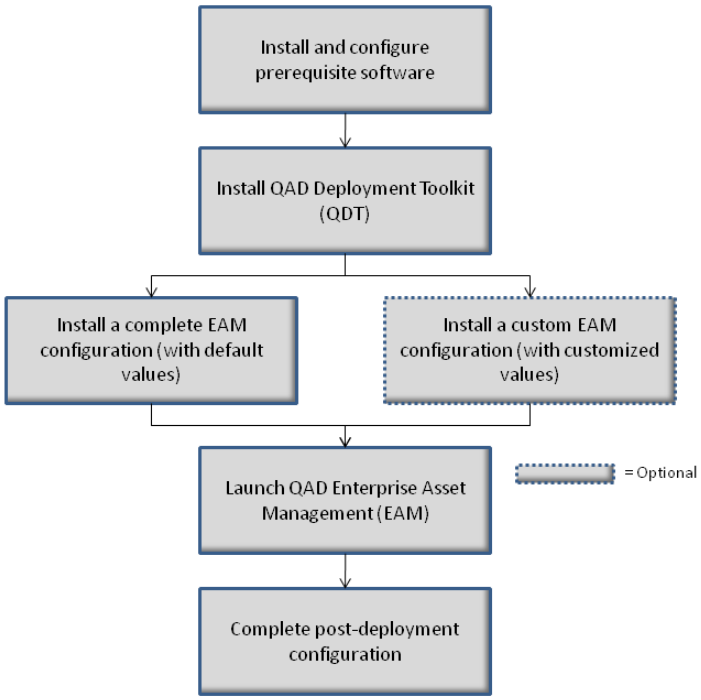
Installation Process Overview

Install EAM with the QAD Deployment Toolkit (QDT). QDT automates much of the installation process on properly set-up systems. The following figure represents the overall flow of the installation process.

Fig. 1.1
QAD EAM Installation Process



The procedure for installing EAM is as follows:

1. Set up systems according to the hardware and software requirements defined in this chapter or with the assistance of QAD Global Services.
2. Install and launch QDT.
3. QDT reads the product image on the distribution media and displays a choice of products and components to install.
4. You select the appropriate products and components.
5. QDT automatically discovers system information, such as location of required software, by reading the previously set environment variables.
6. QDT installs and configures the selected products and components, using default configuration values generated during the auto-discovery process or your customized configuration values.
7. You launch your new EAM installation and log in.

System Overview

An EAM system is composed of:

- A Progress database server that contains EAM software
- A Progress Enterprise application server
- A Tomcat Web server
- Multiple client workstations (with QAD .NET User Interface software), as needed.
- At least one dedicated PC with Progress 4GL Development System to host the Admin Client.

The database server, application server, and Web server are all installed on the same machine in a single-tier environment. The QAD .NET User Interface clients are installed on machines that access the EAM environment. The Admin Client is installed manually after the server has been installed.

Sizing and Capacity Planning

The database server contains EAM and Progress server software, as well as your production data. Prior to starting an installation, estimate the eventual size of your production database and the demands placed on different components of the database so that you can lay out your disks appropriately.

EAM takes a minimum of 12 GB to install and configure the product as-is for one environment. That does not include additional space for warehousing or sizable changes to the production databases.

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

General Prerequisites

The following general prerequisites apply:

- If you are a new EAM customer, you must have EAM 12 Limited Availability installation media and the latest patches from the EAM R&D.
- The system administrator must be an experienced Progress database administrator who can manage Progress client processes.
- A 100 Mbps Ethernet or faster network is required.

Supported Versions

QAD EAM 12 can be installed with the following ERP application versions on a Progress database; Oracle is not currently supported:

- QAD 2009 Enterprise Edition or greater running in QAD .NET UI 2.8 or greater.
- For compatibility with QAD Standard Edition, please contact the EAM product manager.

Software and Hardware Prerequisites

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

Important These components must be installed before beginning the installation of EAM.

Note 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.

UNIX Considerations

Installation Group and User

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

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

Environment Variables

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

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

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

- *`SHLIB_PATH`*
- *`LD_LIBRARY_PATH`*

Database Server

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

Table 1.1
Database Server Requirements

Software	Hardware	Notes
Progress OpenEdge 10.1B or higher, including the following: • Latest Progress version-specific patches with a minimum patch of 10.1B19 or 10.1C03 • Enterprise DB Server for appropriate number of users • 4GL Development, one license • Progress Enterprise application server Progress language-specific releases for each language in multi-language installation Java J2SE 5.0 or higher Web browser (Internet Explorer or Netscape) Operating system patches	4 GB free disk space for single-language installation. 700 MB free disk space for each additional language. Operating system patches Approximately 10 GB free disk space for data structures. This estimate is based on a 5-7 GB production database. 100 Mbps network card ISO 9660 CD-ROM or tape drive Two disk controller channels (minimum) Internet connection	Perform a Complete installation, not a Typical or Custom installation of Progress components. If Progress installs its own version of Java and it differs from the version required by the Web server (see below), do not remove the Progress-installed Java version when installing the Web server version.

Application Server

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

Table 1.2
Application Server Requirements

Software	Hardware	Notes
Progress OpenEdge 10.1B or higher, including the following: • Latest Progress version-specific patches with a minimum patch of 10.1B19 or 10.1C03 • Enterprise DB Server for appropriate number of users • 4GL Development, one license • Progress AdminServer. Java J2SE 5.0 or higher Operating system patches	At least 124 GB free disk space per environment (pilot, production, etc.).	Perform a Complete installation, not a Typical or Custom installation of Progress components. If Progress installs its own version of Java and it differs from the version required by the Web server (see below), do not remove the Progress-installed Java version when installing the Web server version. Depending on your Progress release, you may be required to install Java before installing the Progress component. If so, use Java J2SE 5.0 or higher.

Web Server

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

Table 1.3
Web Server Requirements

Software	Hardware	Notes
Tomcat 5.5.20 or higher Java J2SE 5.0 or higher	10 MB free disk space for Tomcat installation files 100 MB free disk space for QAD user interface client application (see below)	Tomcat is not included on the EAM installation media and must be downloaded from `www.tomcat.apache.org` or acquired from another source. Tomcat version 5.5.20 or higher is recommended; Tomcat 5.0.27 or higher can be used. If Tomcat requires a different version of Java than the one Progress components install, do not remove the Progress-installed Java version when installing the Tomcat version. Depending on your Progress release, you may be required to install Java before installing the Progress component. If so, use Java J2SE 5.0 or higher.

EAM Add-On Files

In the `add_ons` directory of the QDT EAM 12 installation media, there are three files needed to complete your installation:

- 12.1.0-to-12.2.0_Upgrade.zip - This file is used to upgrade systems from EAM 12.1.0 or 12.1.1 to EAM 12.2.0.
- GUI_Client_xxxxxxx.zip - the QAD EAM Admin Client installation files. In the file name, “xxxxxxx” represents either “stand alone” or the version of EE with which EAM is to be integrated.
- 12.2.0_Qxtend.zip - the QXtend schemas and a patch to QXtend 1.6.2 and earlier. QXtend is required to integrate EAM with QAD EE. This file will need to be replaced with another updated files, however.

  Important The files in the 12.2.0_Qxtend.zip file are out of date and the latest version (12.2.0.02_QXtend.zip) must be requested from QAD Support.

Chapter 2

Installing the QAD Deployment Toolkit

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

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Overview

The QAD Deployment Toolkit (QDT) is used to install EAM and other QAD products. QDT streamlines the installation process by automatically finding system information (such as component locations) and modifying the EAM configuration profile appropriately without manual input.

QDT must be installed before EAM installation.

With QDT, there are two options for installing EAM:

- Complete 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.

Note If EAM is to be integrated with QAD Enterprise Applications Enterprise Edition, then a custom installation must is required.

Important Before installing QDT and EAM, verify that the environment variables for the prerequisite Java and Tomcat installations on your target system are set. The User ID you use to complete the process must have permission to access the locations you intend to use.

Installing QDT

QDT is installed from the application media shipped by QAD. For example, if you are installing EAM, you perform the QDT install from the installation media. QDT uses a graphical user interface and requires X-Windows when installing on Unix or Linux. In these cases, the install is intended to be run from the server console.

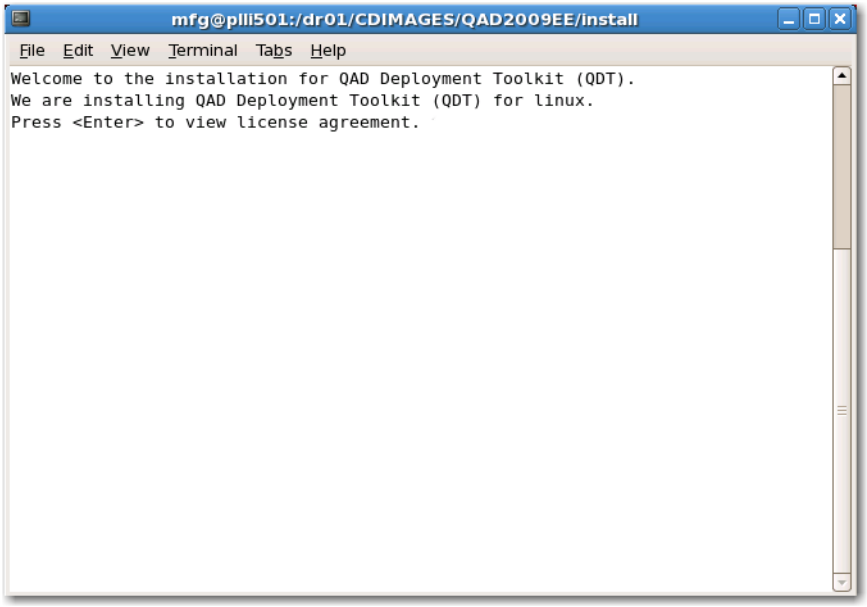
Note If you intend to view the UNIX or Linux QDT graphical user interface on a machine other than the machine on which QDT is installed, you must have a graphical environment with full X-Windows capability installed on that machine. One option is the TightVNC open source cross-platform remote desktop software. This does not apply to servers that will be installed on Windows.

Shut down virus protection programs during the installation process. This can significantly reduce the time required for installation and implementation.

To install QDT:

1. Ensure the OpenEdge Admin Server and Name Server are running.
2. Launch the installation using the appropriate file for your operating system. For example, use `./install.ksh` for UNIX. A command window displays informing you that you are installing QDT.

Fig. 2.1
Installation Window for a UNIX/Linux Installation



3 The license agreement displays. Press the spacebar to advance through it or press `q` to continue the installation, skipping the agreement.

4 You are prompted to accept the agreement. Select `y` to continue, `n` to exit the installation.

5 You are prompted to enter the location where QDT is to be installed. On Windows, the default is `c:\qadeam`. On Linux and UNIX, the default is `/usr/local/qdt`.

Note It is common to select an alternate target location for the QDT installer files. Keeping in mind that this is not the EAM installation folder, but EAM's QDT installation folder, one might choose `/<qadappsfolder>/qdt-qadeam-pilot`, `/<qadappsfolder>/qdt-qadeam-prod,` or something similar.

Be certain the file system that will contain the QDT installation has enough free space to uncompress and hold the QDT files.

6 After specifying the proper directory, press Enter.

7 You are prompted to enter the location where QDT is to be installed. On Windows, the default is `c:\qadeam`. On Linux and UNIX, the default is `/usr/local/qdt`. Accept the default location or enter a different directory. Press Enter.

8 You are prompted to enter the location where to create the log directory. On Windows, the default is `c:\qdt\logs`. On Linux and UNIX, the default is `/usr/local/qdt/logs`. Accept the default location or enter a different directory. Press Enter.

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

10 You are prompted to enter the location where to install the QDT XML files. On Windows, the default is: `c:\qdt\xml`. On Linux and UNIX the default is `/usr/local/qdt/xml`. Accept the default location or enter a different directory. Press Enter.

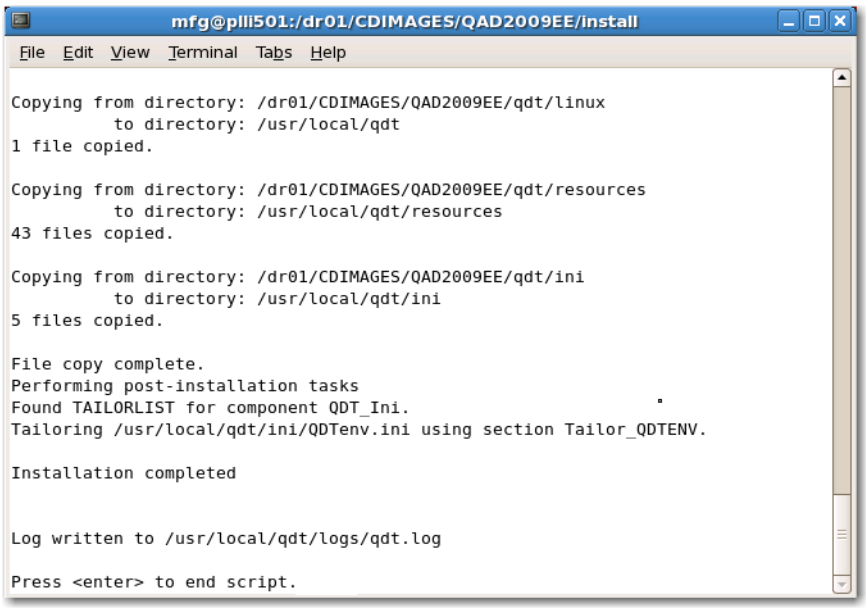
11 If the `xml` directory does not exist, you are prompted to confirm its creation.

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

13 You are prompted to continue with the install. If yes, press Enter.

14 The installation runs. A summary of the install displays.

Fig. 2.2
Installation Summary



15 Press Enter to exit the installation script.

16 You can verify that there were no errors during the installation by reading the log file.

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

Look for any lines beginning with five stars (`*****`) or two stars (`**`). Five stars indicate QDT errors and two stars indicate Progress errors.

Patch Installation

Install the latest patches. Refer to the QDT patch README for installation instructions.

Starting QDT

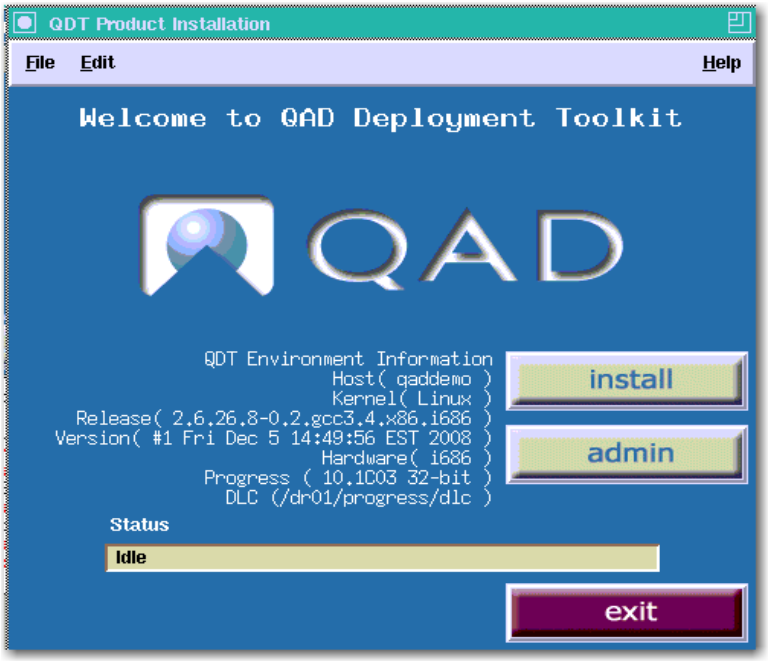
To start QDT on Windows, select Start|All Programs|QAD Deployment Toolkit|Start QDT.

To start QDT on Linux or UNIX, run the appropriate installation script for your version in the `/usr/local/qdt`.

Example `./qadinst` or `./qadinst.ksh`

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

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 either select a Complete or Custom install. The Complete installation uses the default configuration values. The Custom installation requires manual intervention to modify one or more of the default configuration values while installing EAM.

- Admin

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

  Note If you are a user of previous versions of QAD applications, the Admin function is, to a large extent, what was formerly known as MFG/UTIL.

  Note Although similar to MFG/UTIL, the process used with MFG/UTIL is not valid for this install. You should continue to read the install guide.

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

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

Configuring QDT

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

- Setting system defaults, including port settings
- Adding additional authorized users

Setting System Defaults

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

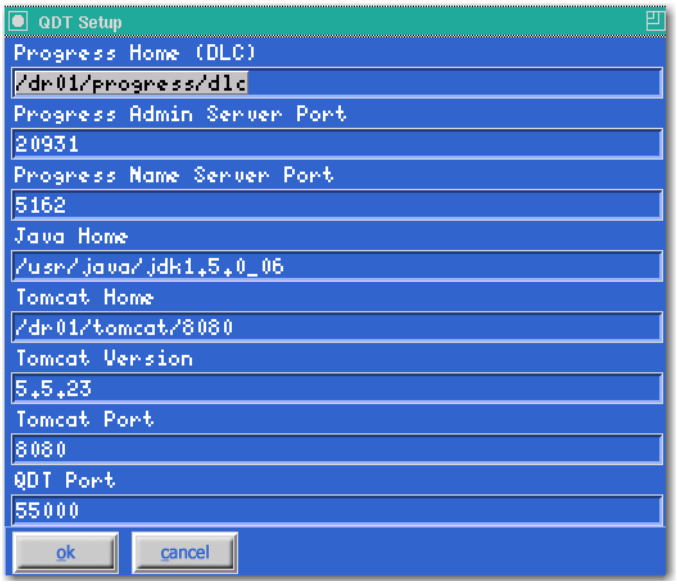
If system information is not displayed on the QDT main screen or incorrect information is displayed, you must set these system defaults through QDT's Set System Default function.

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

To set system defaults (including port settings):

1. On the QDT main screen, pull down the Edit menu and select Set System Defaults. The Set System Defaults screen displays.
2. Enter changes to the appropriate settings.

Fig. 2.4
Select Edit|System Default Settings Sample



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

Adding Users

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

1. Open Edit|User Maintenance.
2. Add the additional users.
3. Select OK to close the screen and add the users.

Note Authorized user information is stored in the *QDT_root*/xml/ users.xml file. If you have many users to add, the file can be edited directly.

Next Steps

You now have a choice to use QDT to do a complete install without modifying the default configuration values or a custom install in which you modify the default configuration values.

Chapter 3

Installing a Complete EAM Configuration

This chapter describes how to install EAM using default configuration settings.

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Overview

QAD Deployment Toolkit (QDT) automatically finds the previously defined system information required to configure an EAM installation. In most cases, you can use default configuration information.

Note EAM can interface to QAD Enterprise Edition. The default EAM installation is stand-alone. If you are interfacing your EAM installation to QAD EE, see Chapter 4, “Installing a Custom EAM Configuration,” on page 21.

Perform installation using QDT. There are two main steps:

1 Install the media to UNIX.

2 Configure the admin environment.

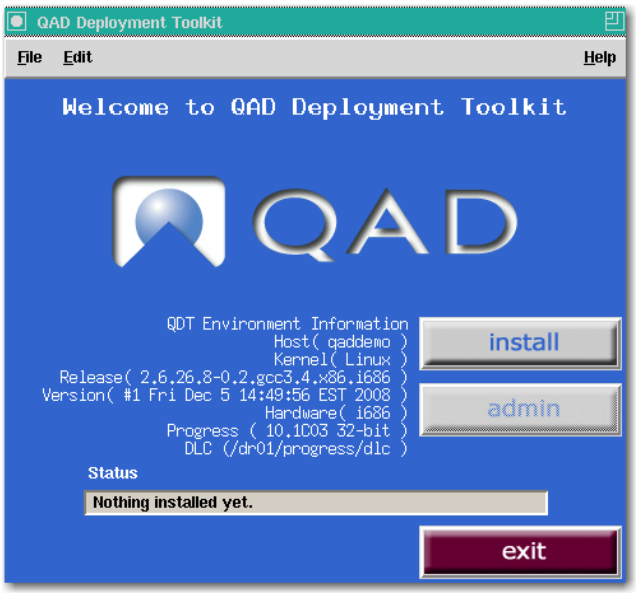
Note The default language setting for a complete installation is US English. If you need to install additional languages, see Chapter 4, “Installing a Custom EAM Configuration,” on page 21. EAM databases are by default configured for Unicode (UTF-8) for support of non-English character sets.

Installing the Media to UNIX

To install EAM with default configuration information:

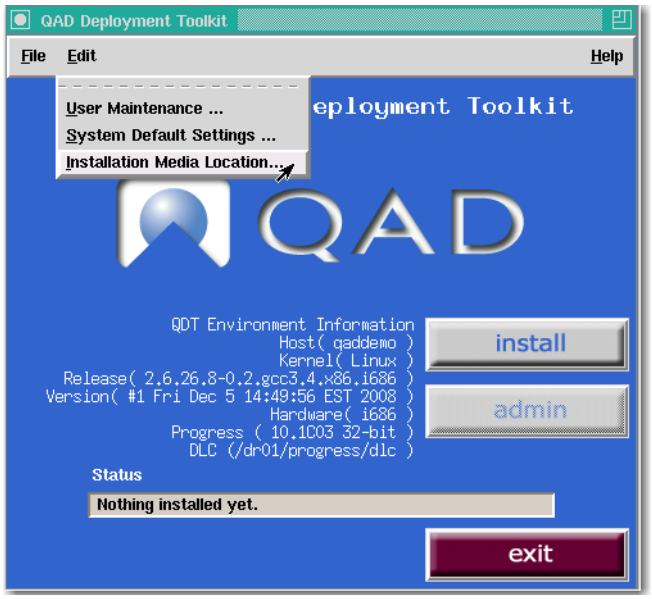
1 Launch QDT by entering `./qadinst`.

Fig. 3.1
Select Install



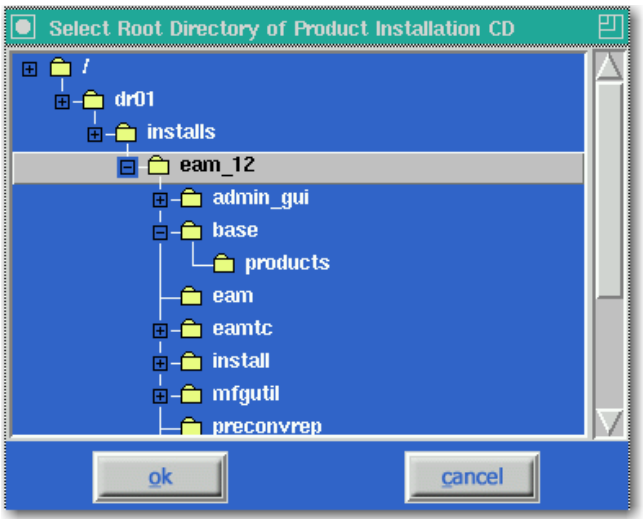
Note If the status message indicates missing processes such as Tomcat, Select Edit|Installation Media Location.

Fig. 3.2
Select Edit|Installation Media Location



2 Browse to the `installs/EAM_12` directory in the install folder.

Fig. 3.3
Select Edit|Installation Media Location

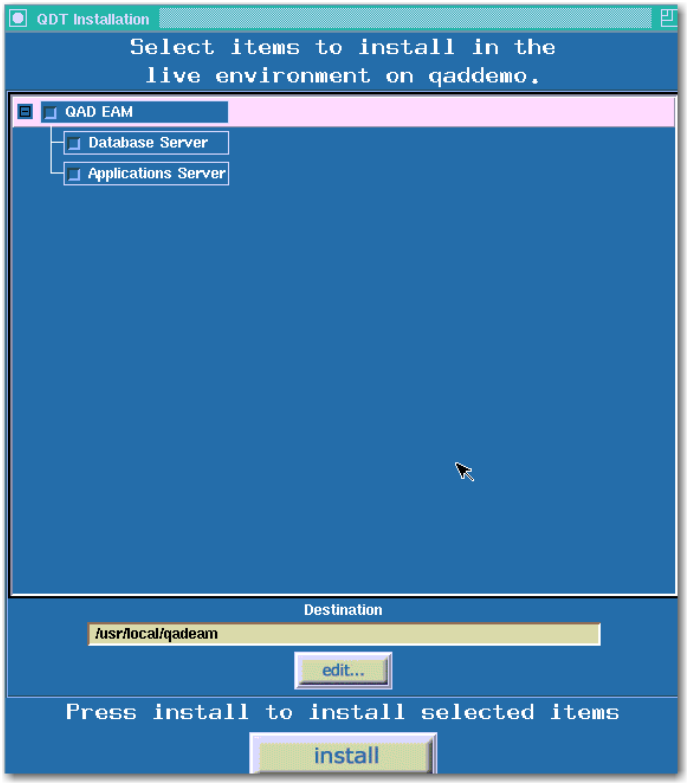


3 Click OK.

4 Click Install.

5 Select all available products.

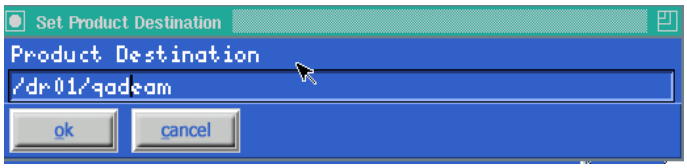
Fig. 3.4
Verify Products to Install



6 Click Edit and verify the path to EAM.

Note It is common to pick an alternate destination. For example, assuming EAM's copy of QDT was installed into `/<qadappsfolder)/qdt-qadeam-pilot` a logical choice would be `/<qadappsfolder>/qadeam-pilot`.

Fig. 3.5
Verify Path



7 Click OK.

8 Click Install.

9 Close the log window.

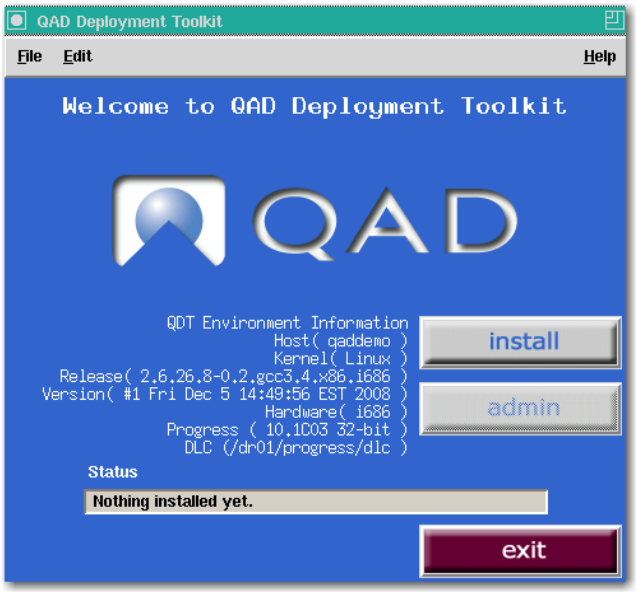
Configuring the Admin Environment

After QDT installs the EAM files on your server, configure the environment.

To configure the EAM environment:

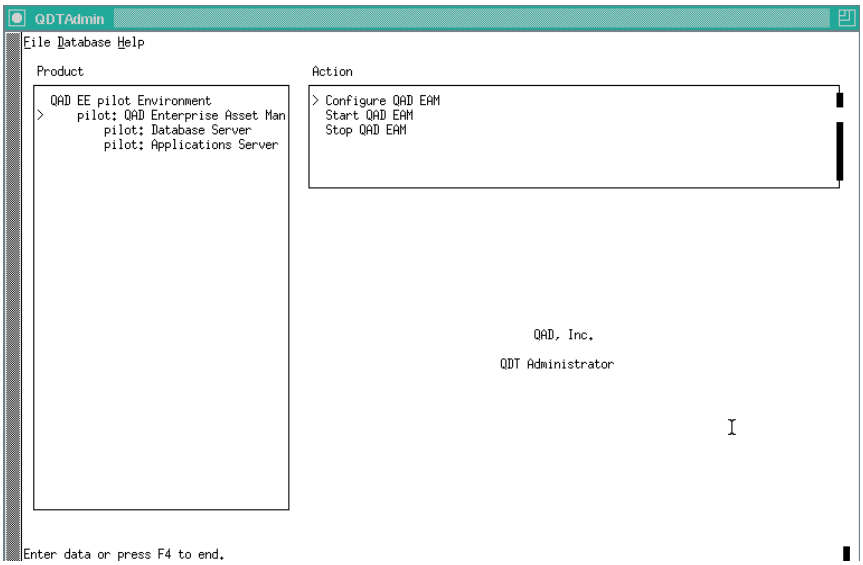
1 Return to the main QDT screen and click Admin. This action opens the QDT Administrator window.

Fig. 3.6
Select Admin



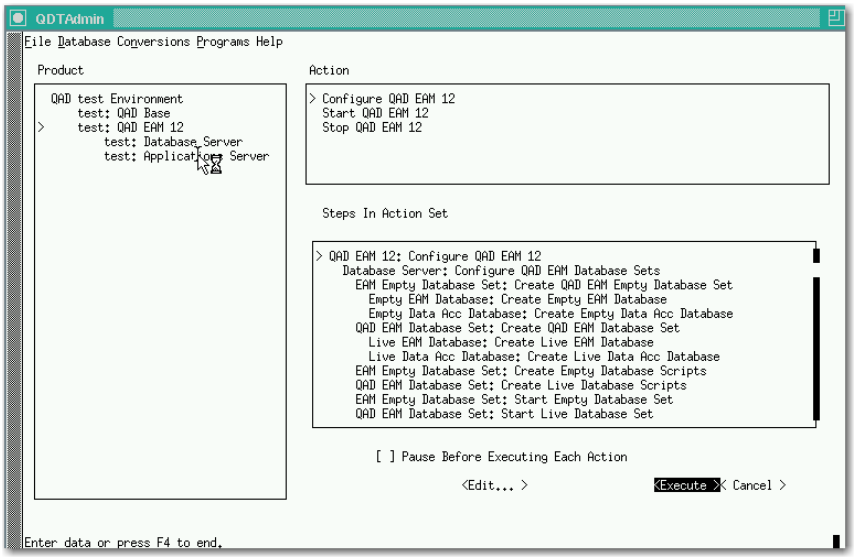
2 Select the environment to configure under Product.

Fig. 3.7
QDT Admin



3 Select Configure EAM. The configuration steps appear in the Steps in Action Set pane.

Fig. 3.8
Configure EAM Screen with Update UI Configuration Action Step



4 Select Execute to begin the configuration process. The system prompts you to confirm execution of the configuration process.

5 Select Yes. You are prompted to clear the log. Enter yes. A confirming message box appears. Select OK. The configuration process begins. The installation script launches. A window displays the `qdtadmin.log` file, which records the configuration progress. Allow some time for this process.

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

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

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

Chapter 4

Installing a Custom EAM Configuration

This chapter describes how to install EAM using customized configuration settings.

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Overview

QAD Deployment Toolkit (QDT) automatically finds previously defined system information that is required to configure an EAM installation. In most cases, this default configuration information can be used without modification to perform a complete install.

Some situations require modification of default configuration data for a customized installation. This chapter describes how to perform a custom install.

All of the steps described in this chapter are optional.

Important You can create configuration problems if you make incorrect modifications. Proceed with care.

EAM Interface with QAD EE

EAM can be interfaced directly with QAD Enterprise Edition. The default EAM configuration is stand-alone; however, using the custom installation procedure described in this chapter, you can create the interface to QAD EE.

See “Interfacing to QAD EE and SE” on page 28 for more details.

Multiple Environments

You can install EAM in multiple environments (for example, test and production). Repeat the installation process described in this chapter for each environment. Use separate Tomcat Web server directories and ports for each environment. For example, the original webapp could be `qadhome_eam` (to be used in production) and a second might be `qadhome_eam_pilot`.

Note If you install EAM in multiple environments, you must perform the applicable configuration procedures in this chapter for each environment separately.

Installing and Configuring a Custom Installation

Follow the steps to install EAM files in “Installing the Media to UNIX” on page 16. After QDT installs the EAM files on your server, configure the environment.

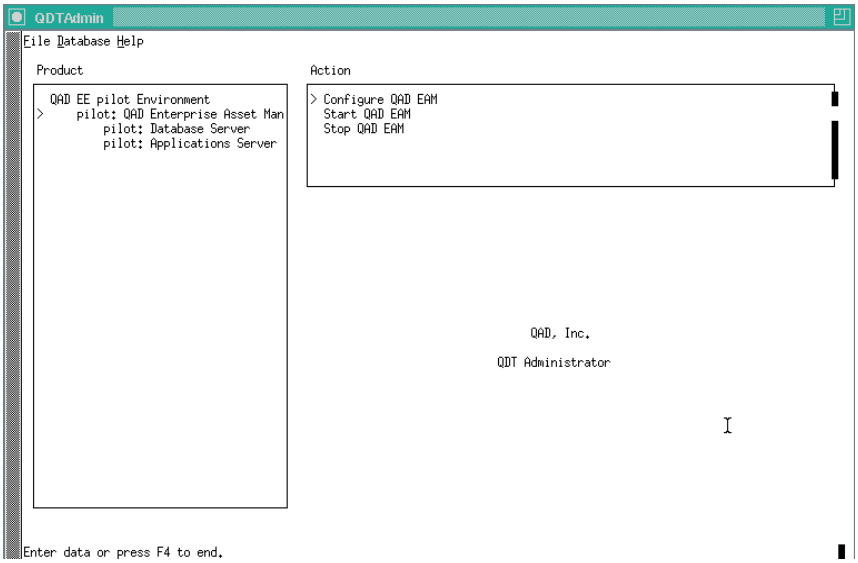
To configure the EAM environment:

1 Click Admin on the QDT main screen. The QDT Administrator window opens.

Fig. 4.1
Select Admin

2 Select the environment to configure under Product.

Fig. 4.2
QDT Admin



The QDT Administrator window offers the following options:

- Edit System Details

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

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

- Edit Language Details

  With this option, you can install and configure the languages your EAM uses.

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

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

- EAM Interface

  With this option, you can set up a direct interface to a QAD Enterprise Edition installation.

  See “Interfacing to QAD EE and SE” on page 28 for more information.

Editing System Details

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

System details can be edited as a whole by highlighting the environment or individual components by highlighting the component. For example, selecting EAM allows the editing of all system details sequentially. However, highlighting `<env>:database server` will just edit database settings.

Editing Language Details

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

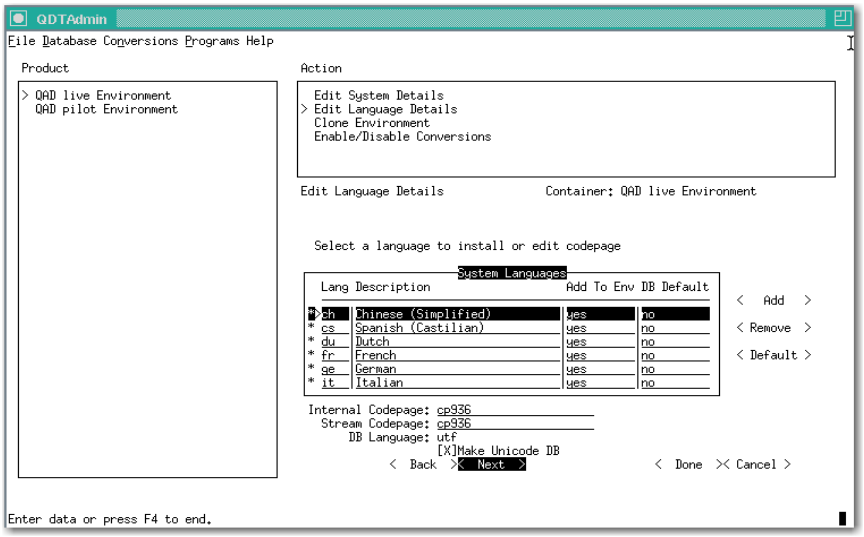
Note The default EAM language is US English. If you are using only US English in your installation, you do not need to install it. You can skip this section.

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

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

1. Select QAD *`Environment Name`* Environment under Product. In the Action pane, select Edit Language Details.
2. The Edit Language Details Screen appears. Select a language you want to add and select Add. The Add to Env and DB Default columns change from No to Yes.

Fig. 4.3
Edit Language Details Screen



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

Note Modifications to codepage settings should be limited. Unexpected behavior can result from incorrect modifications.

4 Repeat steps 2 and 3 for each language to add or modify.

5 To define a language as the default language for the EAM installation, select it and select Default.

6 Select Done to complete the changes.

7 If you have no further configuration changes, select Execute. The system prompts you to confirm execution of the configuration process.

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

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

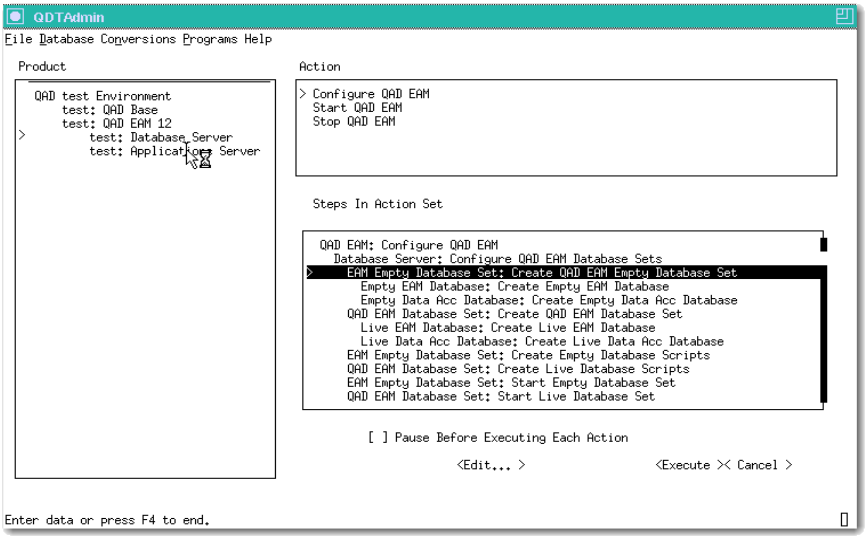
10 When the configuration completes successfully, select Close to exit.

Configuring Databases

There are two EAM databases:

- EAM
- DATAACC

Fig. 4.4
Configure EAM Database Action Steps



If Pause Before Executing Each Action is selected, the system will wait after each action is performed. This is mainly used for creating a restore point for conversion.

Editing Structure File Information

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.)

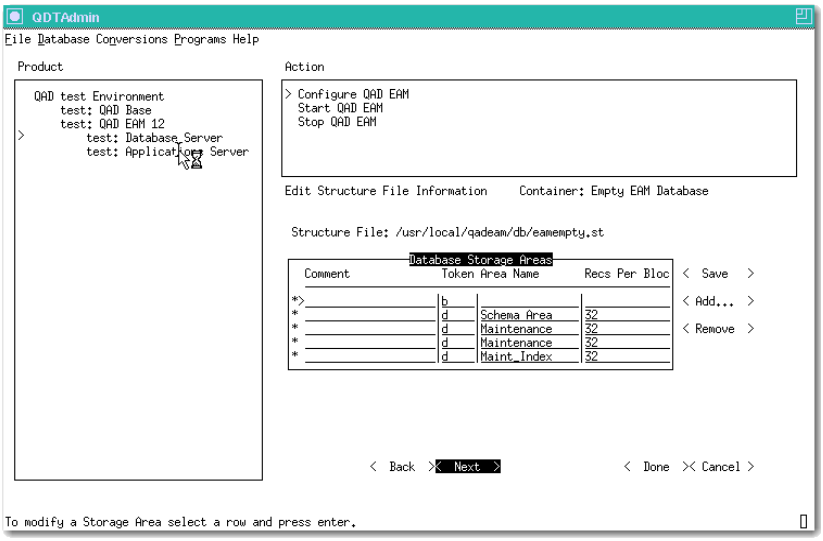
Note Most storage areas consist of two extents—one fixed length, the other variable length to allow for growth. Also, for performance reasons, the goal is to keep all of the data in fixed database extents. QAD Global Services can aid in the optimal configuration of the structure file.

Warning Do not edit the Comment line in a storage area. This converts the storage area definition to a comment and nullifies the storage area. To add a comment to the file, select a comment line (#) from the Database Storage Area's selection list and press Enter.

Warning Do not change the storage Area Name. This name matches the Area definition in the data definition files (`.df`) for the database. When Progress encounters data files without defined storage areas, it creates them in the system storage area, which is also used to maintain the structure of the database.

The first configuration screen is Edit Structure File Information. The structure file defines how the database will be created on disk—the storage areas, their sizes, locations, and whether they are fixed or not.

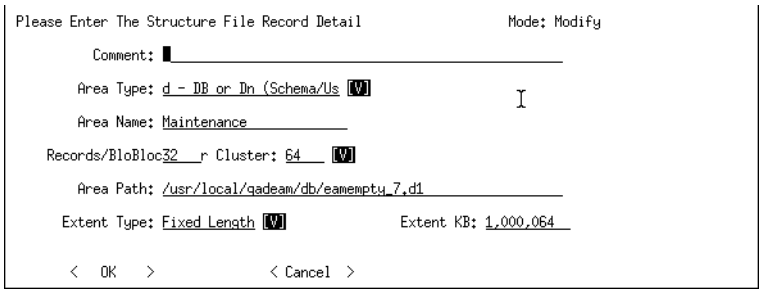
Fig. 4.5
Edit Structure File Information Screen



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

The second screen is the Edit Structure File Detail Screen. Use it to specify additional parameters.

Fig. 4.6
Edit Structure File Detail Screen



Editing Data Load Options

Note Not all databases have data load options. If this is the case, the Edit Data Load Options screen does not display.

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.

Edit System Details Process

To edit the system details, use the following steps:

1. Select QAD *`Environment Name`* Environment under Product. In the Action pane, select Edit System Details.
2. Select Edit System Details in the Steps In Action Set pane.

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

- Edit Database Location - Database Server
- Edit Database Properties - Empty EAM Database
- Edit Structure File Information - Empty EAM Database
- Edit Schema File Information - Empty EAM Database
- Edit BI Truncation Parameters - Empty EAM Database
- Edit Database Properties - Empty Data Acc Database
- Edit Structure File Information - Empty Data Acc Database
- Edit Schema File Information - Empty DB Database
- Edit BI Truncation Parameters - Empty Data Acc Database
- Edit Database Properties - Live EAM Database
- Edit Structure File Information - Live EAM Database
- Edit Data Load Options - Live EAM Database
- Edit BI Truncation Parameters - Live EAM Database
- Edit Database Properties - Live Data Acc Database
- Edit Structure File Information - Live Data Acc Database
- Edit Data Load Options - Live Data Acc Database
- Edit BI Truncation Parameters - Live Data Acc Database
- Compiler Settings - Character Client Code
- Build UI Configuration
- AppServer UBroker Properties - UI AppServer
- WebSpeed UBroker Properties
- Update UI Configuration

Note Update UI Configuration is the only mandatory task.

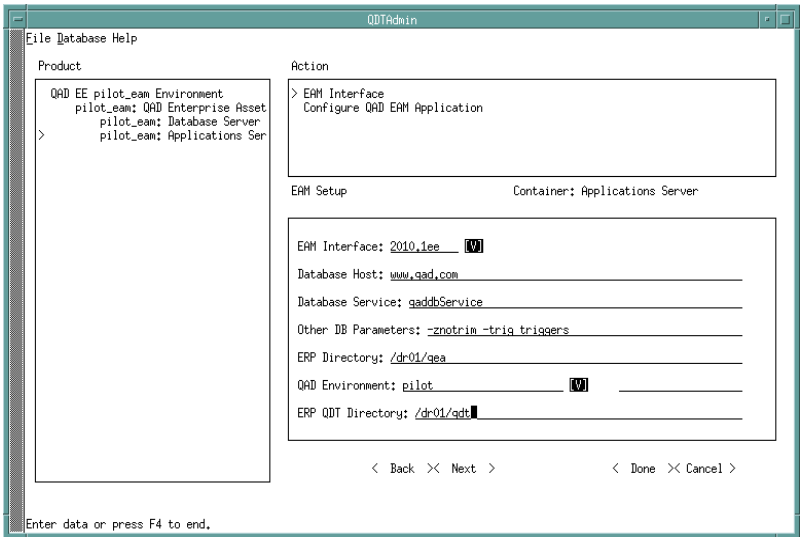
Interfacing to QAD EE and SE

EAM can be interfaced directly with QAD Standard or Enterprise Edition. The default EAM configuration is stand-alone; you are not required to interface to the QAD application.

To establish an interface between EAM and QAD:

1 Select Configure EAM Application from the Action menu.

Fig. 4.7
Configure EAM Application Screen



2 Select the appropriate QAD installation from the drop-down EAM Interface menu. This menu lists the available QAD environments compatible with EAM. `Standalone` is the default selection.

3 Edit the Database Host field, as needed. This is the server where the QAD (qaddb) database resides. This value will be used for the -H (host) parameter in the `qaddb.pf` database connection file.

4 Edit the Database Service field, as needed. This is the Progress service for the QAD (qaddb) database. This value will be used for the -S (service) parameter in the `qaddb.pf` database connection file.

5 Edit the Other DB Parameters field, as needed. Values in this field will be added to the `qaddb.pf` database connection file.

Note Any valid Progress database parameter can be used in this field.

If you are interfacing with QAD SE, you can skip the following steps and proceed to “Completing the Custom Configuration”.

For QAD Enterprise Edition (EE) interfaces only:

6 Edit the ERP Directory field, as needed. This is location of the QAD EE code. If this code resides on another server, then leave it blank.

7 Select the QAD EE environment from the QAD Environment drop-down menu. If this menu is blank or does not contain the preferred environment, the field next to the menu can be used to enter the appropriate value.

8 Edit the ERP QDT Directory field, as needed. This is the directory containing the QAD EE (not EAM) installation code. This value cannot be the same as the EAM QDT installation code directory.

Note QDT will try to extract the QAD EE financial components from the ERP Directory (see step 6) and the ERP QAD Directory (see step 8). If you would prefer to get these components from the EAM files provided, then leave these fields blank, and QDT will extract the values from the EAM directory.

Manually Setting Up QAD EE Financial Components for the EAM Interface

Modification of QAD EE financial component files is required to interface EAM with QAD EE. These modifications are done automatically by QDT. If you would prefer to do these modifications manually, follow the procedure in this section.

Important QDT modifies the QAD EE financial component files automatically. The following procedure is optional.

To manually set up the QAD EE financial components files:

1. Copy *EAM_directory*/programs/fin_src/*QAD_EE_version*/cbserver.tpl to the *QAD directory*/envs/*EAM_environment*/configs directory.
2. Rename *QAD_directory*/envs/EAM_environment/configs/cbserver.tpl to *QAD_directory*/envs/EAM_environment/configs/cbserver.xml.
3. In this file, enter the appropriate information for these values:
   - host = The QAD EE server name
   - nsport = The Progress NameServer port
   - qadfinas = The QAD Financial AppServer name.
4. Copy *EAM_directory*/programs/fin_src/*QAD_EE_version*/env.p and *EAM_directory*/programs/fin_src/*QAD_EE_version*/proxy.pl to the *EAM_directory*/programs/fin directory.

   Note This will overwrite the existing env.p and proxy.pl files in the target fin directory.
5. Create a proxy sub-directory in the *EAM_directory*/programs/fin directory.
6. Copy the directories *EAM_directory*/programs/fin_src/*QAD_EE_version*/bposting and *EAM_directory*/programs/fin_src/*QAD_EE_version*/datasets to the *EAM_directory*/programs/fin/proxy directory.

Completing the Custom Configuration

To complete the custom configuration:

1. If you have no further configuration changes, select Execute. The system prompts you to confirm execution of the configuration process.
2. Select Yes. The configuration process begins. The installation script launches. A window displays the qdtadmin.log file, which records the configuration progress.

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

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

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

Next Steps

If you have installed EAM in multiple environments, launch the application and perform post-configuration for each.

Chapter 5

Launching EAM

This chapter describes how to launch the product.

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Starting EAM

The applications server build creates launch scripts for UNIX and Linux or icons and Start menu links for Windows.

Test your startup scripts with the following steps. You can use these same steps on a regular basis to start Progress database servers and character clients.

Note Before starting EAM, exit completely from the QDT Toolkit. Exiting QDT updates the necessary prerequisites for EAM in the QDT XML files.

UNIX and Linux Installations

Start Tomcat, Progress, and Java if they did not start automatically.

Note The user must have permission to run these scripts.

1 Launch Tomcat and Progress.

Windows:

Tomcat: `/dr01/tomcat/8080/bin/startup.bat`

Progress: Use the Progress Explorer to start the Progress Admin Server and Progress NameServer

Linux:

Progress Admin Server: `$DLC/bin/proadsv -start`

Progress Name Server: `$DLC/bin/nsman -i NS1 -start`

Tomcat: `/dr01/tomcat/8080/bin/startup.sh`

2 Navigate to the `QDT/eam/envs/`*`EnvironmentName`*`/scripts` directory and launch the server script:

Databases: `./start.EnvironmentName`

AppServer broker: `./startqadeam_AS.ksh`

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

Windows Installations

To start EAM, select EAM from the Start menu.

EAM starts.

Exiting EAM

To exit EAM, select End on the EAM Main Menu.

Backing Up the Database

At this point you should do a complete backup of the entire database and directory structure

Chapter 6

Post-Launch Configuration

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

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Overview

This chapter describes how to complete the following tasks:

- Install GUI Administrative Client
- Configure QXtend
- Install the EAM client on a personal computer.

Install GUI Administrative Client

The following instructions assume OE10 client networking and 4GL Development System have been installed into `c:\oe10` and the EAM client is to be installed in `c:\eam`.

To install the GUI Administrative Client:

1. Install OE10 Client Networking and 4GL Development System into `c:\OE10` and edit the DLC environment variable to point to `c:\oe10`.

   Note If for some reason Progress can not be installed in this location, a number files will need to be modified manually. See the steps detailed in the "Non-Standard GUI Administrative Client Installations" section.

2. Unzip the application folders on the Windows admin PC.

   Locate the appropriate GUI client file from the install media `add_ons` folder and unzip to a temporary location. Once unzipped, copy the contents of `<temporary location>\GUI_Client_XXXX` to `c:\eam`. This should create `c:\eam\app`, `c:\eam\pf`, and `c:\eam\shortcuts` sub-directories.

   Note If `c:\eam` is not an acceptable location (perhaps `c:\eampilot` or `c:\eamprod` is preferred), a number of files will need to be modified manually. See "Non-Standard GUI Administrative Client Installations" for details on this procedure.

3. Modify `c:\eam\pf\eam.pf` with the appropriate physical database name, database host name, and database port number or service name.

   If integrated with Enterprise Edition, modify this information in the mfg database connection parameters as well.

4. Run `c:\eam\app\ocx\register.bat` to register the ActiveX (.ocx) files needed by the GUI client.

   Note If EAM is not installed in `c:\eam`, skip this step and perform the steps detailed in the "Non-Standard GUI Administrative Client Installations" section.

To run the GUI Administrative Client, use the shortcut in `c:\eam\shortcuts`.

Non-Standard GUI Administrative Client Installations

If Progress was not installed into `c:\oe10`:

1. Make sure the Windows DLC environment is pointing to the proper location.
2. Modify `c:\eam\app\eam12gui.ini` by modifying the 7th line from `DLC=C:\OE10` to `DLC=<Progress install folder>`.

If the EAM GUI client is not installed into `c:\eam`:

1. Modify `c:\<eam folder>\app\ocx\register.bat` by replacing every instance of `c:\eam` with `c:\<eam folder>`. Once modified, run this .bat file by double-clicking it in Windows Explorer. You can expect 16 succeeded messages.
2. Modify the shortcuts in `c:\<eam folder>\shortcuts` by replacing all instances of `c:\eam` in the `Target:` and `Start In:` values with `c:\<eam folder>`.

Configure QXtend

Enterprise Asset Management can in be integrated with QAD Enterprise Edition. This integration requires QXtend.

QXtend 1.6.2 (and earlier) is not pre-configured for EAM. This section describes the steps must be taken for this integration to work properly.

The following description assumes a working knowledge of the QXtend product, including its configuration and administration.

To configure Qxtend 1.6.2 (and earlier) for use with EAM:

1. Set up the Source Application.
   a. In QXtend Outbound, create a Source Application Type and name it `QADEAM`.
   b. Create a Source Application for QADEAM and name it `QADEAM-2009`.
   c. Define the following two event types for QADEAM-2009:

Event Name	Business Object
GLOut	dsGLTransOut
SOShipOut	dsSOShipOut

2. The QXtend files bundled with the 12.2 media are not correct. Download the 12.2 schema files (`12.2.0.02_Qxtend.zip`) from the QAD Support site.
3. If there are Business Objects and Profiles defined for EAM, delete them through the QXO Web application.

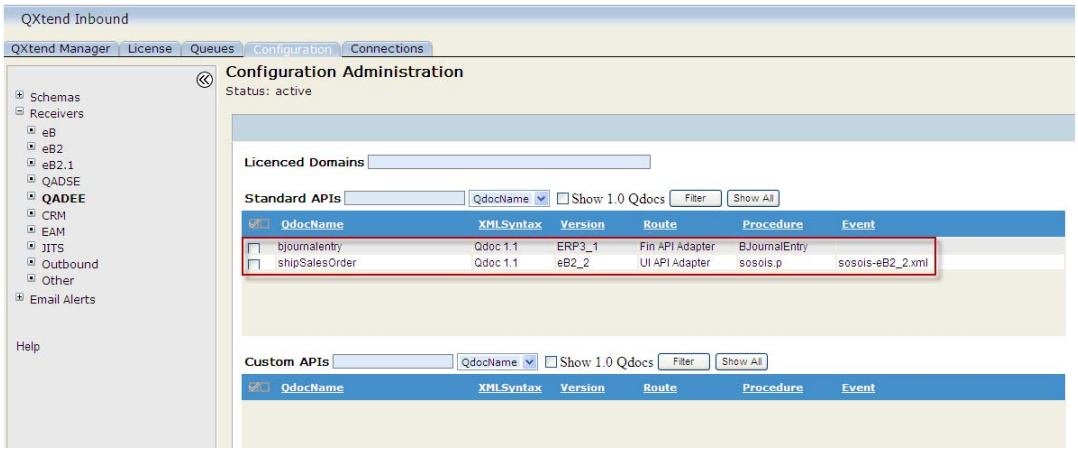
   Note On the QXtend server, navigate to the `<qxtend server folder>/boXML/QADEAM` directory and remove any .XML and .XSD files that may be present. Place the contents of the uncompressed `12.2.0.02_Qxtend.zip` in this folder such that the `<qxtend server>/boXML/QADEAM` directory now contains two .XSD files and the `dsGLTransOut` and `dsSOShipOut` folder each contain two new .XML files.

   If you are installing against Enterprise Edition 2009.1 or higher using Qxtend 1.6.2 or higher, use the Profiles tab to edit the `FINOnlyGLTransOut` profile and exclude the fields `tdTCLCExchangeRate` and `tdTCLCExchangeRateScale` from the `tPostingLine` data object.
4. Register the `QADEAM/dsGLTransOut` and `QADEAM/dsSOShipOut` business objects with an existing message publisher.

5 EAM's integration requires one subscriber per Domain/Entity pair if the system will be using multiple domains and/or entities. Create new subscribers as needed and register the FINOnlyGLTransOut and SalesOrderShipOut with each.

Note Each subscriber must be assigned a receiver that is configured for both FINAPI and UIAPI connection pools. Verify in QXtend Inbound that the receiver is configured for both before completing this step. Verify that the receiver is assigned the bjournalentry (version ERP3_1) and shipSalesOrder (version eB2_2) Qdocs. If these assignments have not been made, do so now.

Fig. 6.1.
QXI with Qdocs Assigned



6 Apply the Sales Order Shipment Patch event patch to Oxtend Inbound.

a On the server, back up `<tomcat>/webapps/<qxi web app>/WEB-INF/events/QADEE/sosois-eB2_2.xml` by renaming to `sosois-eB2_2.xml-orig`.

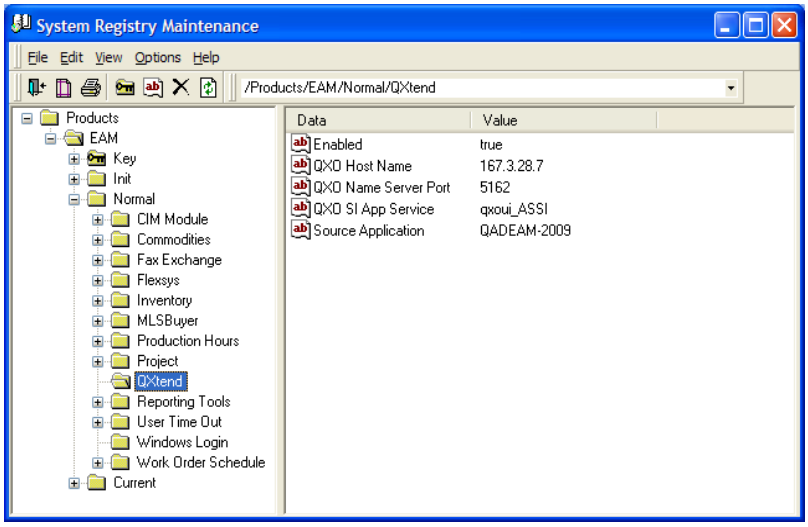
b From the .zip file, extract `qxi\WEB-INF\events\QADEE\sosois-eB2_2.xml` to the server's `<tomcat>/webapps/<qxi web app>/WEB-INF/events/QADEE` folder.

7 Configure the EAM system registry for QAD EE integration.

a In the GUI admin client, navigate to the system registry by opening System Admin|System Control Maintenance|Modules|Registry.

b In the registry, expand Products|EAM|Normal|QXtend.

Fig. 6.2.
EAM System Registry



c Set the following values:

Data	Value
Enabled	True
QXO Host Name	IP Address or DNS name of the server that hosts the QXO ASSI appserver.
QXO Name Server Port	Default is 5162, although this may differ depending on the installation.
QXO SI App Service	The ASSI appserver that EAM will connect to when sending messages to QXtend. This is the app server that connects to the QXODB and runs the startup procedure com/qad/qxtend/siAppServerStart.r
Source Application	QADEAM-2009

Installing the EAM Client on a PC

To install the EAM Client on a personal computer:

- In Internet Explorer, open the following URL:
  `http://tomcat_server:port_number/qadhome_eam`

Note Multiple environments require multiple installation URLs. For example, if a `qadhome_eam_pilot` environment was created in addition to a `qadhome_eam_production` environment, the installation URL for the pilot environment would be `http://tomcat_server:<port number>/qadhome_eam_pilot`.

Glossary

Before-Image (BI) File. A Progress database file containing roll-backward recovery information. Progress employs a mandatory recovery technique called roll-backward recovery. Any time a transaction is called against a database, a snapshot of the data is recorded prior to alteration. The snapshot is held in the before-image file. If a transaction is aborted, Progress returns the database record to the before-image snapshot.

Client Directory. The target directory specified during the installation of the EAM clients. This directory contains all of the compiled EAM code (r-code), as well as master copies of all configuration files. For remote clients, this directory is typically located on a Application Server. For character clients, this directory is typically located on the database server.

Client Machine or Client PC. The machine in a client/server configuration, often a PC, that runs the client session.

Client Session. An executable running an application that accesses a server running a database. Progress, regardless of the hardware platform, uses a client process and a server process.

Client/Server. The configuration in which a client session runs on a separate machine from the database server process.

Client/Server Connection. A connection in which a client session runs on a separate machine from the database server process. When using a client/server connection, the database host and service name parameters must be defined for both the client and server views of a database. Additionally, these parameters must also be defined in the `Services` files on the server and client machines.

Code Page. A character set used to map data represented in one code page to another. Since a code page is specific to your hardware or operating system, Progress converts data from one code page to another. If the client code page is different than the database code page, Progress handles the conversion between them.

Conversion. Refers to the transition from one numbered release to the next. Conversions involve program fixes and, in some cases, major schema changes.

Data Definition File. A file containing the database table, field, and index definitions that make up the schema of a specific EAM database. Has a .df extension.

Database Definitions. Characteristics of the database schema, including field names, table names, validation expressions, labels, initial values, and others.

Database Server. Can refer to either the Progress software task that supports multi-user access to a database or the machine on which the database is located.

Database Set. A set of databases that form a logical group. QDT uses the concept of database sets to generate server and client startup and shutdown scripts and icons. The standard EAM database set consists of a main database and additional support databases.

Database Structure File. A file that defines the structure of a Progress database. A database structure file contains the definition of each storage area and the extents within those storage areas that make up the database. A database structure file has a `.st` extension.

Default System Data. The data that initially populates the menu, messages, printers, language code, and other default data files.

Empty Database. The initial Progress database defined by the database structure file, but without data.

Extent. Physical units of a database that provide the ability to split the database across multiple physical disks or logical volumes. Extents contain blocks of database objects. There are two types of extents: fixed- and variable-length.

Fixed-Length Extent. An extent with a fixed size. Fixed-length extents let you control the size of the extents within a storage area and to plan and manage hardware resources such as disk space.

GL. General Ledger.

Help Database. A database that contains all of the field and procedure help as well as the source code cross-reference data. You can use a single help database in multiple database sets.

Host Name. The name of the machine where a database is located.

Local Client. A client process running on the same machine as the database process.

This allows the client session to communicate directly with the database rather than over the network. This type of connection greatly increases system performance. By default, EAM character clients are local clients.

Log File. A file created each time QDT completes a series of tasks. You can view log files in QDT or in any text editor.

Logical Database Name. The database name used to compile programs. When the program executes, the logical database name must correspond to the logical database name of a connected database.

Main Database. The database that contains the bulk of the transaction data for a given environment.

Network File System (NFS). A client/server application that lets a user view and optionally store and update files on a remote computer as though the files were on the user's own computer.

Object ID (OID). A means of uniquely identifying a database record.

Physical Database Name. The name you have given the database schema area file (extension `.db`).

EAM Installation Directory. The target directory specified during the installation of the EAM database server media. This directory is located on the database server machine and contains all of the database-related files for an EAM environment

QAD Deployment Toolkit (QDT). QAD's installation, conversion, and deployment tool.

R-code. A term used to describe EAM compiled code, derived from the `.r` file extension.

Schema. The definition of a database including the tables it contains, the fields within the tables, indexes, and views. In addition to database definitions, EAM schema contain items such as validation expressions and messages.

Server. This term identifies both a software process and hardware. The definition depends on the context. The most common uses are: 1) to designate the Progress process that controls multi-user access to a database; 2) a machine that enables client connections to a shared resource.

Single-User Mode. A client connection mode that allows only a single user to connect to a database. Single-user mode is invoked by using the `-1` startup parameter in the client startup script or parameter file.

Startup Parameter. A Progress parameter used when a database server is started or when a client connection is made to a database.

Storage Area. The largest physical unit of a Progress database. Storage areas provide control over the location of database objects such as tables and indexes within a database. Each storage area includes one or more extents.

Striped Disk Arrays. Method of distributing a file system over multiple storage disks. Striping increases the file system data rate (bytes transferred per second) and I/O rate (I/O requests per second).

Support Database. An EAM on Progress database that contains system or user data.

Two-Phase Commit. A Progress feature that ensures transactions that update two or more databases occur consistently. During the first phase, Progress verifies that the databases are available for update. During the second phase, Progress commits the transaction and updates the databases. For more information, see the *Progress Database Administration Guide and Reference*.

Variable-Length Extent. An extent without a pre-defined length. Variable-length extents continue to grow until they use all of the free space on the disk or reach a maximum size of two gigabytes (2 GB).

Windows Application Server. A server that enables multiple client machines to share common files and directories. QAD recommends storing EAM Windows code on a Application Server to enable centralized administration of the code and client configurations.