QAD Enterprise Applications

Installation Guide

Enterprise Asset Management

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Contents

QAD Enterprise Asset Management Install Guide Change Summary

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

Date/Version	Description	Reference
March 2014/EAM 12.7	Added section to set up Progress editor	page 62
	Added information on starting QDT in AIX environments	page 4
	Updated supported Java versions	page 5 page 6 page 6
	Updated the Tomcat Web server information	page 6
November 2013/EAM 12.6 Rev 1	Added note regarding users upgrading from QAD SE to EE	page 3
October 2013/EAM 12.6	Revised QDT Installation	page 10
	Moved Installing Media to Linux to Ch. 2	page 15
	Revised Custom EAM Configuration	page 23
	Added the Configure QXtend procedure	page 46
April 2013/EAM 12.5.2	Rebranded 12.5.2	--
	Added Upgrading From a Previous Version of EAM section	page 7
December 2012/EAM 12.5.1	Updated EAM 11 to EAM 12 conversion information.	page 7
September 2012/EAM 12.5.1	Updated Progress database server software requirements.	page 5
	Updated Fixed Asset patch procedure.	page 37
April 2012/EAM 12.5	Removed obsolete language-specific scripts information.	--
	Removed editing language details information.	--
September 2011/EAM 12.4	Updated installation media add-on files information.	page 7
	Added fixed asset patch installation procedure detailing upgrade procedures. Updated other version-specific information.	page 37

Chapter 1

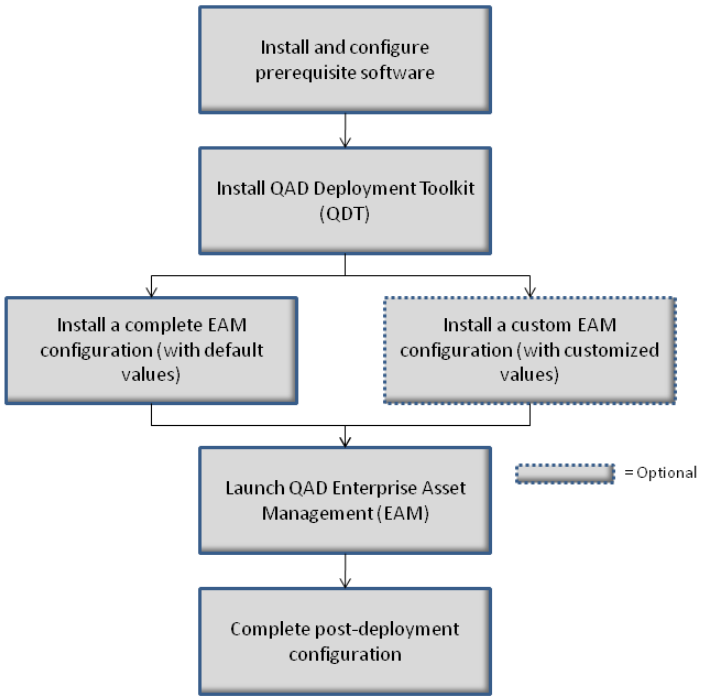
Installation Overview and System Requirements

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

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 the 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 consists 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

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.

Sizing and Capacity Planning

The database server contains EAM and Progress server software, as well as your production data. Before starting an installation, estimate the eventual size of your production database and the demands placed on the different database components 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:

- The system administrator must be an experienced Progress database administrator who can manage Progress client processes.
- A 100 Mbps 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
- QAD 2008 Standard Edition or greater

Note Supported versions of QAD Enterprise Edition and QAD Standard Edition that integrate with QAD EAM 12 can be found in the *QAD Enterprise Asset Management Release Notes* and on the drop-down menu of the QDT Installation.

Important If you are upgrading from QAD SE to EE, there is currently no migration tool for EAM. For further assistance, contact QAD Support.

Software and Hardware Prerequisites

The following sections describe the software and hardware requirements for your QAD EAM installation.

Note

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

http://support.qad.com

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

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

UNIX Considerations

X terminal

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

AIX

You cannot launch QDT on AIX if Concurrent I/O (CIO) is enabled. You must disable CIO or move QDT to another file system on the server and launch QDT from the new location.

Red Hat 6

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

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

Installation of QAD Enterprise Edition in Red Hat 6 environments requires use of the `qadinst_RH6_64bit` or `qadinst_RH6_32bit executable`.

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. You maintain your system without logging on as root.

Follow these steps to create the installation group and user:

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`*

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/

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

Database Server

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

Table 1.1
Database Server Requirements

Software	Hardware	Notes
Progress OpenEdge 10.2B or higher, including the following: • Latest Progress version-specific patches with a minimum patch of 10.2B07 or higher. • 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 6 or higher Graphical Web browser Operating system patches	4 GB free disk space for single-language installation 700 MB free disk space for each additional language Operating system patches Approximately 10 GB of free disk space for data structures. This estimate is based on a 5-7 GB production database. 100 Mbps network card ISO 9660 DVD 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 10.2B08 or higher, including the following: • Latest Progress version-specific patches with a minimum patch of 10.2B08 or higher. • Enterprise DB Server for appropriate number of users • Application DB Server • 4GL Development, one license • Progress AdminServer. Java 6 or higher Operating system patches	At least 12 GB free disk space per environment (pilot, production, and so on)	Perform a Complete installation, not a Typical or Custom installation of Progress components. If Progress installs its own version of Java and it differs from the version required by the Web server (see below), do not remove the Progress-installed Java version when installing the Web server version. Depending on your Progress release, you may need to install Java before installing the Progress component. If so, use Java 6 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 7 Java 6 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.

EAM Add-On Files

In the `add_ons` directory of the QDT EAM 12 installation media, there are two subdirectories that may be needed to complete your installation:

- `QAD_patches` contains patches that may be needed for Fixed Assets integration and older versions of QXtend.
- `v12upgrade` contains instructions and tools to help upgrade older versions of EAM 12.

Upgrading EAM 11 to EAM 12

Upgrading an EAM 11.x installation to EAM 12.x requires use of a conversion utility. Contact QAD Support to obtain the latest version of the utility and for assistance with its use.

Upgrading From a Previous Version of EAM

If you are upgrading from a previous version of EAM, check your installation media for any additional upgrade instructions.

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.

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.

QDT provides two EAM installation options:

- 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 or QAD Enterprise Applications Standard Edition, then a custom installation 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.

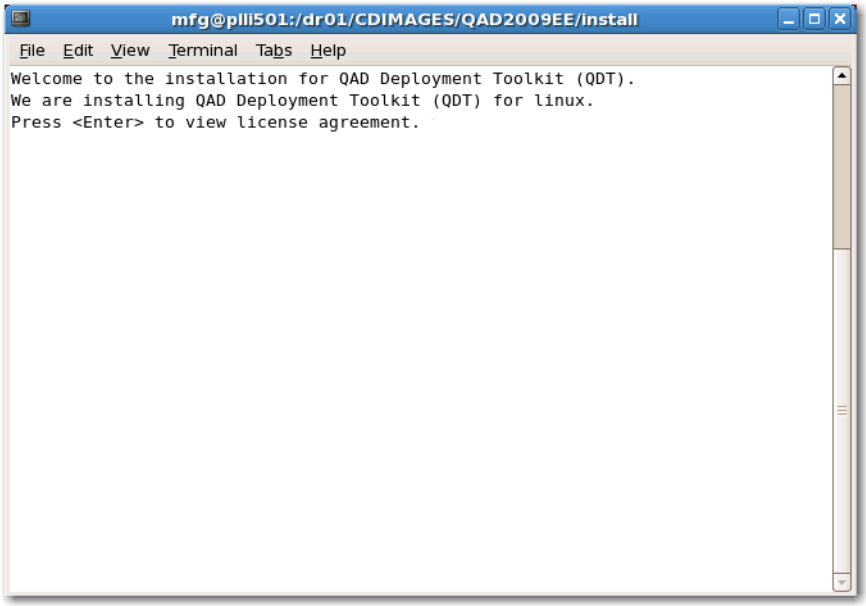
Note If you intend to view the UNIX or Linux QDT graphical user interface on a machine other than the machine on which QDT is installed, you must have a graphical environment with full X-Windows capability installed on that machine. One option is the TightVNC open source cross-platform remote desktop 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. Open an x-terminal window.
2. Ensure that the OpenEdge Admin Server and Name Server are running.
3. Launch the installation using the appropriate file for your operating system. For example, use `./install.ksh` for Linux/UNIX and `install.exe` for Windows. A command window displays informing you that you are installing QDT.

Fig. 2.1
Installation Window for a UNIX/Linux Installation



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

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

6 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.

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, you might choose `/<qadappsfolder>/qdt-qadeam-pilot`, `/<qadappsfolder>/qdt-qadeam-prod,` or something similar.

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

7 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.

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

9 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.

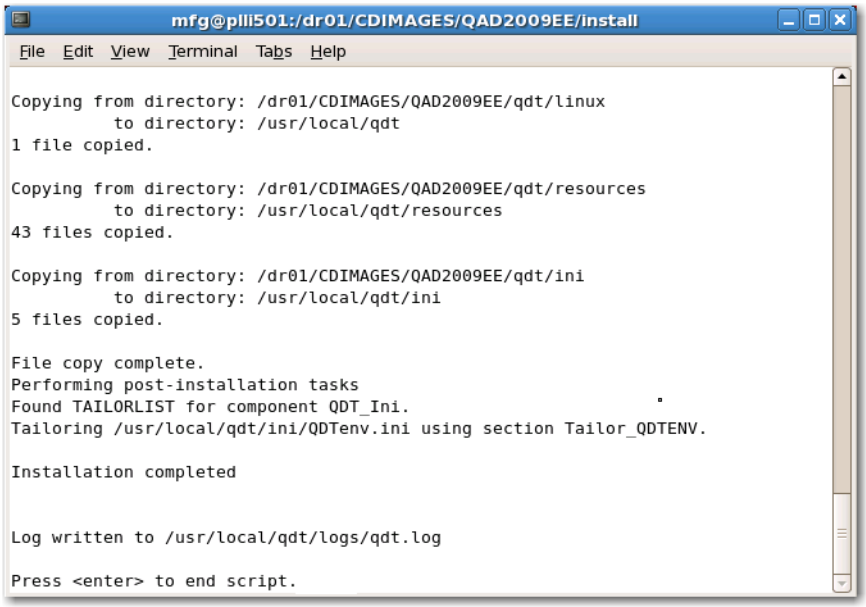
10 If the `xml` directory does not exist, you are prompted to confirm its creation.

11 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.

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

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

Fig. 2.2
Installation Summary



14 Press Enter to exit the installation script.

15 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

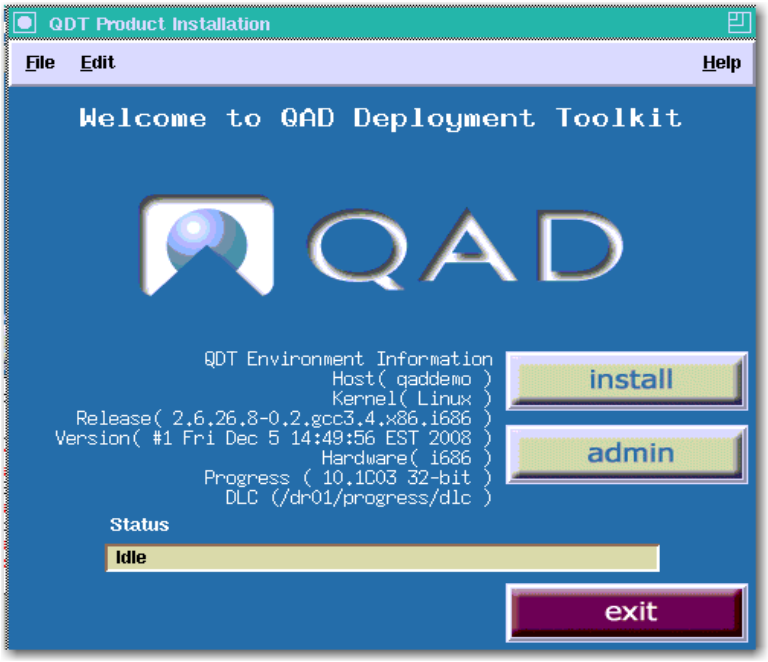
1 If you are using Windows, start QDT by selecting Start|All Programs|QAD Deployment Toolkit|Start QDT.

If you are using Linux or UNIX, start QDT by running the appropriate installation script for your version in the `/usr/local/qdt`.

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

2 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



3 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 either 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.

4 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.

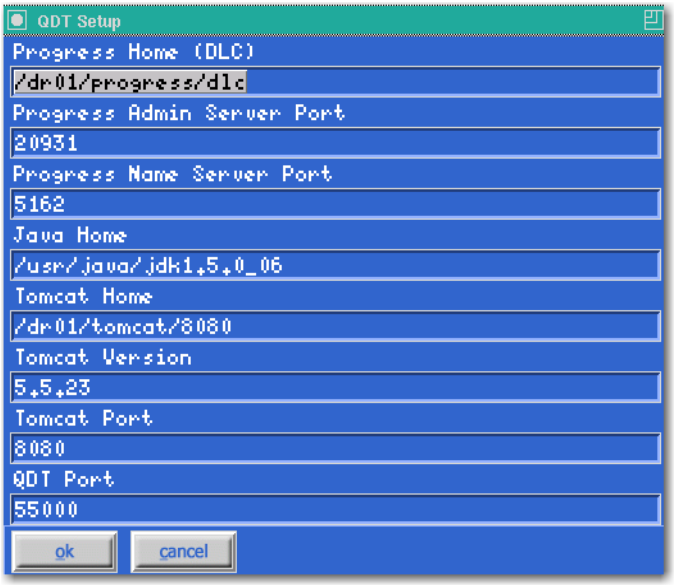
If system information is not displayed on the QDT main screen or incorrect information is displayed, you must set these system defaults through QDT's Set System Default function.

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



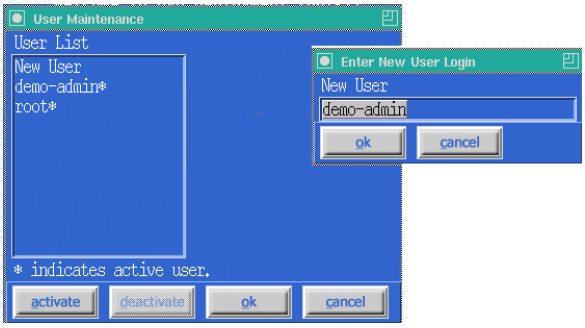
3. Select OK to close the screen and save the changes.

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. To add a new user, highlight New User and click Activate.
3. Enter the User ID and click OK.

Fig. 2.5
Adding Users



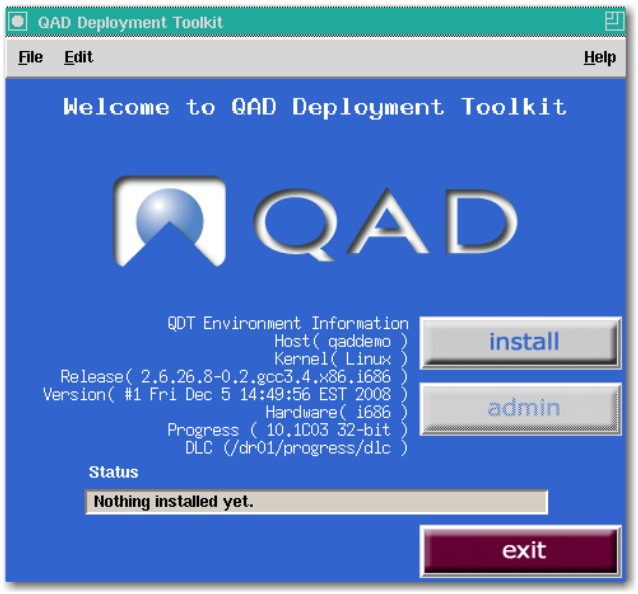
4 Select OK to close the screen and add the users.

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.

Installing the Media to Linux/UNIX

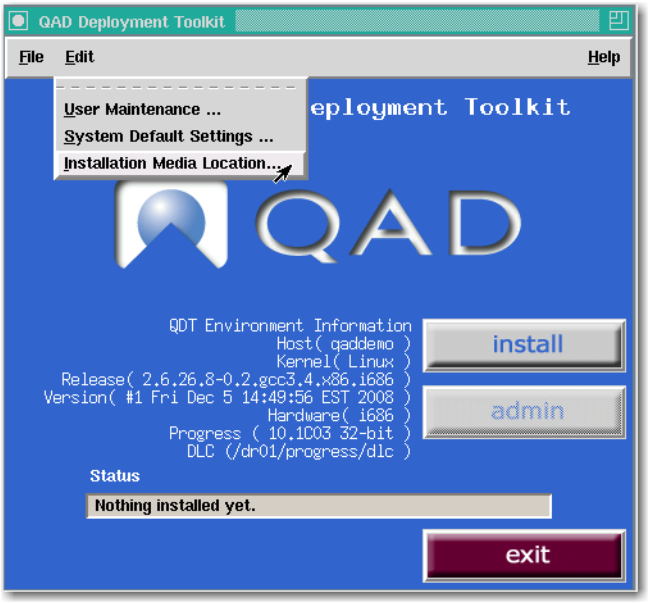
1 If the QDT welcome screen is not open, launch QDT by entering `./qadinst`.

Fig. 2.6
Select Install



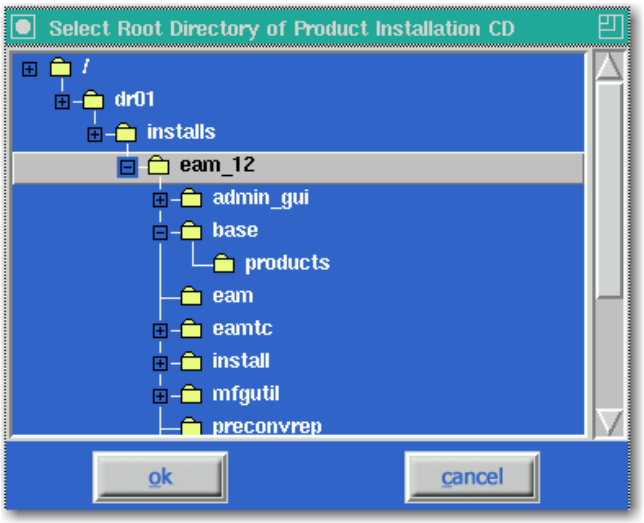
2 Select Installation Media Location from the Edit drop-down menu.

Fig. 2.7
Select Edit|Installation Media Location



3 Browse to the `installs/EAM_<version>` directory in the install folder. Click OK.

Fig. 2.8
Select Edit|Installation Media Location



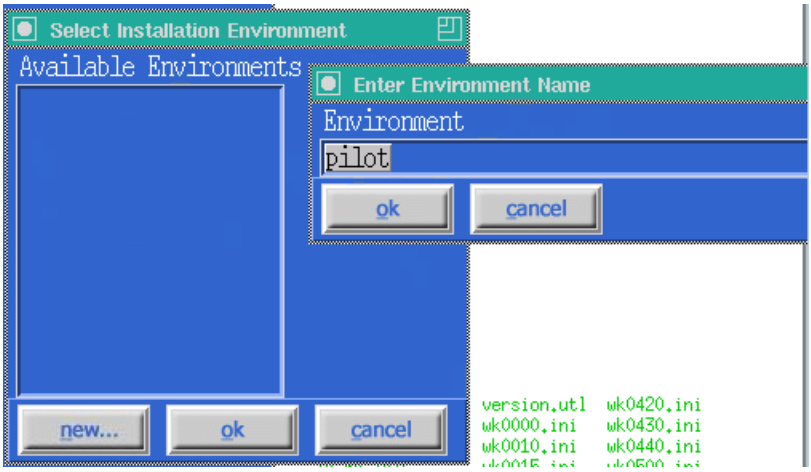
4 Click Install to install the environment.

5 Click New.

6 Enter the name in the Environment Name dialog box and click OK.

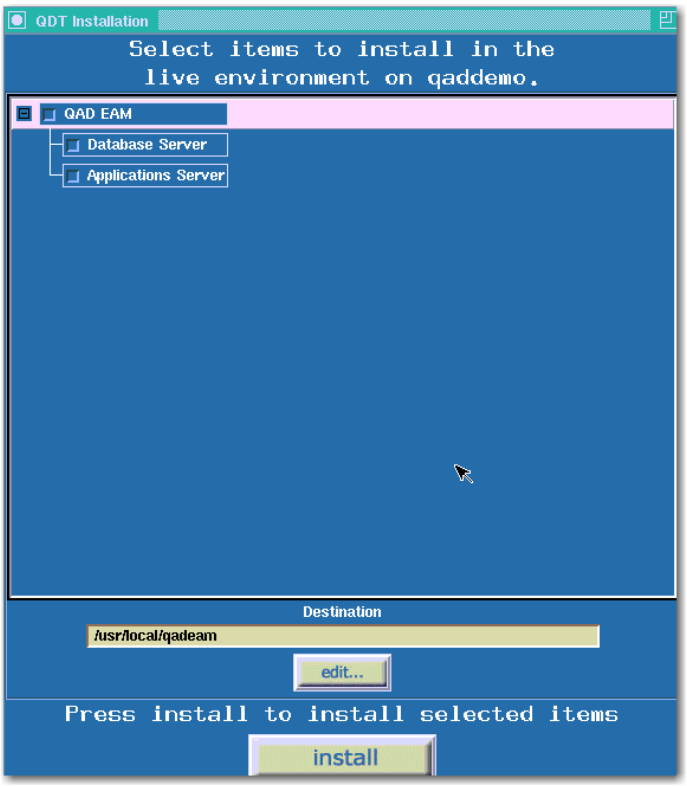
7 Click OK.

Fig. 2.9
Select Edit|Installation Media Location



8 Verify that all of the products are selected.

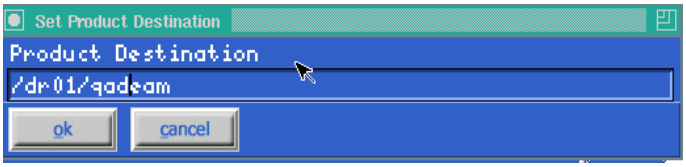
Fig. 2.10
Verify Products to Install



9 Verify that the destination to EAM is correct. To edit the destination, click Edit and then enter the correct destination in the Set Product Destination window.

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. 2.11
Verify Path



10 Click OK.

11 Click Install.

12 A window displays the log file. When the message, “End of install process” appears, click Close.

Next Step: Default or Custom Installation

You have the option of using QDT to perform:

- A complete installation without modifying the default configuration values

  or,

- A custom install in which you modify the default configuration values

Installation Using Default Configuration

If you choose the default EAM installation, the EAM configuration is stand-alone. QDT automatically finds the previously defined system information required to configure an EAM installation. In most cases, you can use default configuration information.

For default EAM installation instructions, see Chapter 3, “Installing a Complete EAM Configuration,” on page 19.

Custom Installation

If you choose a custom installation, EAM can be interfaced directly with QAD Enterprise Edition (EE) or Standard Edition (SE). The default EAM configuration is stand-alone; however, using the custom installation procedure described in this chapter, you can create an interface to QAD EE or SE.

For instructions to perform a custom installation, see Chapter 4, “Installing a Custom EAM Configuration,” on page 23.

Chapter 3

Installing a Complete EAM Configuration

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

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 or Standard Edition. The default EAM installation is stand-alone. If you are interfacing your EAM installation to QAD EE or SE, see Chapter 4, “Installing a Custom EAM Configuration,” on page 23.

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 23. EAM databases are by default configured for Unicode (UTF-8) for support of non-English character sets.

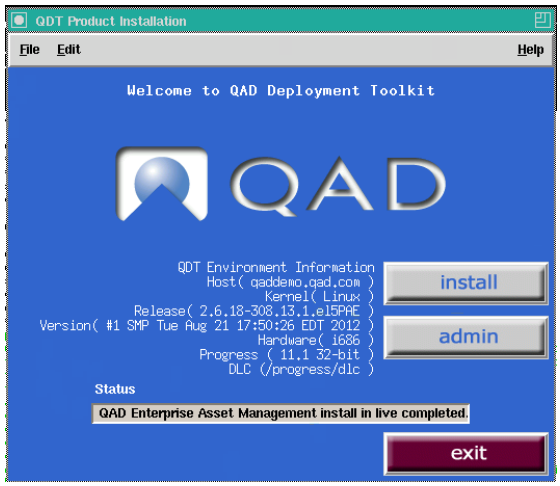
Configuring the Admin Environment

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

Note This section shows you how to perform the default EAM installation. When you choose the default EAM installation, the EAM configuration is stand-alone. QDT automatically finds the previously defined system information required to configure an EAM installation. In most cases, you can use default configuration information.

1 Return to the main QDT screen and click Admin.

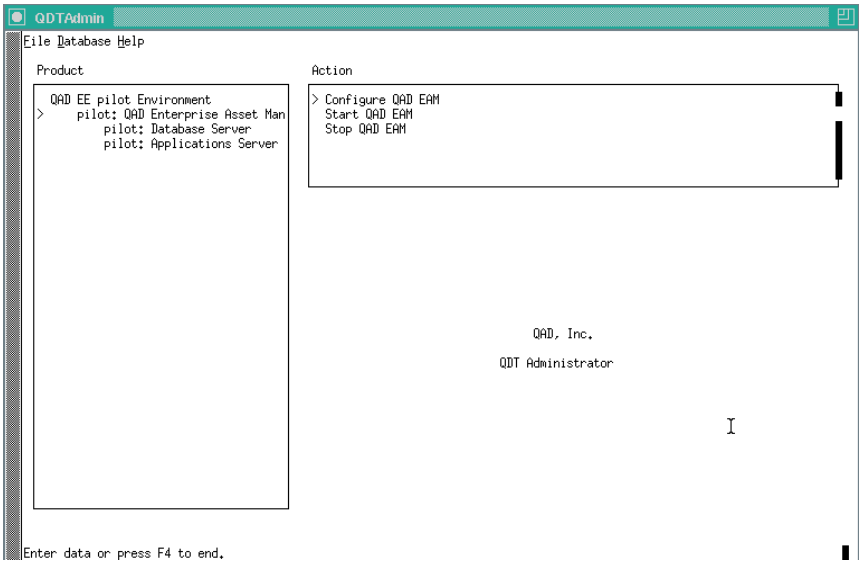
Fig. 3.1
Select Admin



2 The QDT Administrator window opens. In the Product pane, select the environment to configure.

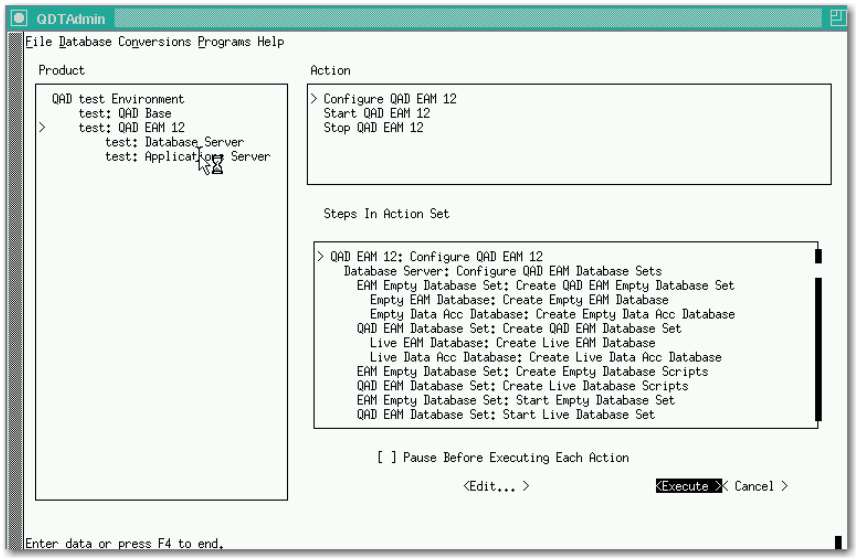
Note To expand the tree, highlight an item and press Enter.

Fig. 3.2
QDT Admin



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

Fig. 3.3
Configure EAM Screen with Update UI Configuration Action Step



4 Select Execute to begin the configuration process.

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

6 You are prompted to clear the log. Enter yes.

7 A confirming message box appears. Select OK.

8 Select Close. 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 does not affect the system.

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

10 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.

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 and SE

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

See “Interfacing to QAD EE and SE” on page 33 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, perform the applicable configuration procedures in this chapter for each environment separately.

Installing and Configuring a Custom Installation

Follow the steps to install the EAM files in “Configuring the Admin Environment” on page 20. After QDT installs the EAM files on your server, configure the environment.

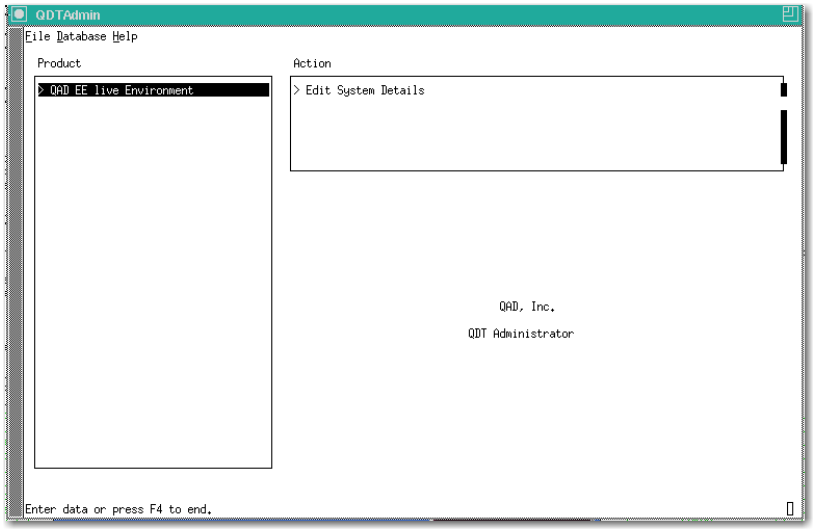
To configure the EAM environment:

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

Fig. 4.1
Select Admin

2 In the Product pane, highlight the environment that you are configuring by using the up and down arrows.

Fig. 4.2
QDT Admin Screen

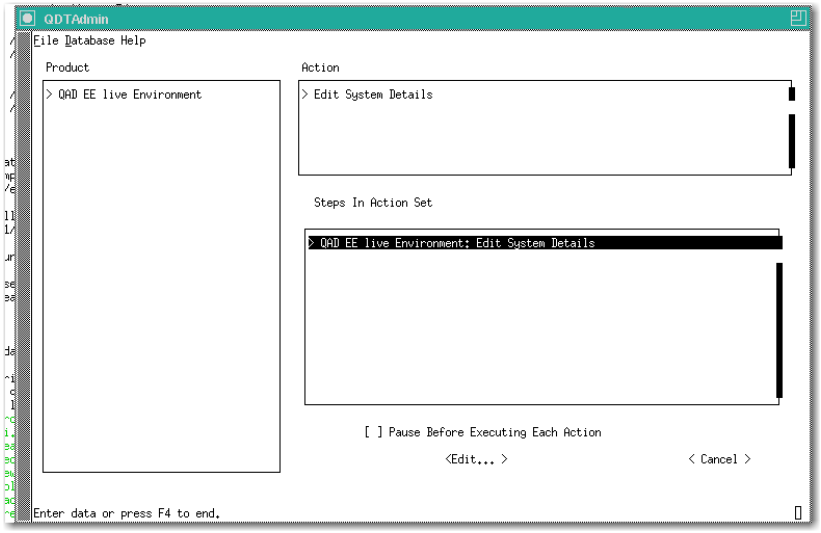


3 Press Tab to navigate to the Action pane.

4 Edit System Details is highlighted. Press Enter.

5 The Steps in Action Set pane appears. Press Enter to edit the system details.

Fig. 4.3
QDT Admin Screen

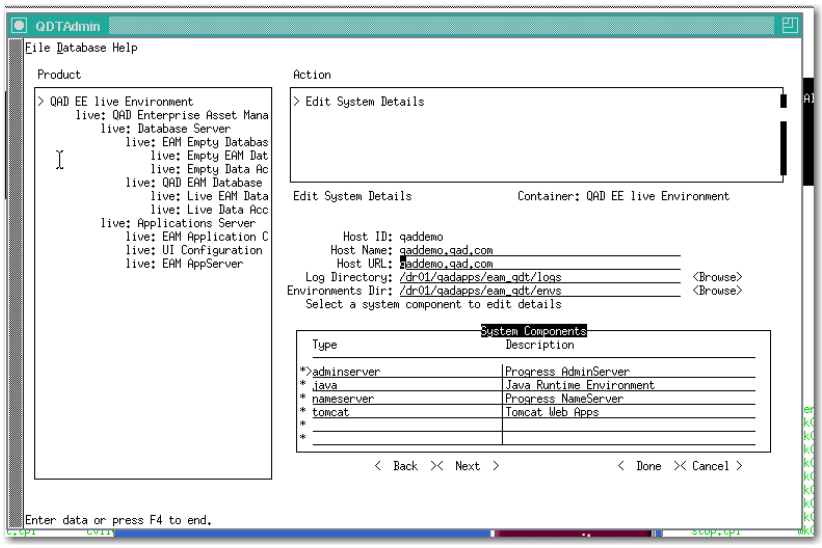


Editing System Details

The Edit System Details function allows you to specify the versions and locations of prerequisite third-party software. Under normal circumstances, the system automatically gathers this information and nothing must 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` just edits the database settings.

Fig. 4.4
Edit System Details



6 In the Edit System Details window, verify that the following are correct. To make changes to the settings, highlight the setting and press Enter.

- Host ID

- Host Name
- Host URL
- Log Directory
- Environments Directory
- Progress AdminServer
- Java Runtime Environment
- Progress NameServer
- Tomcat WebServer

7 Once the system details have been verified, select Done.

Configuring Databases

There are four EAM databases: the empty and live EAM databases and the empty and live DATAACC databases. For each of these databases, you must verify the following settings:

- Database Location
- Database Properties
- Structure File Information
- Schema File Information
- BI Truncation Information
- Data Load Options

Once you verify the settings for a database, cycle through the settings again for the next database. Continue this until you verify these settings for all four databases.

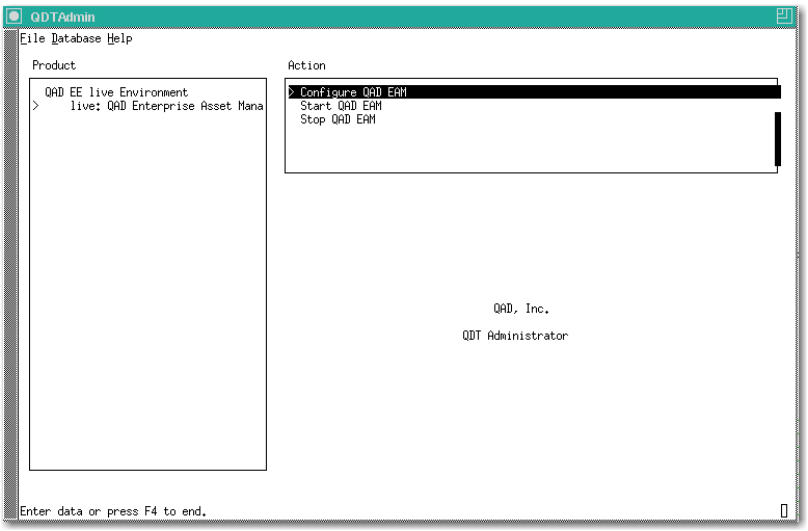
8 In the Product pane, press Enter to expand the tree menu.

9 Highlight QAD EAM.

10 Press Tab to navigate to the Action pane.

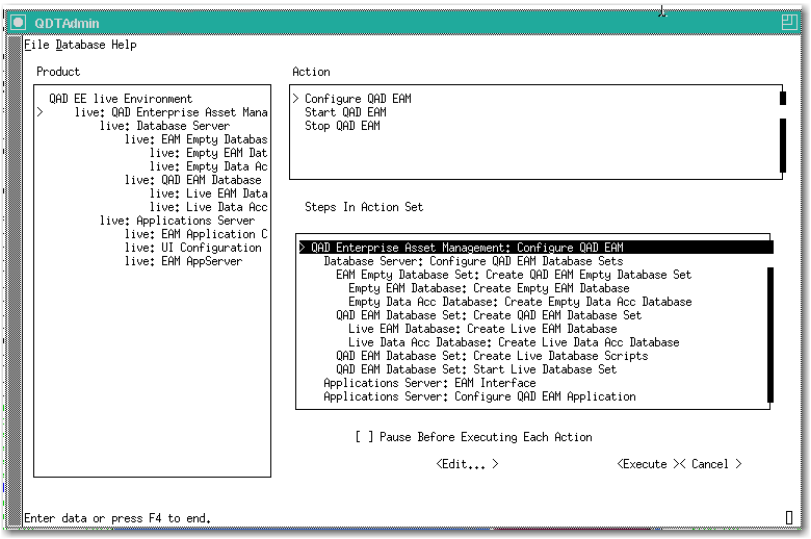
11 Press Enter and select Configure QAD EAP.

Fig. 4.5
Edit System Details



12 The Steps in Action Set pane appears.

Fig. 4.6
Configure EAM Database Action Steps

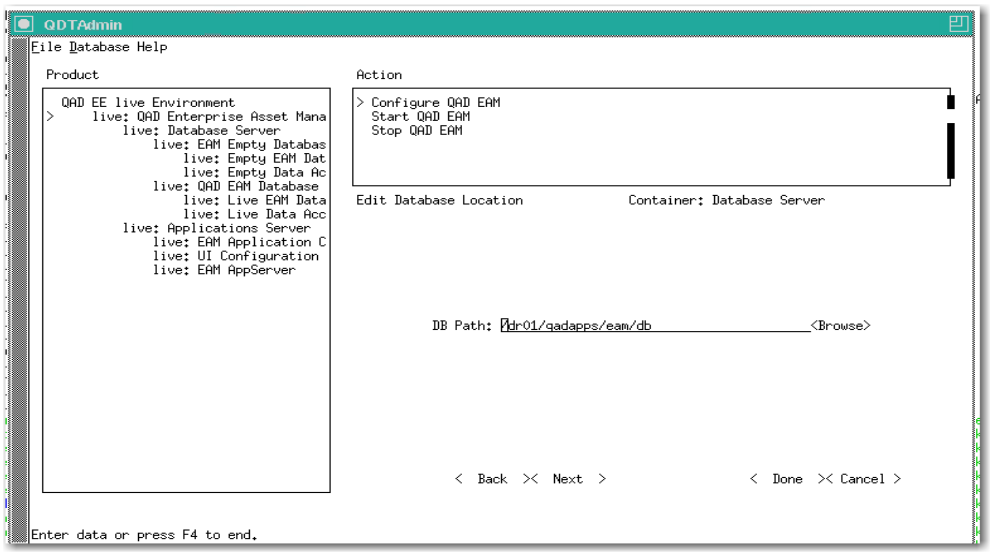


13 Highlight the first step in the Step in Action Set pane. Press Enter.

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

14 Verify that the Database Location is correct. Select Next.

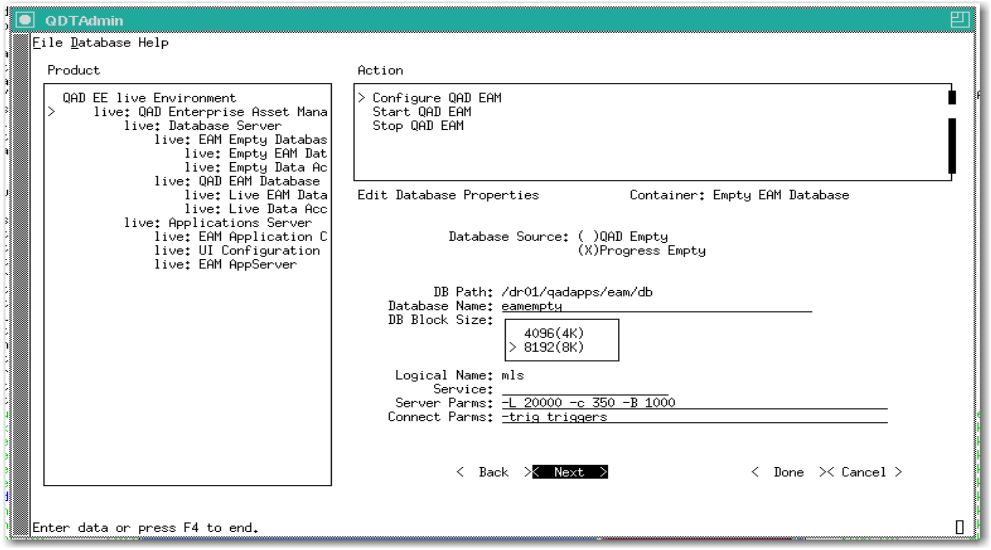
Fig. 4.7
Edit Database Location



15 Verify that the following Database Properties are correct:

- Database Source
- Database Path
- Database Name
- Database Block Size
- Logical Name
- Service. For the EAM and DATAACC databases, verify that Service Numbers are available. For the empty EAM and DATAACC databases, the Service Number should be blank.
- Server Parms
- Connect Parms

Fig. 4.8
Edit Database Properties



16 Once you verify that the Database Properties are correct, select Next to go to the Structure File Information screen.

Structure File Information

The Edit Structure File Information defines how the database is created on the disk—the storage areas, their sizes, locations, and whether they are fixed.

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. 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.

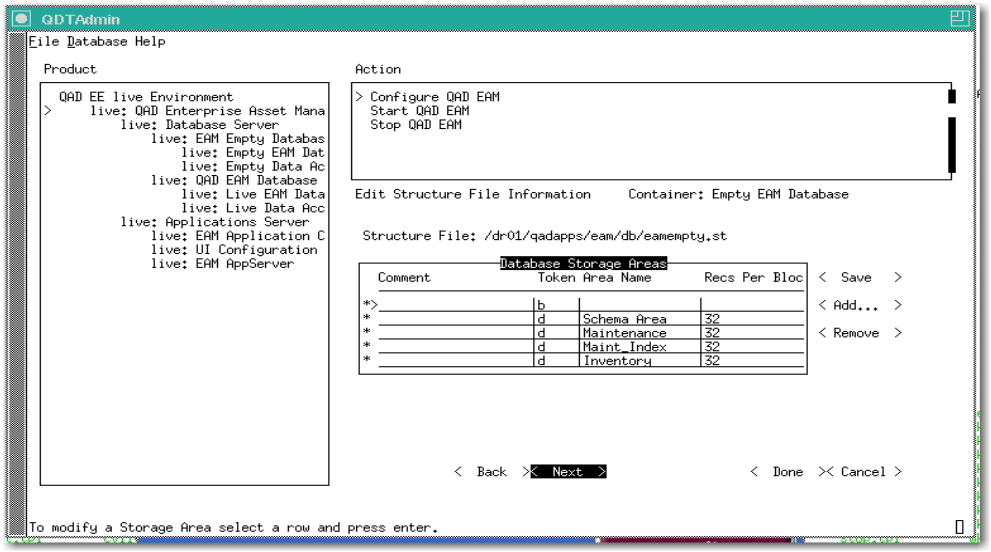
Warning Do not edit the Comment line in a storage area. This converts the storage area definition to a comment and nullifies the storage area. To add a comment to the file, select a comment line (#) from the Database Storage Area's selection list and press Enter.

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.

17 Verify that the Structure File Information is correct.

If necessary, 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.

Fig. 4.9
Edit Structure File Information

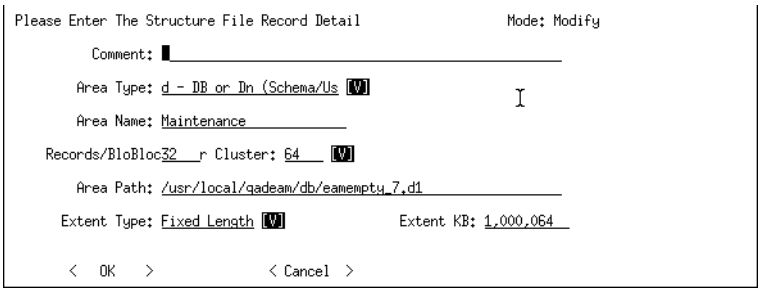


If you select Edit, the Edit Structure File Detail Screen appears. If necessary, modify the following parameters.

- Comment
- Area Type
- Area Name
- Records/BloBloc
- Cluster
- Area Path
- Extent Type
- Extent KB

Select OK to save the changes and return to the Edit Structure File Information screen.

Fig. 4.10
Edit Structure File Detail Screen



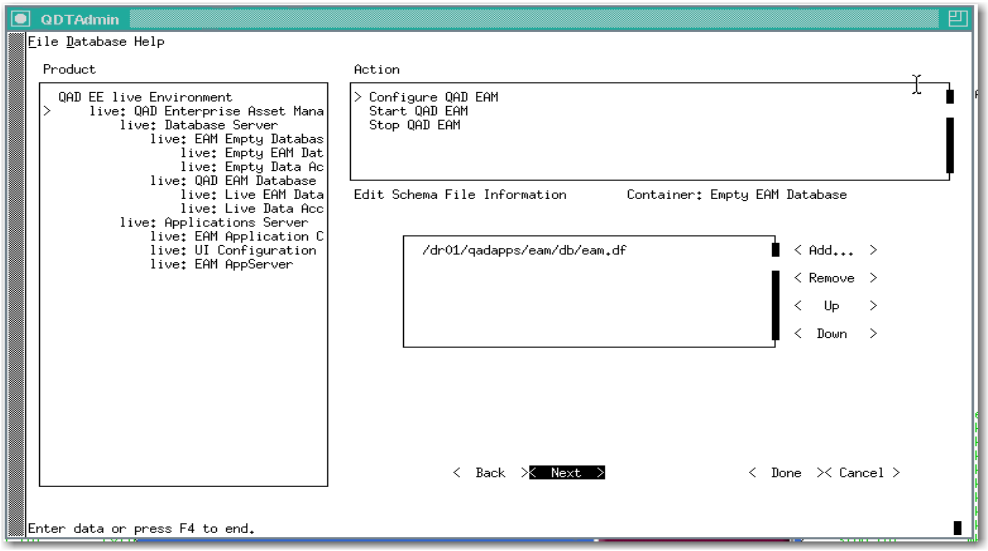
Note If error messages are generated during this process, they can generally be disregarded. Continue with the process. If you are unable to continue, contact QAD Support for assistance.

18 Once you verify that the Structure File Information is correct, select Next.

Schema File Information

19 Verify that the Schema File Information is correct. Select Next.

Fig. 4.11
Edit Schema File Information

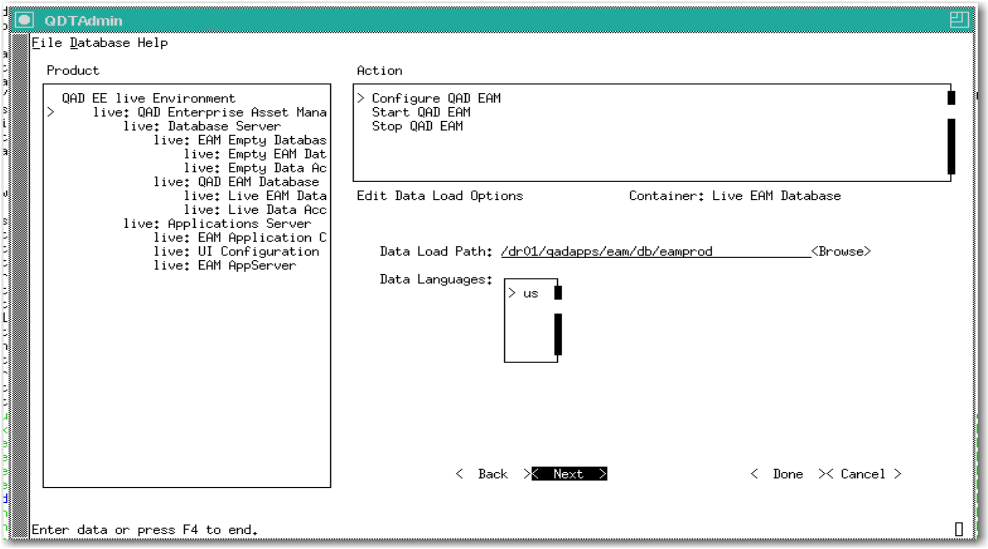


Editing Data Load Options

20 Verify the Data Load Options. Select Next.

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

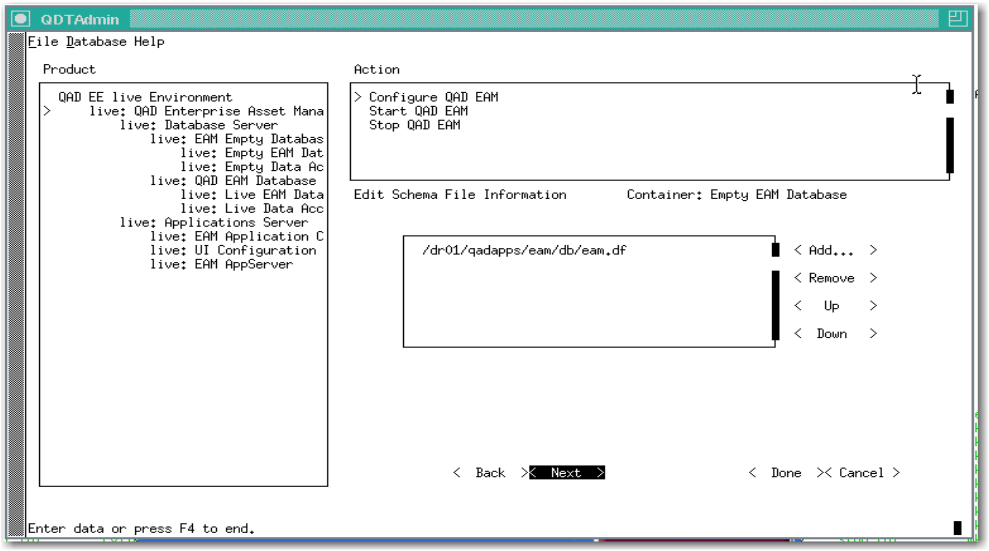
Fig. 4.12
Edit BI Truncation Parameters



BI Truncation Parameters

21 Verify that the BI Truncation Parameters are correct. Select Next.

Fig. 4.13
Edit BI Truncation Parameters



Configure the Settings for the Remaining Databases

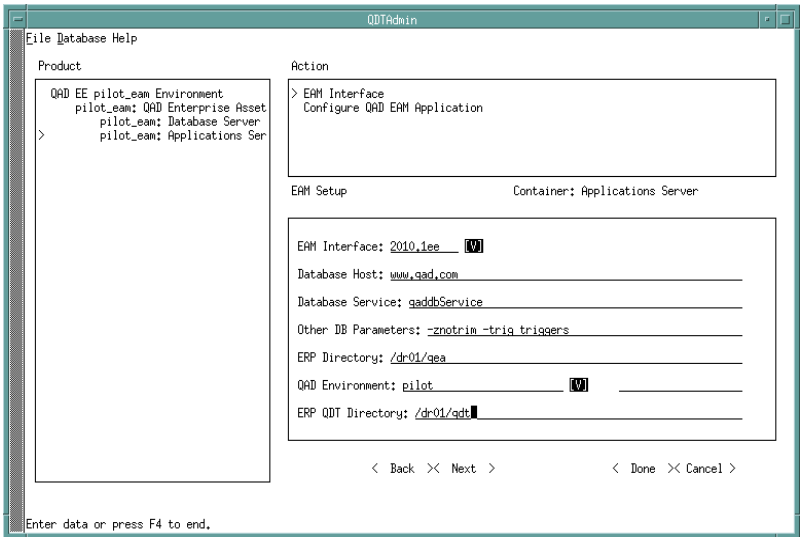
22 After you verify the BI Truncation Parameters and select Next, you are brought to the Edit Database Properties screen for the next database. Repeat the configuration steps for the remaining databases.

Interfacing to QAD EE and SE

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

23 Select Configure EAM Application from the Action menu.

Fig. 4.14
Configure EAM Application Screen



24 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.

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

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

27 Edit the Other DB Parameters field, as needed. Values in this field is 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” on page 37.

For QAD Enterprise Edition (EE) interfaces only:

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

29 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.

30 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.

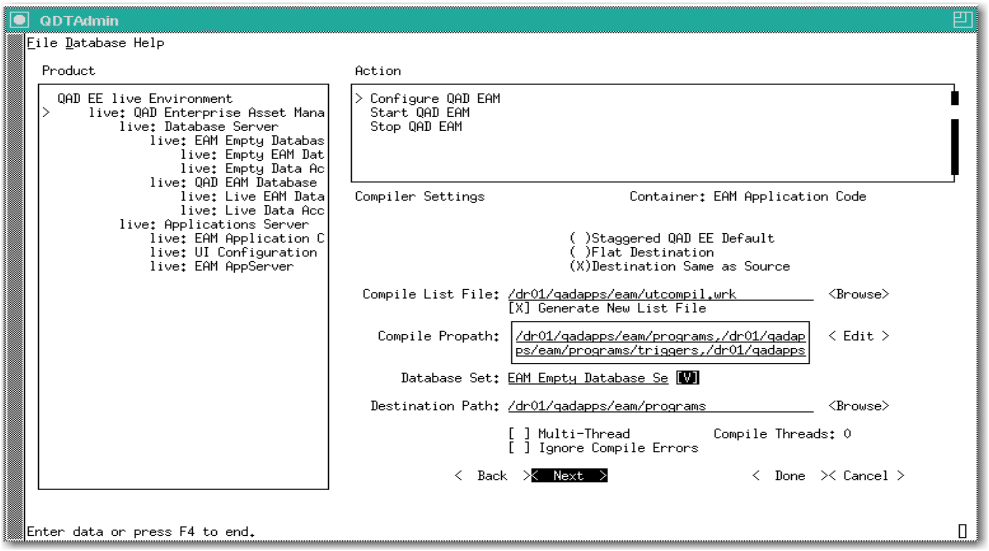
Note QDT tries to extract the QAD EE financial components from the ERP Directory (see step 6) and the ERP QAD Directory (see step 8). If you would prefer to get these components from the EAM files provided, then leave these fields blank, and QDT will extract the values from the EAM directory.

31 Click Next and configure the environment settings.

Configuring Environment Settings

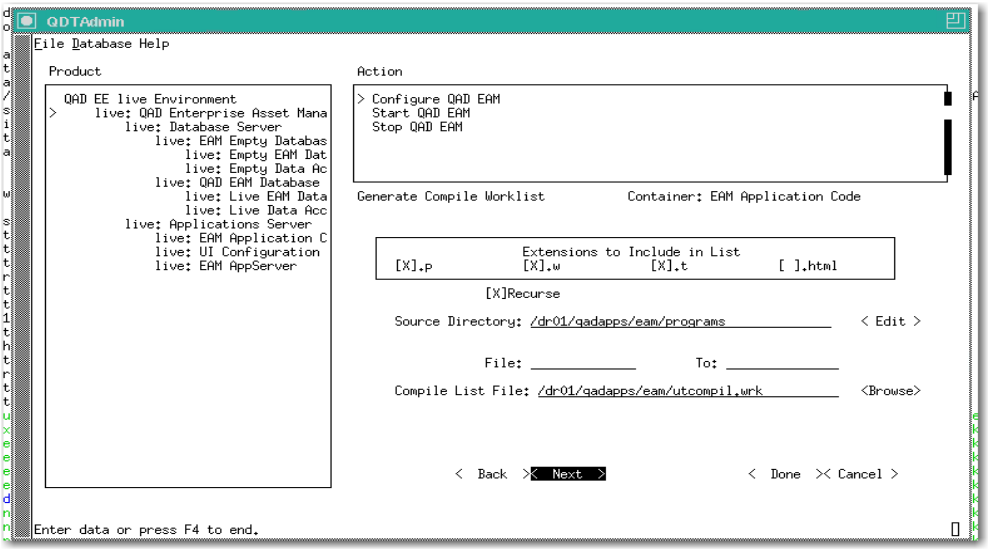
32 Verify that the Compiler Settings are correct. Select Next.

Fig. 4.15
Edit Compiler Settings



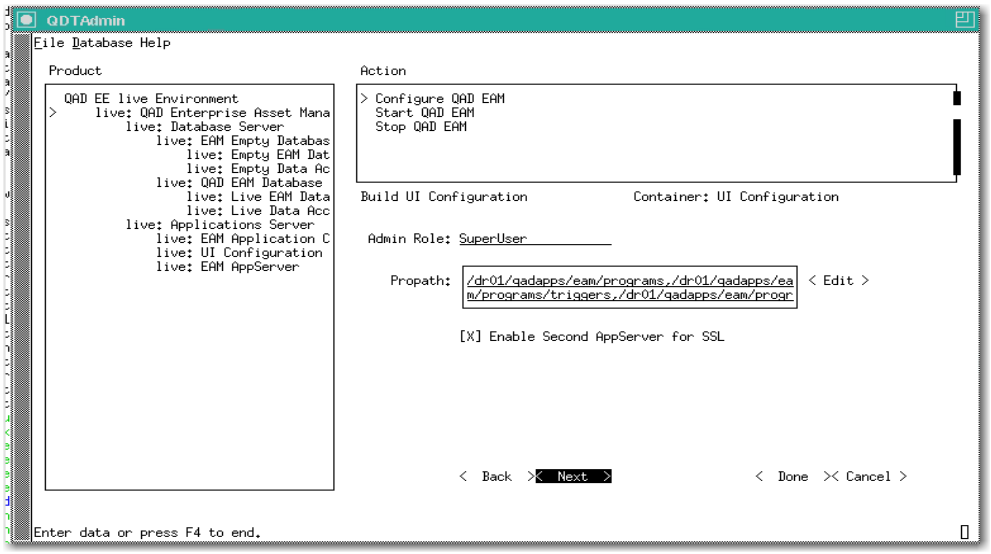
33 Verify that the settings on the Generate Compiler Worklist screen are correct. Select Next.

Fig. 4.16
Generate Compiler Worklist



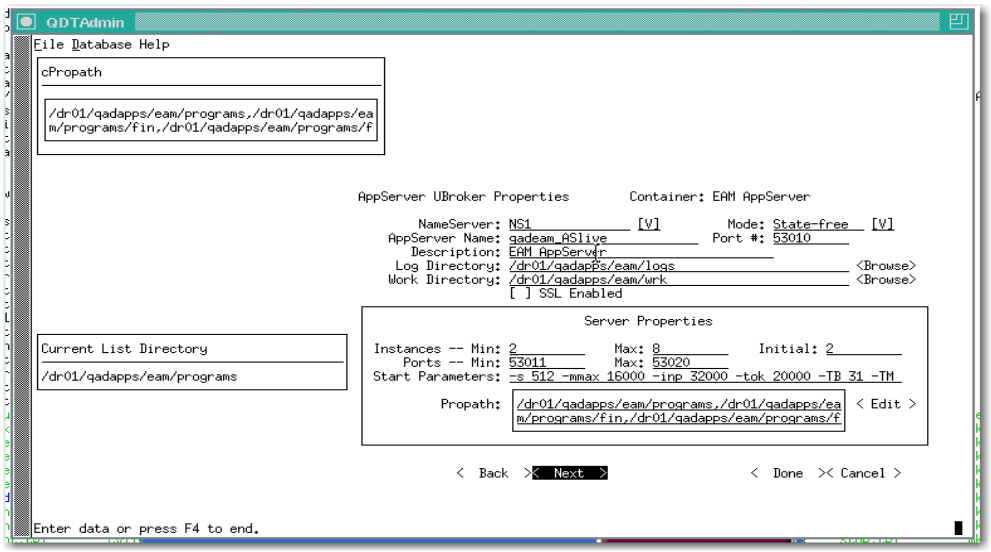
34 Verify that the settings on the Build UI Configuration screen are correct.

Fig. 4.17
Build UI Configuration



35 Click Next. Verify that the App Server UBroker Properties are correct.

Fig. 4.18
App Server UBroker Properties



Manually Setting Up QAD EE Financial Components

Modification of QAD EE financial component files is required to interface EAM with QAD EE. When EAM and QAD EE are installed on the same server, these modifications are done automatically by QDT.

However, if EAM is installed on a different server than QAD EAM, follow the procedure in this section to manually modify the financial component files.

If EAM and EE are installed on the same server, skip this section and move on to the next.

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 overwrites 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.
2. The system prompts you to confirm execution of the configuration process. Select Yes.
3. You are prompted to clear the log. Select Yes. The configuration process begins. The installation script launches.
4. Select Close. 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.
5. Review the qdtadmin.log file to check for errors in the configuration process.
6. When the configuration completes successfully, select Close to exit.

Applying the Fixed Asset Patch (EE Only)

Note If you are integrating EAM with Enterprise Edition 2010.1 through 2013.1, the following patch needs to be installed to complete the integration. Skip this step when integrating with any SE or EE versions 2014.0 and higher.

The files described in this section are found in: <*add_ons*>/QAD_patches/fa.

1 Update the QXtend installation's controllers.xml file.

a Locate the controllers.xml file in:

<*qad_application location*>/qxtend/config or

<*qad_applications location*>/qea.

b Edit controllers.xml by adding the following directly above the </controllers> line:

When integrating with EE 2010.1, add:

```
<component>
  <name>FixedAssets</name>
  <apiMethod>
    <apiName>maintainFixedAssets</apiName>
    <apiType>transaction</apiType>
    <className>com.qad.mfgpro.api.FixedAssetsController</className>
     <extProgram>faapimt.p</extProgram>
        </apiMethod>
 </component>
```

When integrating with EE 2011 - 2013.1, add:

```
<component>
  <name>FixedAssets</name>
  <apiMethod>
    <apiName>maintainFixedAssets</apiName>
    <apiType>transaction</apiType>
    <className>com.qad.erp.api.FixedAssetsController</className>
    <extProgram>faapimt.p</extProgram>
  </apiMethod>
</component>
```

2 Apply the fixed asset API code to the ERP system's xrc folder.

a When integrating with EE 2010.1, copy the contents of <*add_ons*>/QAD_patches/fa-2010.1 to:

<*qad_application_location*>/xrc

Then copy FixedAssetsController.cls to:

<*qad_application_location*>/xrc/com/qad/mfgpro/api

b When integrating with EE 2011, copy the contents of <*add_ons*>/QAD_patches/fa-2011 to:

<*qad_application_location*>/xrc

Then copy FixedAssetsController.cls to:

<*qad_application_location*>/xrc/com/qad/mfgpro/api

c When integrating with EE 2012 - 2013.1, copy the contents of <add_ons>/QAD_patches/fa-2012+ to:

<*qad_application_location*>/xrc/us/fa

Then copy FixedAssetsController.cls to:

<*qad_application_location*>/xrc/com/qad/erp/api

3 Use QDT to recompile Enterprise Edition, or if practical, compile each of these modified files individually.

4 Move the file `FixedAssetsController.r` to its final location.

   a Using the Linux find command, locate the file. It should be located in:
   `<qad_application_location>/qxtend`

   If you cannot locate this file, contact QAD Support for assistance.

   b Move this file to:
   `<qad_application_location>/qxtend/com/qad/<mfgpro or erp>/api`

5 Add `faapimt.p` to the EE's Menu Security and grant access to the EAM integration login ID (which is usually `mfg`).

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.

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.

Windows Installations

To start EAM, select EAM from the Start menu. EAM starts.

UNIX and Linux Installations

Follow these steps for UNIX and Linux installations:

1. Verify that Tomcat, Progress, and Java have started. If they have not started, launch them using the following scripts:

   Note The user must have permission to run these scripts.

   Linux/UNIX:

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

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

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

   Windows:

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

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

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

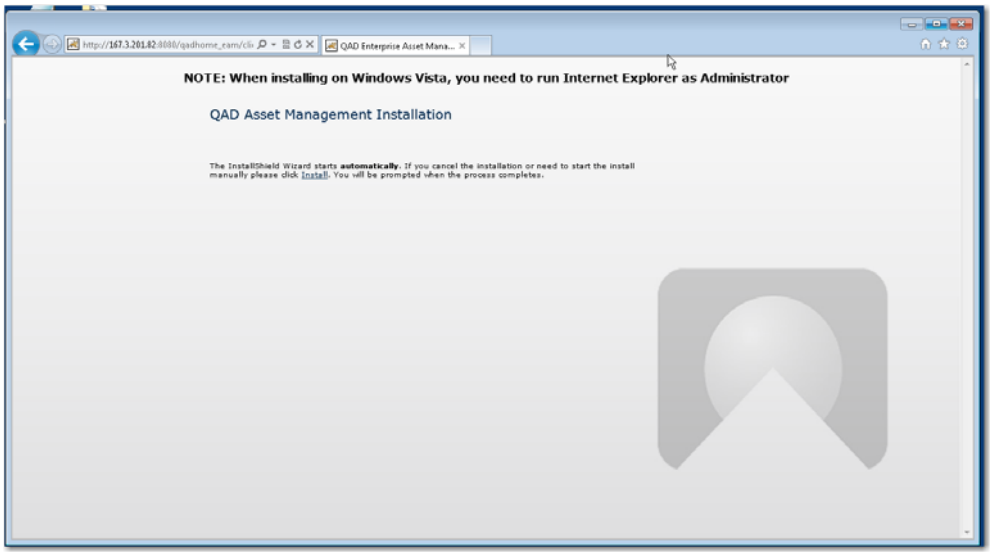
   Databases: `./start.EnvironmentName`

   AppServer broker: `./startqadeam_AS.ksh`

3. Install the Client by opening 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`.

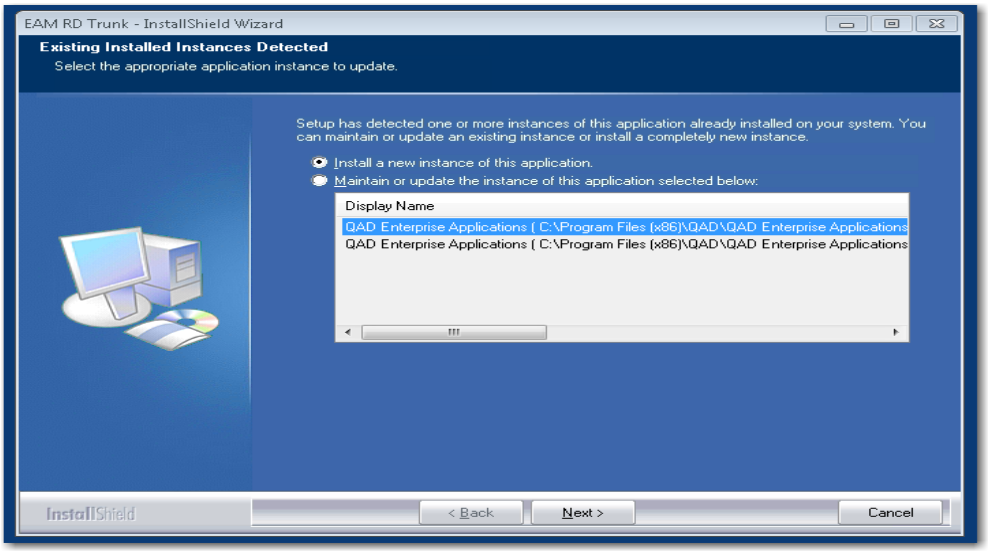
Fig. 5.1
Installing the Client



4 A window appears asking if you want to run this setup. Select the “I understand” option and click OK.

5 Select Install New Instance of this Application. Click Next.

Fig. 5.2
Install New Instance



6 Verify that the install location is correct. Click Next.

7 Select that you want a shortcut on the desktop and in the programs folder. Click Next.

8 Enter the shortcut name. Click Next.

9 The Client starts loading.

Log in to EAM

Verify that you can log in to EAM using the following username and password:

- **Username**: sysadm
- **Password:** leave this field blank
- **Log On To:** qadeam

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-Installation Configuration

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

Overview

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

QXtend is not preconfigured for EAM. This section describes the steps that must be taken for this integration to work properly.

Note The “Configure QXtend”section assumes a working knowledge of the QXtend product, including its configuration and administration.

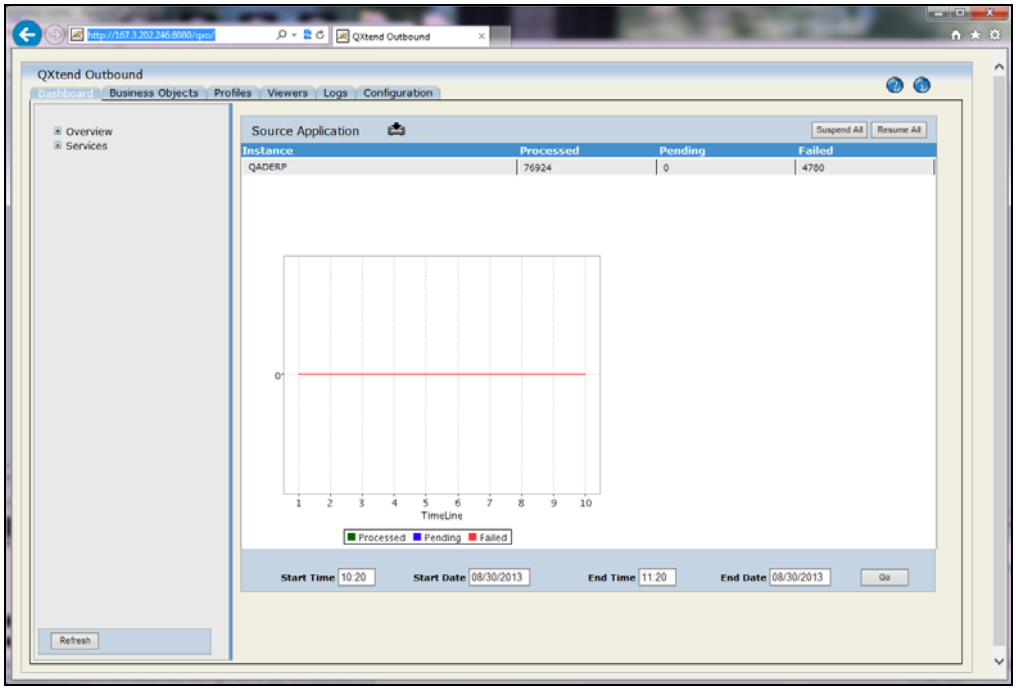
Configure QXtend

Follow these steps to configure Qxtend for use with EAM:

1 In Windows Explorer, navigate to QXtend Outbound Web App:
`http://tomcat_server:port_number/qxo`

Note For newer versions of Windows Explorer, run it in compatibility mode.

Fig. 6.1.
QXtend Outbound Web App

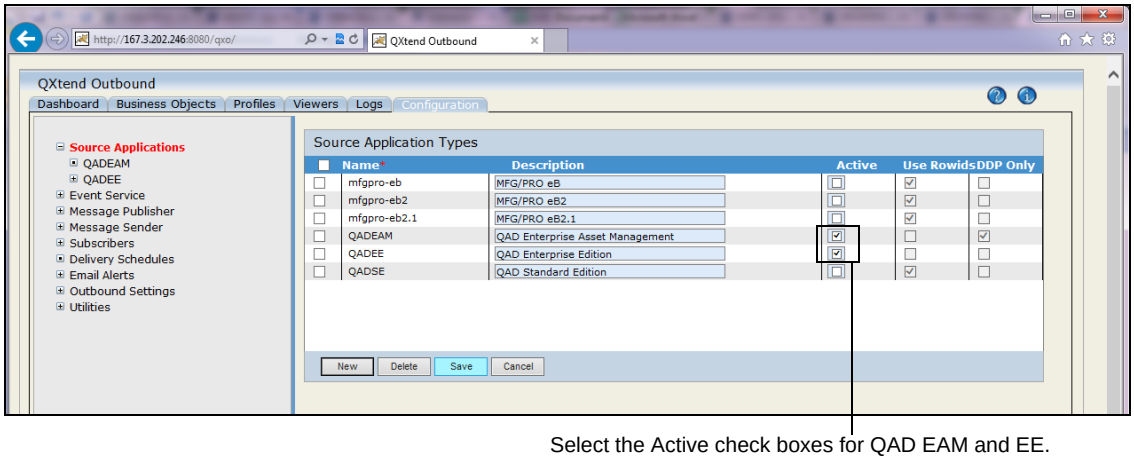


QXO Source App and XML Import

2 Select the Configuration tab.

3 Select Source Applications. For the QADEE Source Application Type, select the Active check box. Verify that the Active check box for QAD Enterprise Asset Management is selected.

Fig. 6.2.
Source Application Types



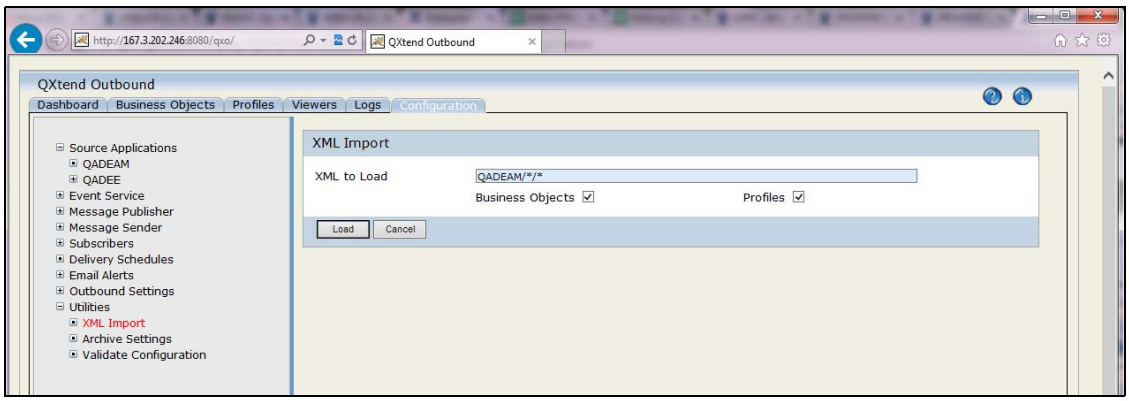
4 Select Utilities|XML Import.

5 Enter QADEAM/*/* in the XML to Load field.

6 Select the Business Object and Profiles check boxes.

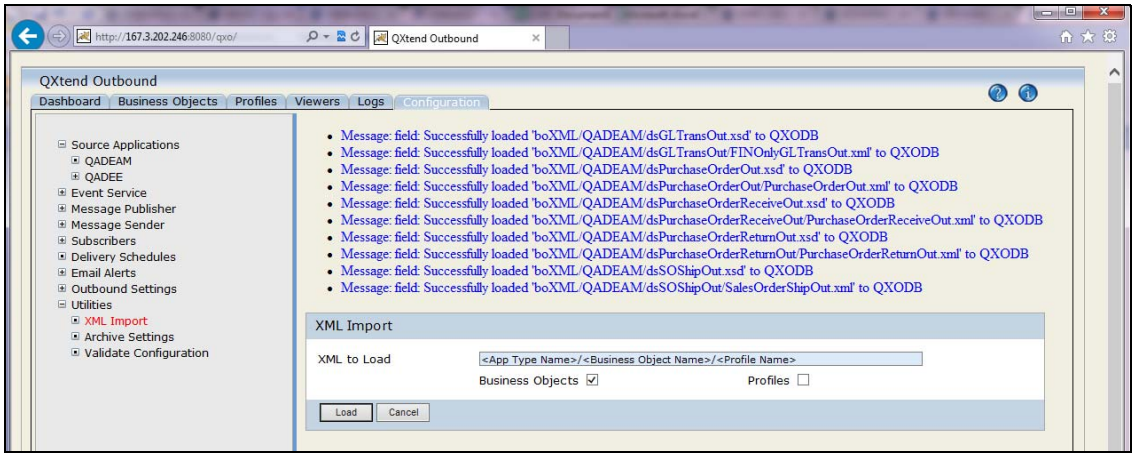
7 Click Load.

Fig. 6.3.
XML Import



8 Once the XML loads, verify that a list of messages appears indicating that the XML successfully loaded.

Fig. 6.4.
XML Loading Messages.

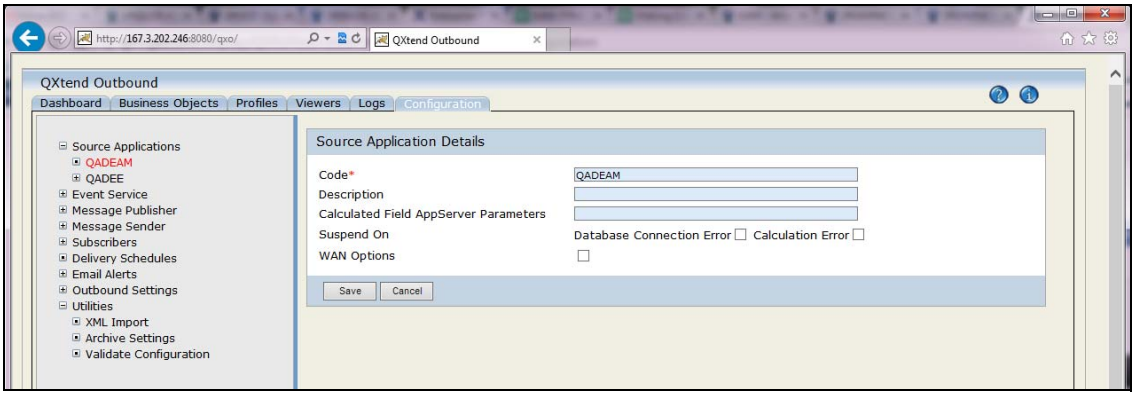


QXO Event Types

9 Select Source Application|QAD EAM. Click New.

10 Enter QADEAM in the Code field. Click Save.

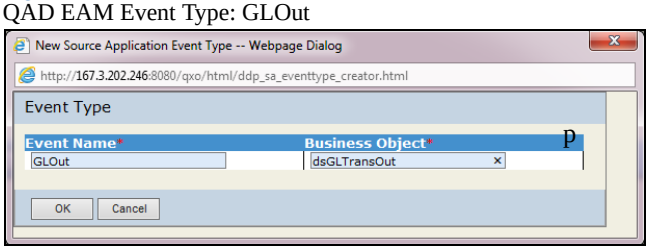
Fig. 6.5.
QADEAM Source Application Details



11 Expand the QADEAM menu option and select Event Types. Click New.

12 Enter GLOut in the Event Name field. Enter dsGLTransOut in the Business Object field. Click OK.

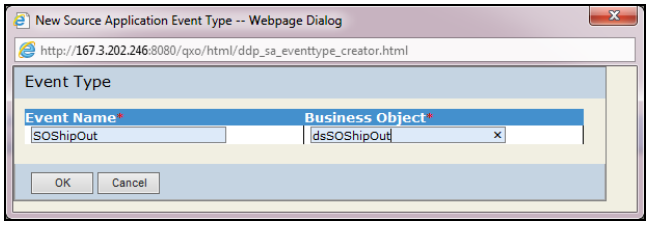
Fig. 6.6.
QAD EAM Event Type: GLOut



13 Click New.

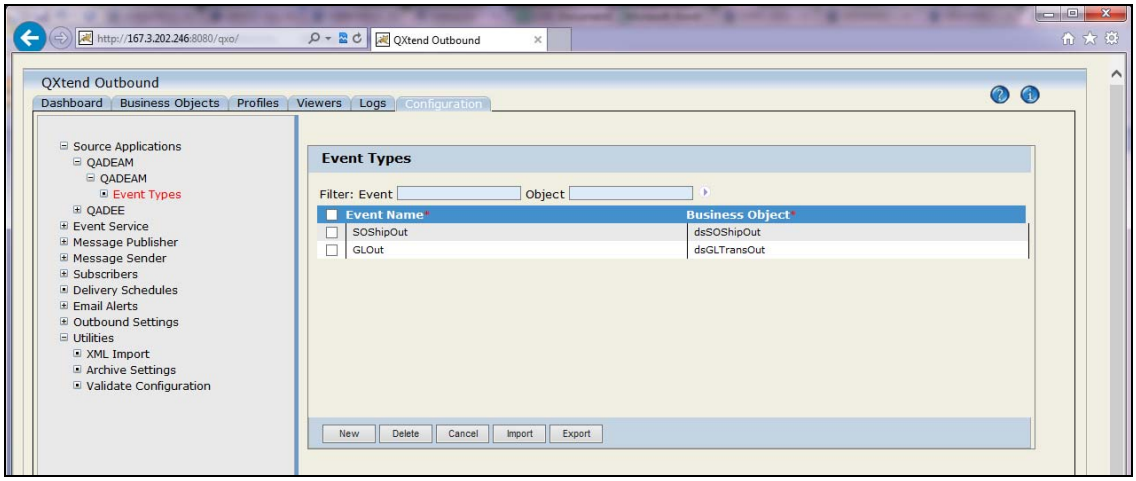
14 Enter SOShipOut in the Event Name field. Enter dsSOShipOut in the Business Object field. Click OK.

Fig. 6.7.
QAD EAM Event Type: SOShipOut



15 Verify that the GLOut and SOShipOut Event Types are listed on the screen.

Fig. 6.8.
QADEAM Event Types

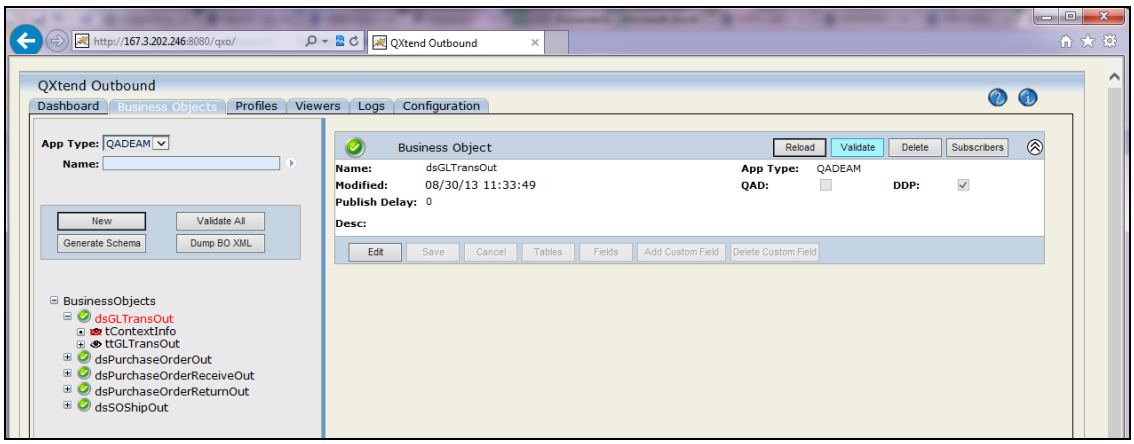


QXO Business Object Validation

16 Select the Business Objects tab.

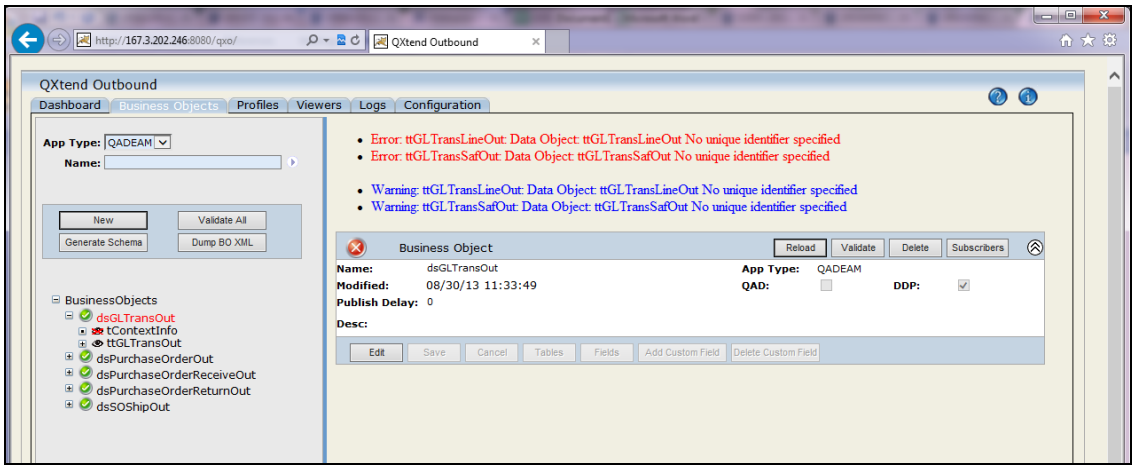
17 Select QADEAM from the App Type drop-down menu. Click Validate.

Fig. 6.9.
Validating Business Objects



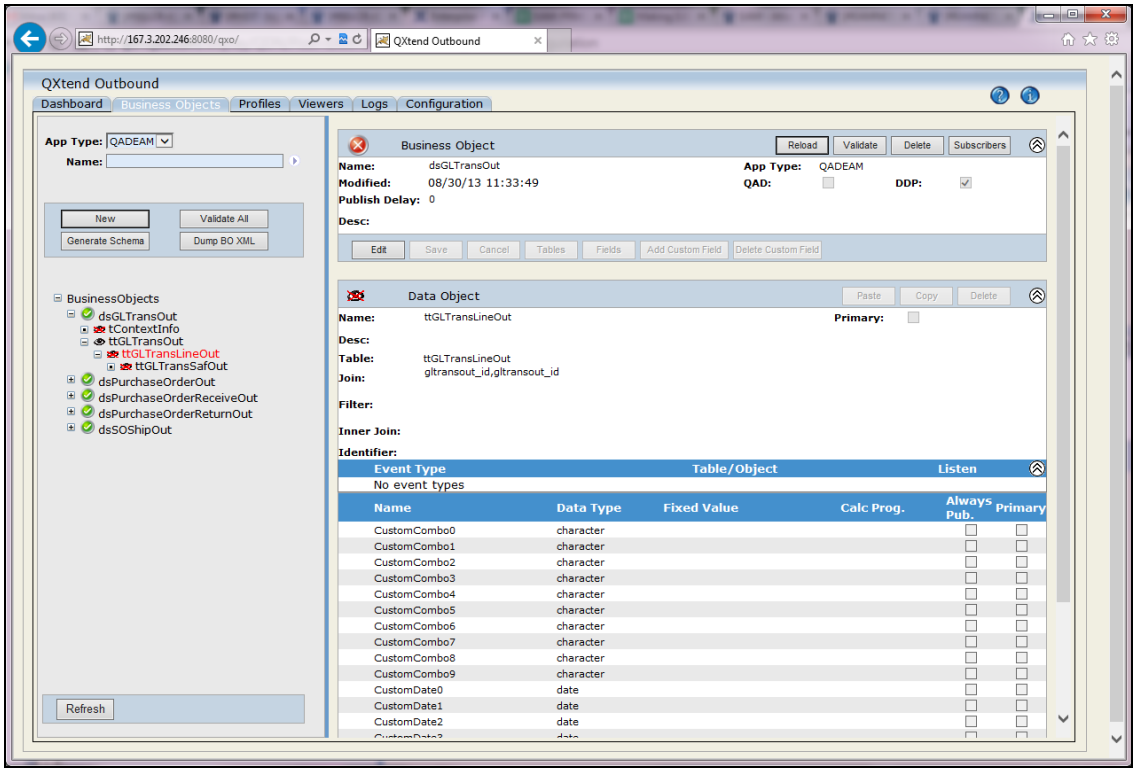
18 Note the validation errors.

Fig. 6.10.
Business Object Validation Errors



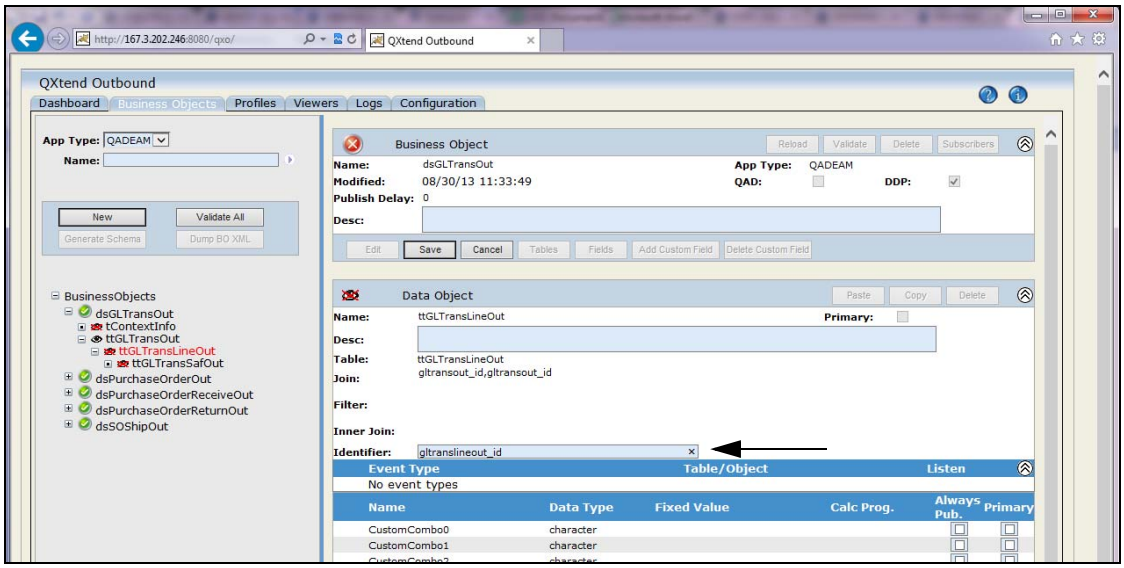
19 Expand the dsGLTransOut menu option and select ttGLTransLineOut. Click Edit

Fig. 6.11.
Editing the ttGLTransLineOut Data Object



20 Enter gltranslineout_id in the Identifier field. Click Save.

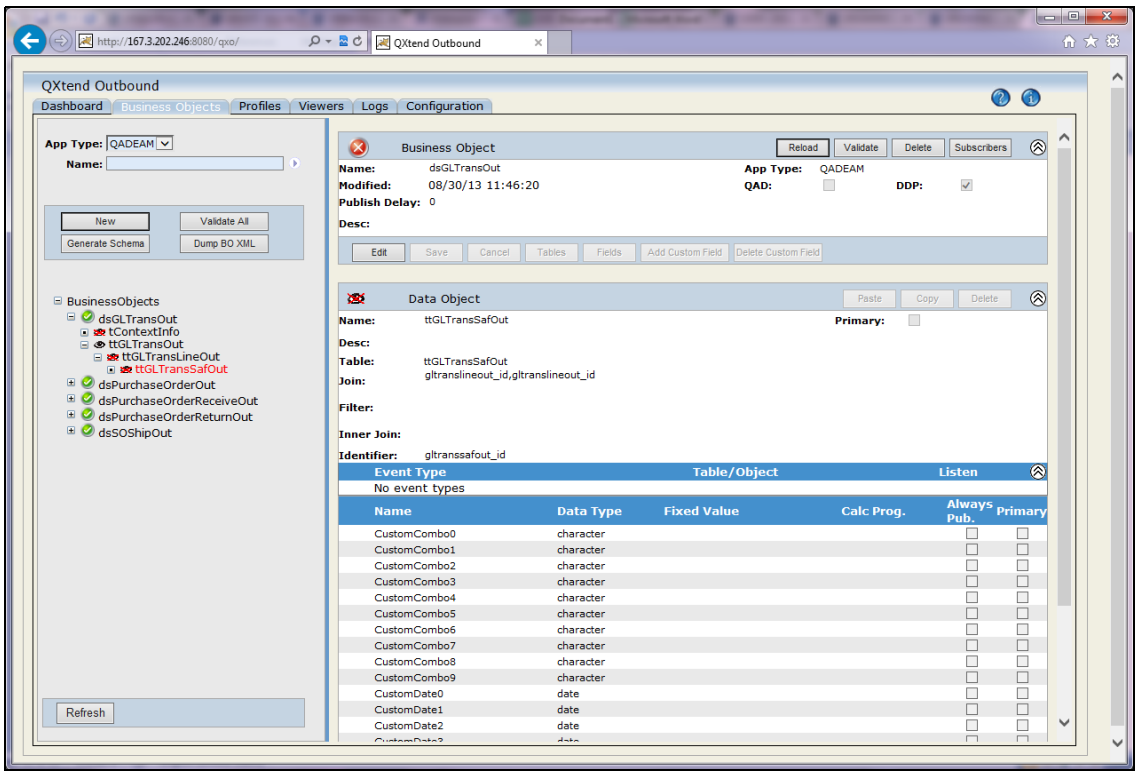
Fig. 6.12.
Editing the ttGLTransLineOut Data Object



21 Select ttGLTransSafOut menu option. Click Edit.

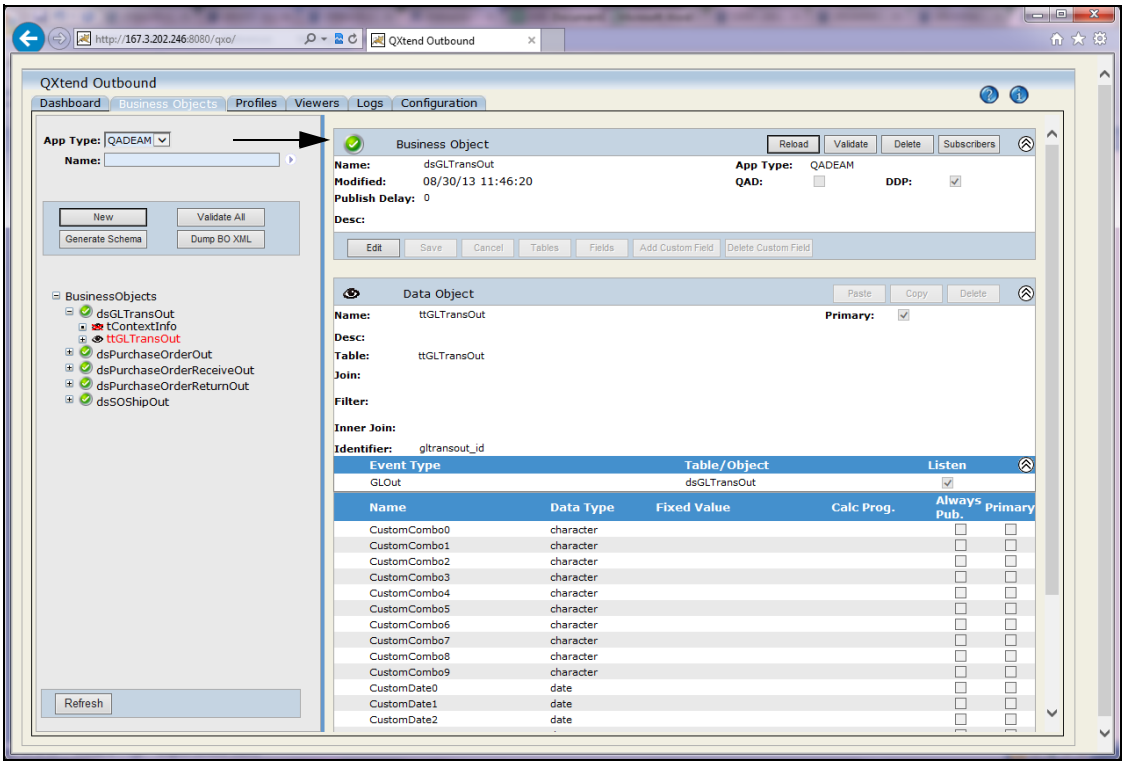
22 Enter gltranssafout_id in the Identifier field. Click Save.

Fig. 6.13.
Editing the ttGLTransSafOut Data Object



23 Select dsGLTransOut menu option and click Validate. Verify there are no errors or warnings. A green check mark should appear in the Business Object header.

Fig. 6.14.
Verify No Validation Errors



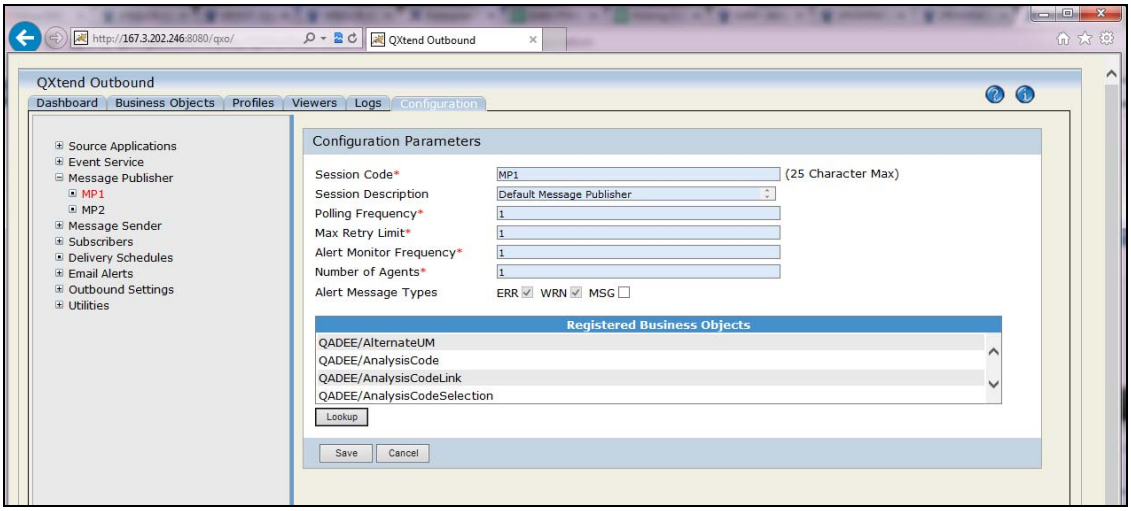
QXO Publisher

Register QADEAM/dsGLTransOut with the Message Publisher.

24 Select the Configuration tab.

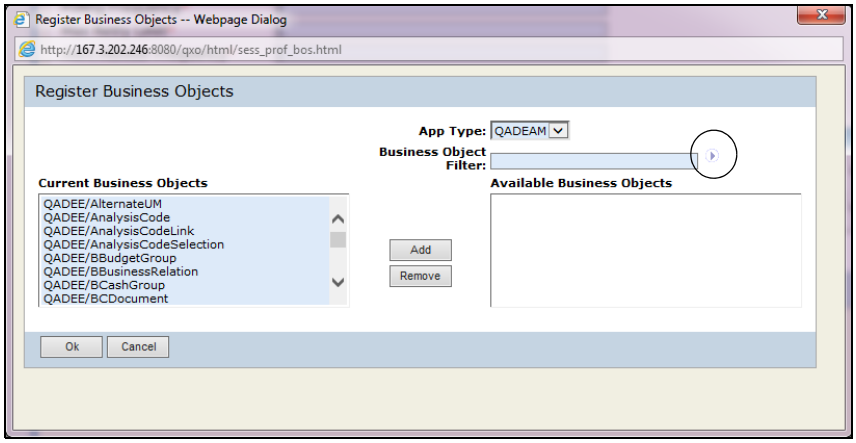
25 Select Message Publisher|MP1.

Fig. 6.15.
MP1 Message Publisher



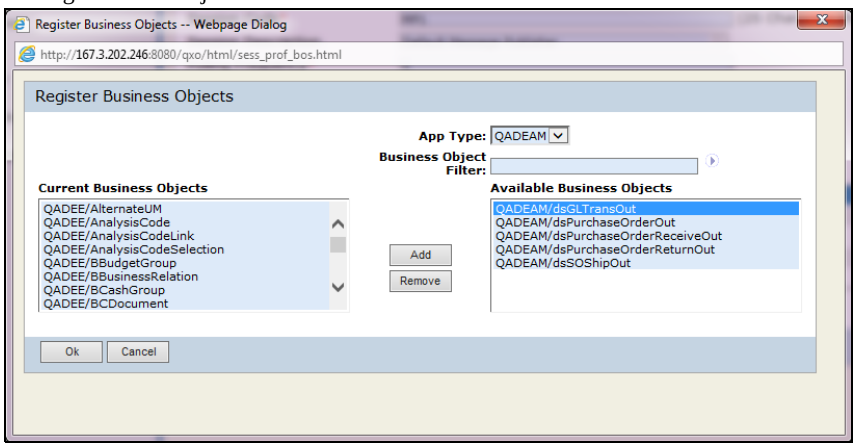
26 Click Lookup. Populate the available business objects by clicking the arrow next to the Business Object Filter field.

Fig. 6.16.
Register Business Objects



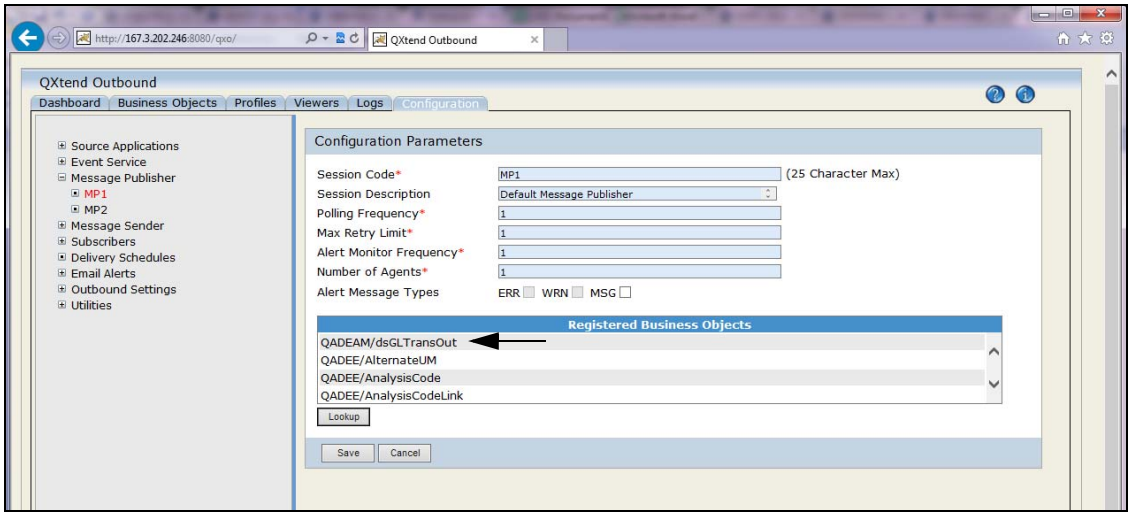
27 A list of available business objects appears in the pane. Select QADEAM/dsGLTransOut and click Add. Then click OK.

Fig. 6.17.
Adding Business Objects



28 Verify that QADEAM/dsGLTransOut is listed as a Registered Business Object. Click Save.

Fig. 6.18.
Saving Registered Business Objects



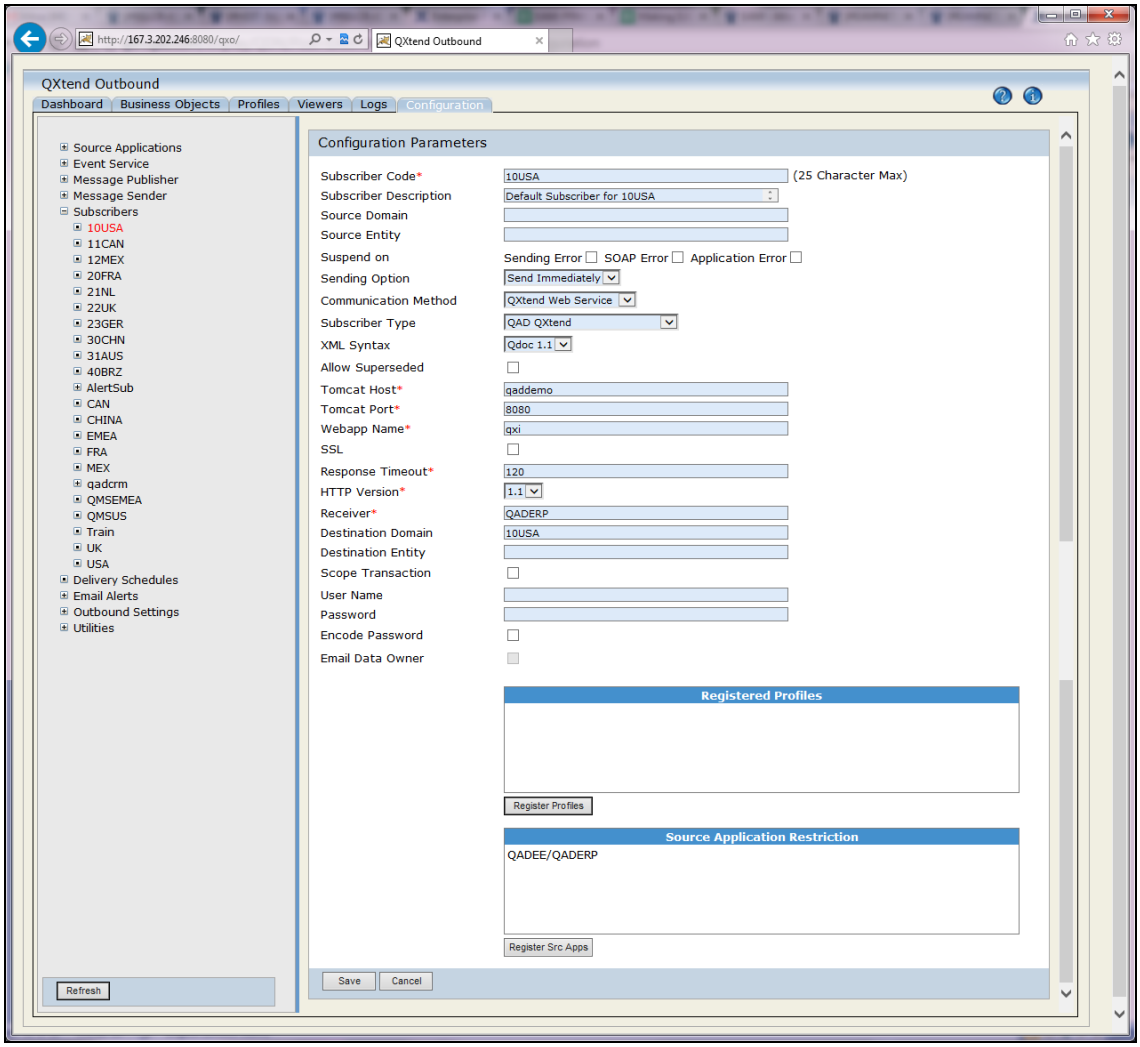
QXO Subscriber

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

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.

29 Expand the Subscribers menu option and select the domain where you register the FINOnlyGLTransOut Profile.

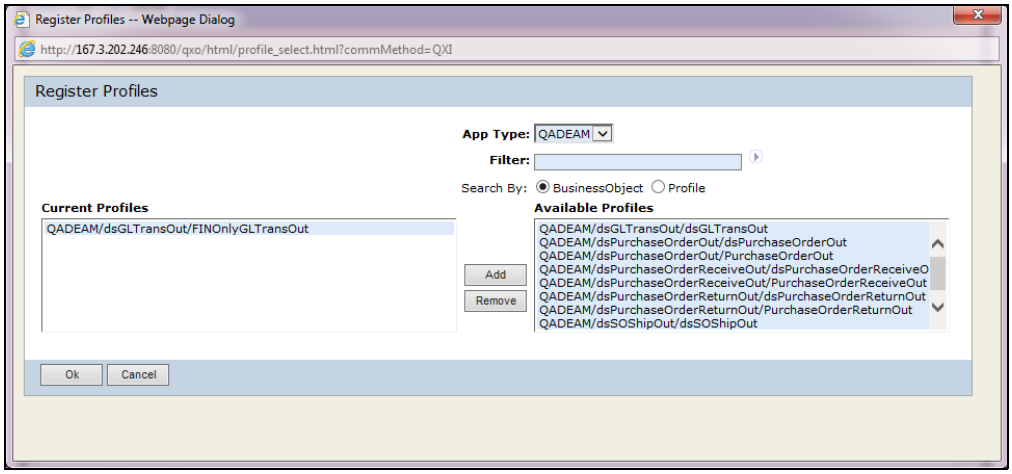
Fig. 6.19.
QXO Subscriber



30 Click Register Profiles. Verify that the QADEAM App Type is selected and that you search by Business Object. Click the search arrow.

31 Select the *QADEAM/dsGLTransOut/FINOnlyGLTransOut* profile and click Add. Then click OK.

Fig. 6.20.
Register Profiles

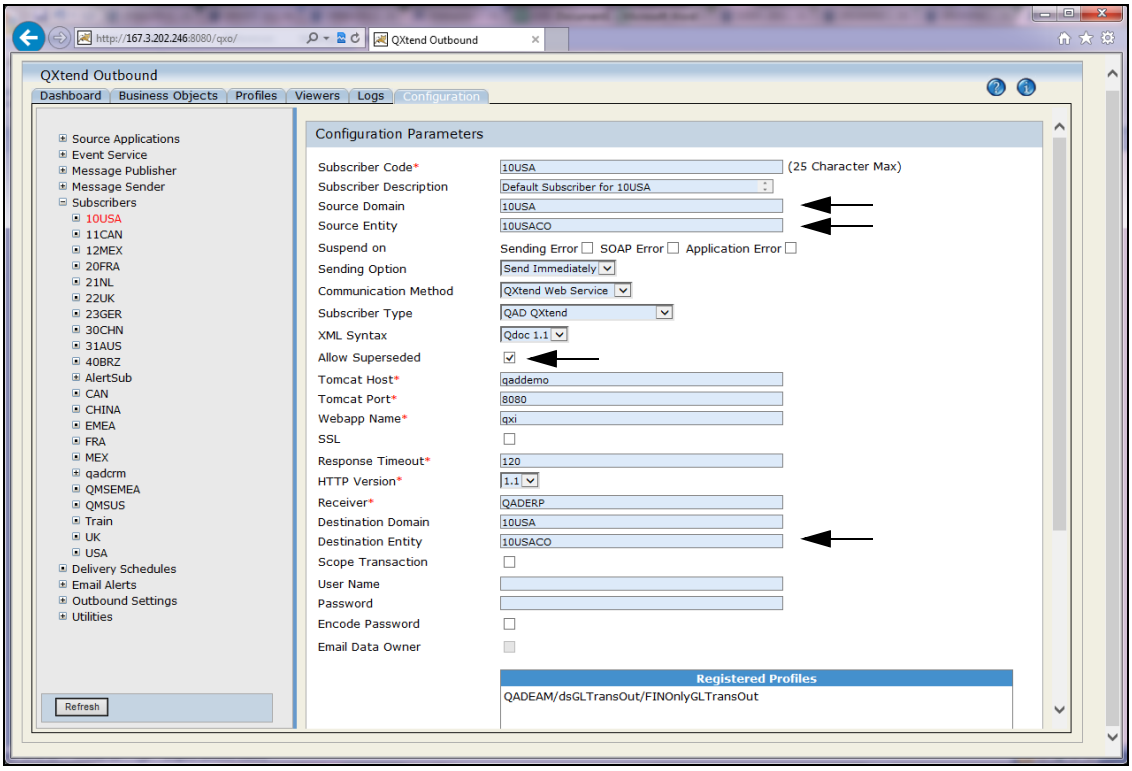


32 Select the Allow Superseded check box.

33 Enter the domain, entity, and destination entity in the Source Domain, Source Entity, and Destination Entity fields.

34 Click Save.

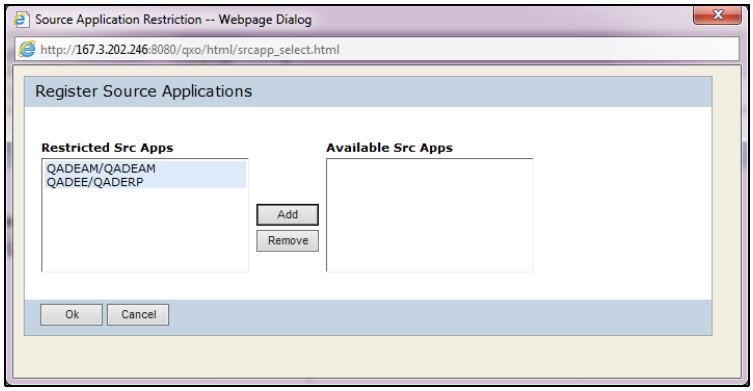
Fig. 6.21.
Enter Domain, Entity, and Destination Entity



35 Click Register Src Apps.

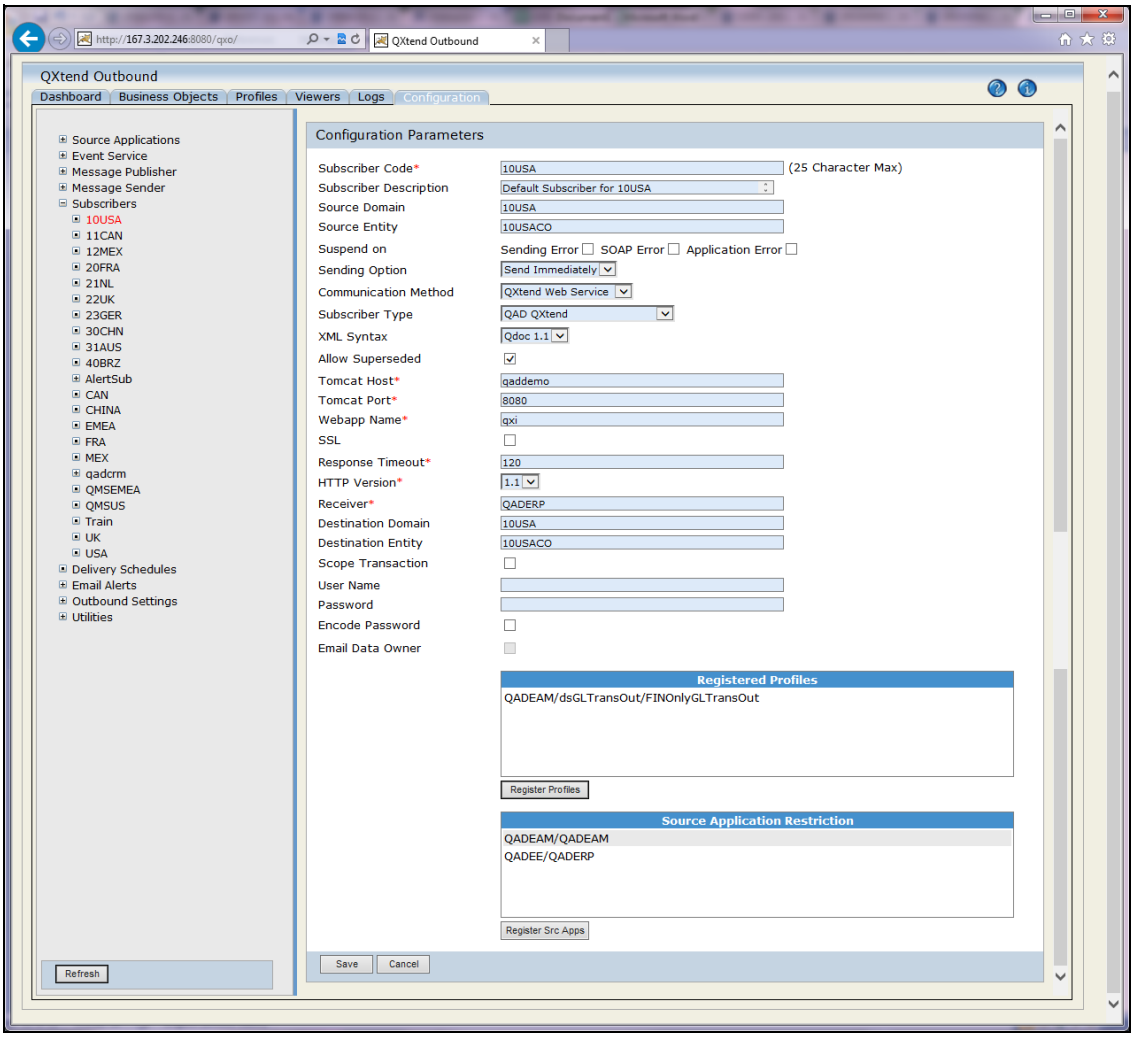
36 Select the *EAM/QADEAM* source application and click Add. Then click OK.

Fig. 6.22.
Register Source Applications



37 Click Save.

Fig. 6.23.
QXO Subscriber



QXI Receiver

In QXI make sure that the bJournalEntry QDoc is registered with the receiver assigned to the Subscriber.

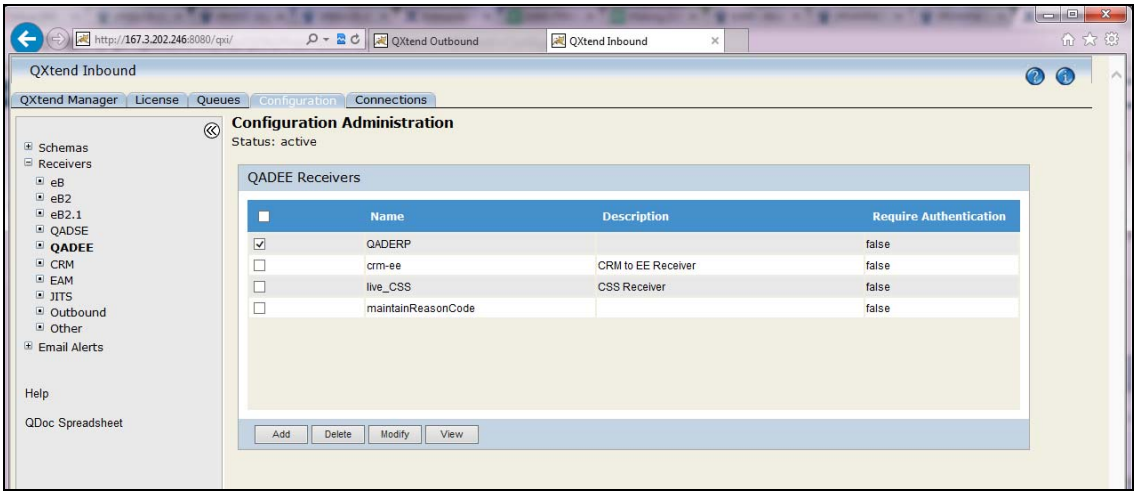
38 Open another Explorer window and navigate to the QXtend Inbound Web App: http://tomcat_server:port_number/qxi

39 Select the Configuration tab.

40 Expand the Receivers menu option and select QADEE.

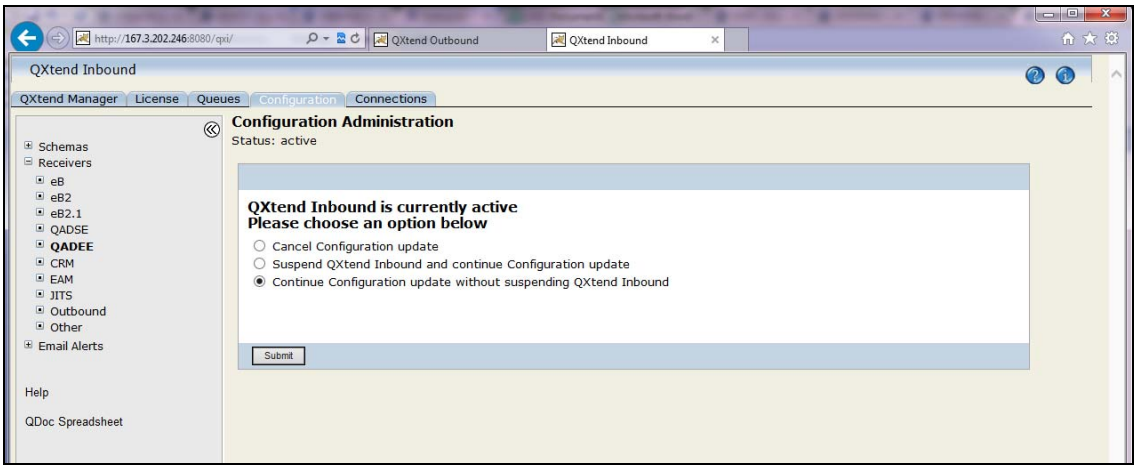
41 Select the QADERP checkbox and click Modify.

Fig. 6.24.
QXI Receiver



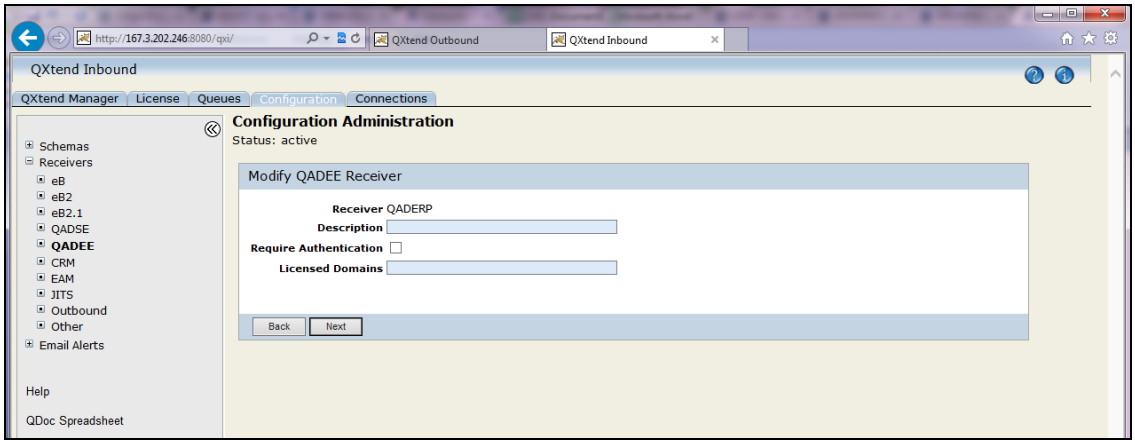
42 Select the Continue Configuration Update option. Click Submit.

Fig. 6.25.
QXI Receiver



43 Click Next.

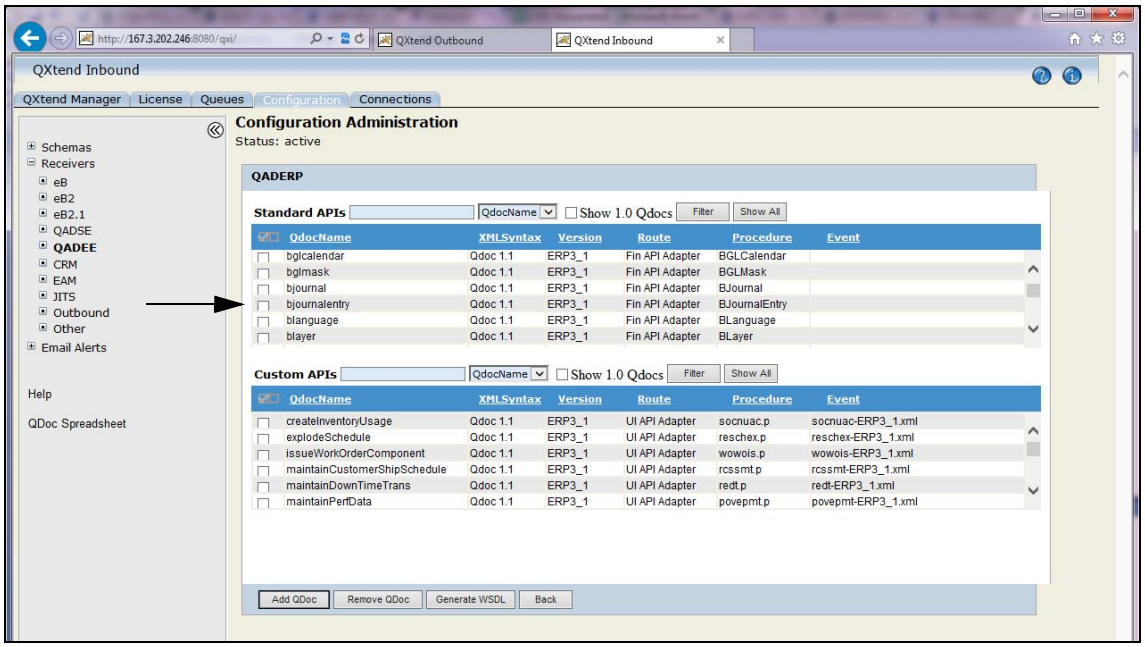
Fig. 6.26.
QXI Receiver



44 Scroll through the Standard API list and verify that the bJournalEntry API is available.

Note If the bJournalEntry API is not listed, contact QAD Support.

Fig. 6.27.
Verify bJournalEntry API Available



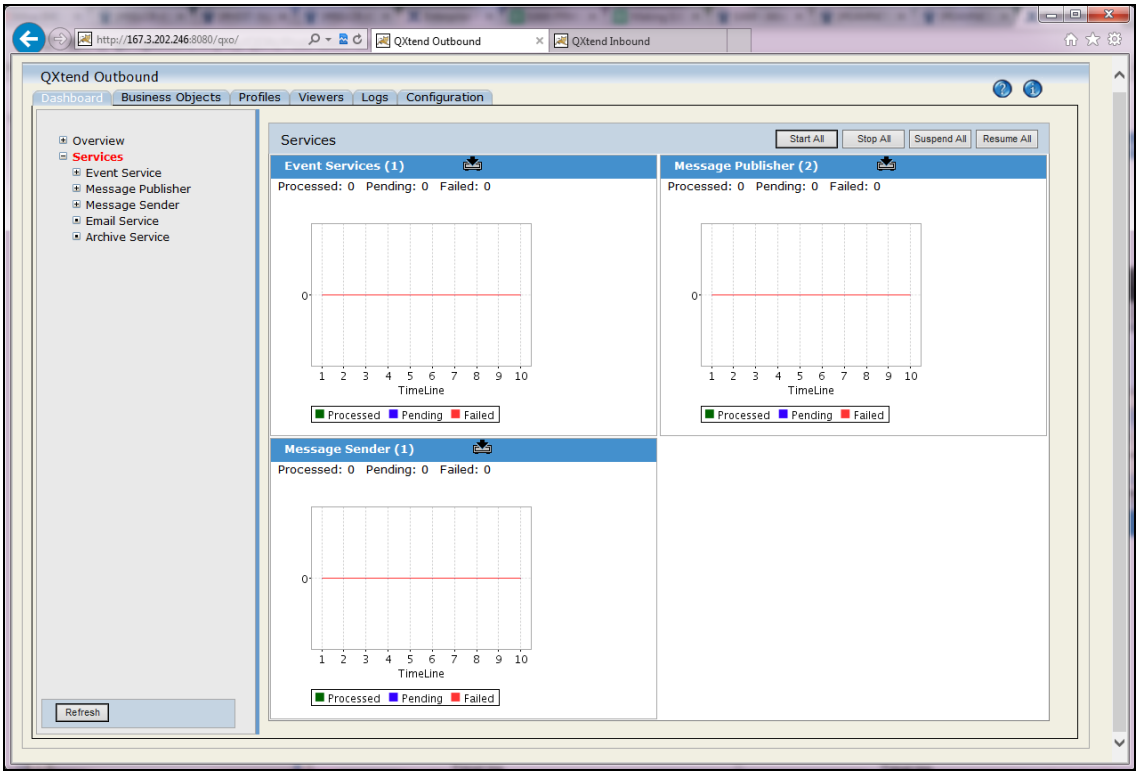
Restart QXO Outbound Services

45 In the QXtend Outbound Web App, select the Dashboard tab.

46 Click Stop All and then wait a few moments.

47 Click Start All.

Fig. 6.28.
Restart QXO Outbound Services



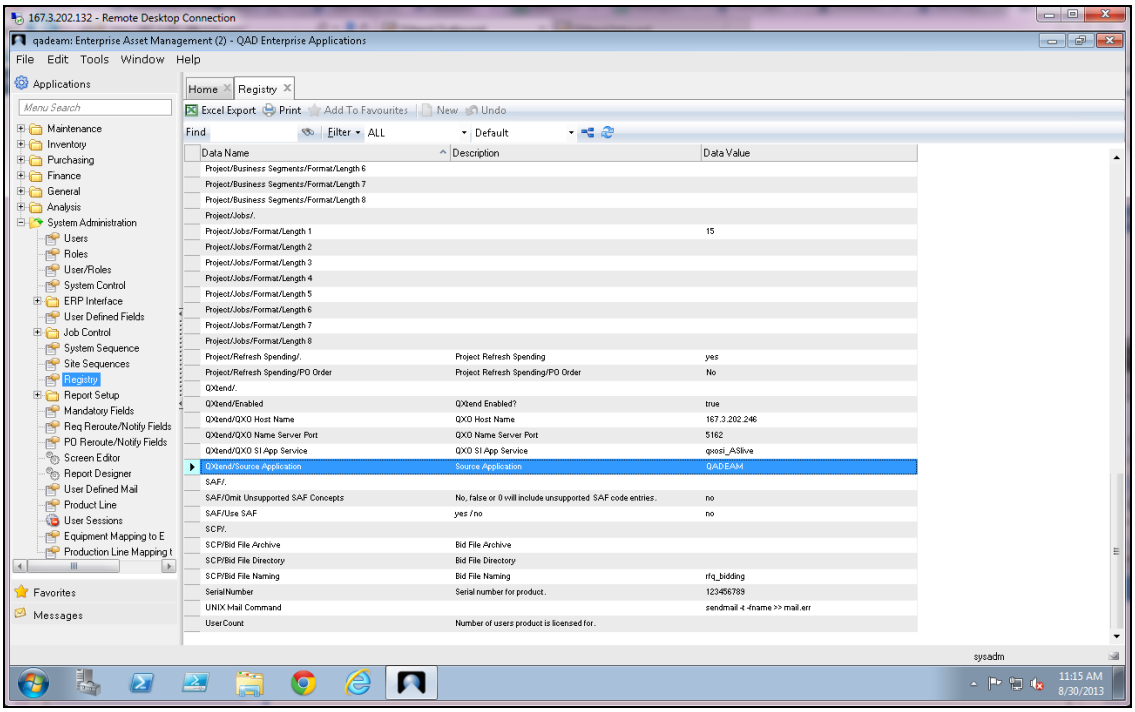
Configure EAM System Registry

Configure the EAM system registry for QAD EE integration. Follow these steps to configure the registry:

1 Log in to EAM.

2 Open the Registry browse located in System Admin|Registry.

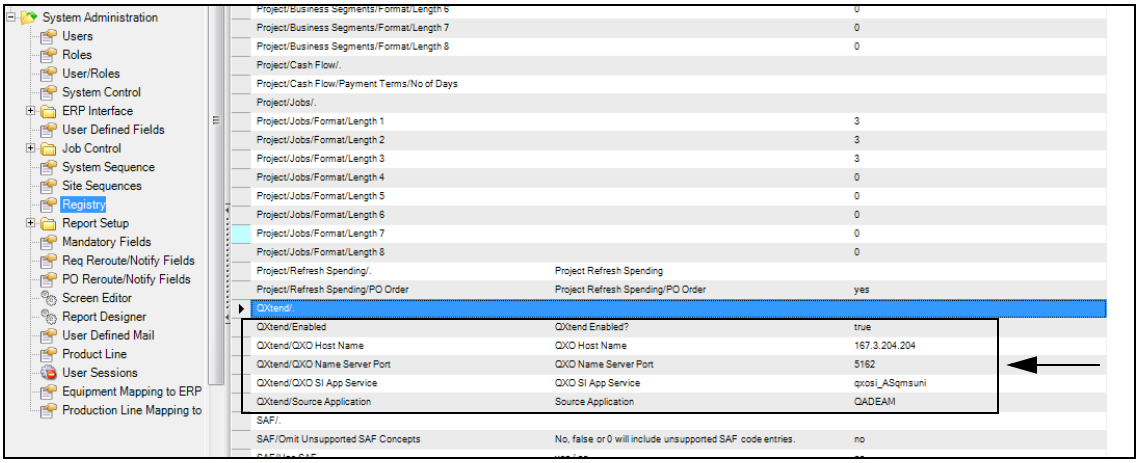
Fig. 6.29.
EAM System Registry Browse



3 Click in the Data Value fields and enter the following values:

Data Name	Data Value
QXtend 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 connects 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
QXtend/Source Application	QADEAM

Fig. 6.30.
QXtend Registry Settings



Set Up Progress Editor

EAM now features a Progress editor similar to QAD SE and EE's mgeditor menu option.

The editor uses SSH (Secure Shell) rather than standard telnet. SSH is a protocol that can create a secure connection between the EAM .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)

Follow these steps to set up SSH:

1. Download Granados 2.0 (`granados200.tar.gz`) from the following link:

   http://www.routrek.co.jp/en/product/varaterm/granados.html

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

2. Save the file to a temporary directory on the tomcat server.

3. Extract `Routrek.granados.dll` from the archive using `gunzip` and `tar`.

4. 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` directory.

5. Copy the DLL to *<tomcat_install_directory>/webapps/<qadhome_eam>*.

6 Open the EAM client's *client-session.xml* file. 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_eam>/configurations/qadeam/client-session.xml
```

Make the following changes:

a Locate the SshProviderUrl tag in `client-session.xml`. If the tag does not say this already, please update it accordingly:

```
<SshProviderUrl>${HomeServer}/Routrek.granados.dll</SshProviderUrl>
```

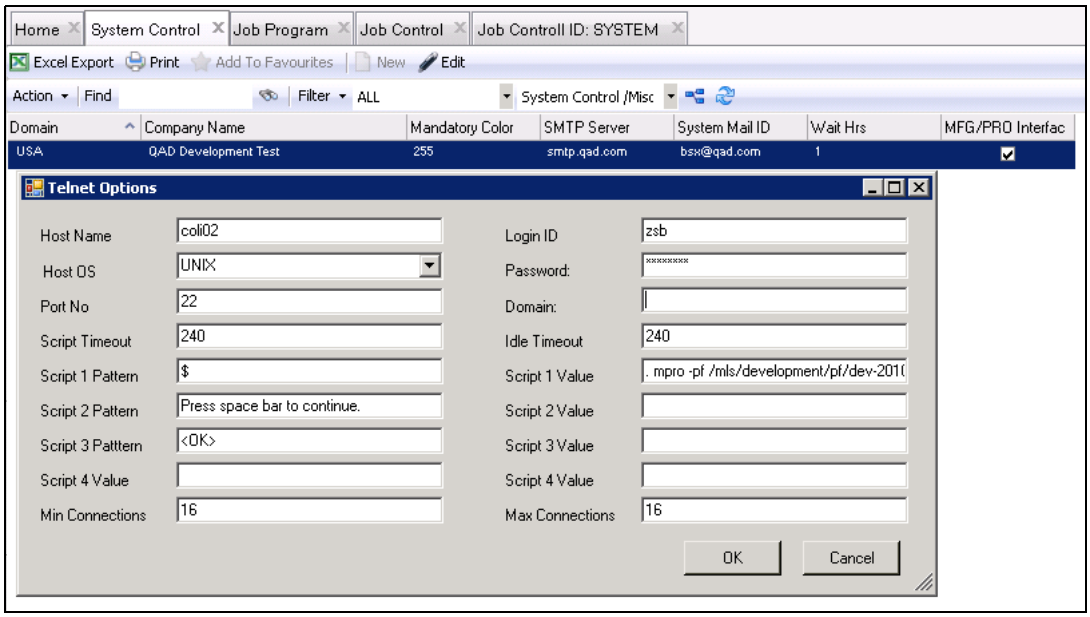
b Change the terminal protocol entry from telnet to SSH2:

```
<TerminalProtocol>SSH2<TerminalProtocol/>
```

7 Save the `.xml` file.

8 In EAM, open the System Control browse and select Telnet Options from Actions drop-down.

Fig. 6.31.
Telnet Options



Note If the Action is not available, review the Role security settings.

Table 6.1
Role Security Settings

Field Name	Setting
Host Name	DNS name or IP address of the EAM DB server
Login ID	Login ID used to log into the EAM DB server (for example mfg)
Host OS	UNIX or Windows NOTE: Reserved for future use, select UNIX (Windows is not supported)
Password	Password used to log into the DB server. NOTE: The password is encrypted before it is stored in the database.
Port No	DB Server's SSH port (usually 22)

Field Name	Setting
Domain	Reserved for future use
Script Timeout	Reserved for future use, leave this at 240
Idle Timeout	Reserved for future use, leave this at 240
Script 1 Pattern	This is the pattern EAM is looking for before it runs Script 1 Value. Usually this the OS's command line prompt. Example: $
Script 1 Value	The command line value to enter once EAM sees the DB server write Script 1 Pattern. This should be used to run mpro and pass it the .pf file used by the EAM appserver. **Note:** Place a period followed by a space (.) at the beginning of this line so that the Progress Editor window will close after the Progress session ends. Without this users will be left at the server's command prompt… Example: . mpro -pf /qadapps/eam/pf/eamtest.pf
Script 2 Pattern	(Optional) This is the next pattern EAM is looking for. It will run Script Value 2 when it sees it. This can be used to skip through Progress messages related to codepage, if they occur. Example: Press space bar to continue.
Script 2 Value	The keyboard strokes / text that EAM will automatically write to the telnet session when Script 2 Pattern is detected. An Example would be a space (" " without the double quotes).
Script 3 Pattern	(Optional) If more keyboard automation is required, EAM will look for this pattern.
Script 3 Value	(Optional) If more keyboard automation is required, EAM will automatically enter these keystrokes when Script 3 Pattern is detected.
Script 4 Pattern	(Optional) If more keyboard automation is required, EAM will look for this pattern.
Script 4 Value	(Optional) If more keyboard automation is required, EAM will automatically enter these keystrokes when Script 4 Pattern is detected.
Min Connections	Reserved for future use
Max Connections	Reserved for future use

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