Installation Guide
QAD Alerts

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Contents

What's New?

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

Date/Version	Description	Reference
September 2012/Alerts 1.3	Added the Load Translated Labels section	page 31
	Added the Check MFG/PRO Character UI section	page 31
	Described the verify Active Maintenance license prerequisite	page 12
	Changed the product name from Workflow Alerts to QAD Alerts	---
	Numerous editorial changes	---
September 2011/Workflow 1.2	Documented Unclear Error Message known issue	page 40

Chapter 1

System Overview

This section contains basic topics that you should understand before attempting a QAD Alerts installation.

System Overview

The QAD Alerts framework provides a way to monitor core business data for particular exception conditions and occurrence-based situations. Messages are sent to relevant business owners in response to data activity. They can then act on the messages accordingly.

The framework consists of two main components:

- Events represent triggers, or occurrences of data movement/activity. For example, a customer's order is modified.
- Alerts are customized responses/messages to events that are sent to individuals. For example, a line manager receives an alert about an order being added.

For details about configuring and implementing QAD Alerts, refer to the *QAD Alerts User Guide*.

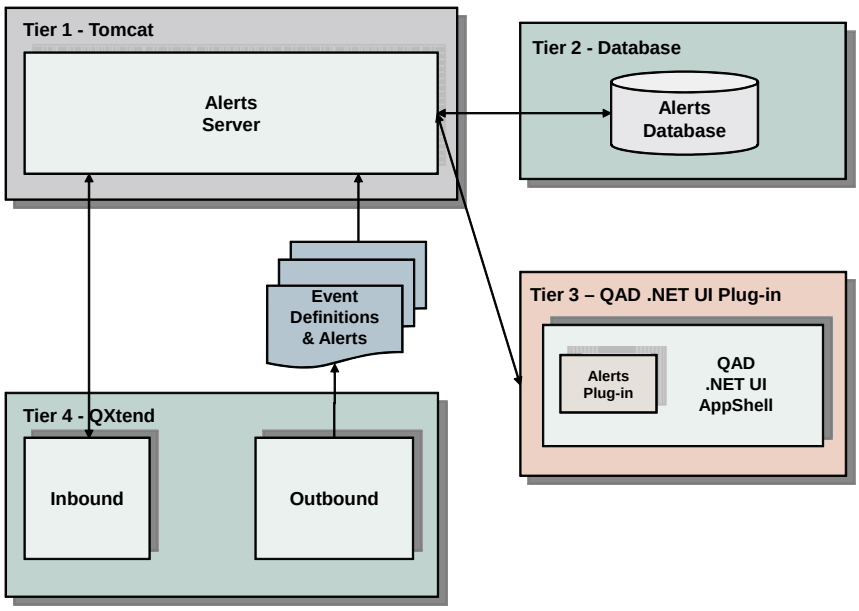
Deployment Overview

The QAD Alerts application consists of several components. These can be deployed in various ways on different hosts, platforms, and architectures.

QAD Alerts Deployment Tiers

Figure 1.1 shows the QXI deployment tiers and their relationships as they relate to QAD Alerts.

Fig. 1.1
QAD Alerts in QXI Deployment Tiers



Note This deployment description uses tiers for explanatory purposes. While the grouping of components is significant, the numbering of the tiers is not.

Tier 1 consists of the Alerts Server and supporting libraries in the Tomcat `lib` directory. The Alerts Server is a Web application that is deployed to a Tomcat Application server.

Tier 2 consists of the database that stores the configuration for alerts. Alerts are also posted here and subsequently sent out in a separate service to avoid holding up the processing in QXtend.

Tier 3 consists of the .NET UI plug-in. This piece gets added to the AppShell, which must already be installed. It is just a container to view the Alerts Configuration UI. Here you can set up new alerts and subscriptions to them.

Tier 4 consists of QXtend, which is a prerequisite and is not installed with the Alerts product. During the configuration stage you will point to the QXtend install. Alerts uses QXtend Inbound for authentication and to get users/groups from the QAD Enterprise Application database. QXtend Outbound can be used to raise event definitions and alerts, which are then sent to the Alerts system via a Web service, though you could configure any system to use the Alerts Web services available. Event definitions are loaded into Alerts when registering an Alerts profile to an alert subscriber in QXtend Outbound. Alerts are sent when triggered by the configured events in QXtend Outbound (see *User Guide: QAD Alerts* for more information).

Deployment Options

You can deploy the various QAD Enterprise Applications and QAD Alerts components in different configurations:

- On a single host in a unified deployment (single-tier deployment)
- On multiple hosts in a distributed deployment (multi-tier deployment)

In a single-host environment, all logical tiers are on the same host, and hence can be run at once. In a multiple-host environment, the logical tiers can be separated physically by host. You must run the installer on each host involved in the installation. Tiers can be combined, but not split.

QAD Deployment Configuration Service

When installing QAD Alerts, QAD recommends you use the QAD Deployment Configuration Service (QDCS) to facilitate the installation process.

Note Before starting an installation, collate your settings information and record it in the worksheet provided on page 13 for easy reference.

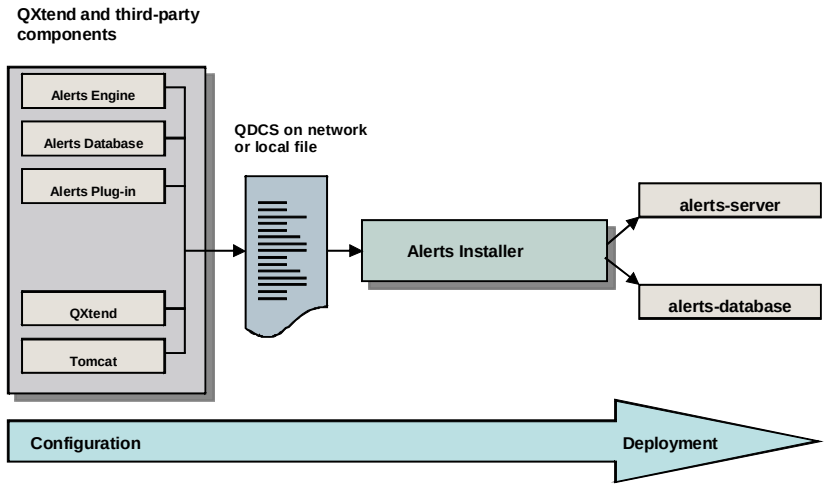
The QDCS is a repository that stores all of your deployment settings for QAD Alerts and its supporting third-party applications (Tomcat, for example) in a single place. Typically, the QDCS is stored on a network for easy access, but it also can be stored in a portable file. The QDCS is populated using the GUI installer. Therefore, access to a GUI environment is a prerequisite.

Note If you are installing in a Linux/UNIX environment and X-Windows is not available, or you are installing QAD Alerts in a character environment, you must first run the installer on Windows to collect the installation information.

There is only a single-repository QDCS regardless of the number of environments and/or hosts you plan to use in your deployment. *You only have to enter your deployment settings once into the QDCS for a particular configuration*. The service can be reused later to, for example, move a QAD Alerts deployment from a test environment into a production environment. See “QDCS Information Hierarchy” on page 4 for details about the structure of the QDCS.

Figure 1.2 illustrates how the QDCS works. The diagram assumes that all of the QAD Alerts components and supporting third-party applications are being installed on the same host.

Fig. 1.2
QDCS Information Flow



An installation using the QDCS consists of the following actions:

1. Specify the location of the QDCS: Network or local host.
2. Specify the name of the configuration file and the environment for the installation.
3. For each module you select to install (Alerts Engine, Alerts Database, for example), provide the deployment configuration settings required by the installer. These settings are stored in the QDCS.
4. After you provide all settings for the selected components, review the installation summary before you run the installation process. The information stored in the QDCS guides the automated installation.

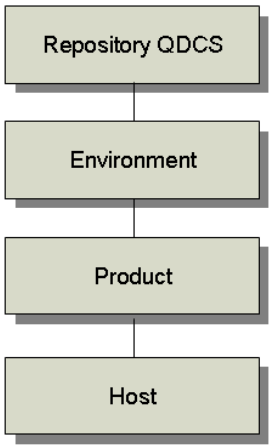
Installing QAD Alerts using the QDCS has the following advantages:

- For QAD Alerts components that share installation parameters (the location of the Progress AppServer, for example), the QDCS supports the passing of these settings between hosts. This reduces the potential for error when entering configuration information.
- The QDCS preserves deployment data across sessions. If the installation fails, you can resume the from the point where it stopped without having to reenter the settings.
- Reinstallations need no further input.

QDCS Information Hierarchy

The QDCS stores information in XML format in a hierarchy, as shown in Figure 1.3.

Fig. 1.3
QDCS Information Hierarchy



The repository QDCS hierarchy consists of the following elements:

- The repository QDCS element is at the top of the hierarchy. There is only one repository, regardless of the number of subordinate environments, products, and hosts.
- Typically, organizations have more than one environment. For example, your organization may have a test environment for verifying deployments and a production environment that accommodates the live system. The position of the environment element at the secondary level in the QDCS hierarchy allows for the easy movement of product and host deployments between environments.
- In the current release, there is only one product element—for the QAD Alerts product. In the future, it is envisioned that the QDCS will store deployment settings for all QAD applications in your environment.
- Typically, there are many host elements that allow for the deployment of QAD Alerts in various configurations. Each host typically contains one or more QAD Alerts components determined by component dependencies and organizational deployment requirements.

Installation Overview

Installing and configuring QAD Alerts requires several prerequisite programs. This guide describes the installation and configuration of the QAD Alerts application for use with these programs.

Note See Chapter 2, “System Requirements,” on page 7 for additional information on requirements.

The steps are:

1. Install the prerequisite components.
2. Complete the QDCS worksheet.
3. Install QAD Alerts using the installer.

Chapter 2

System Requirements

This section describes the system requirements for QAD Alerts installation.

Overview

This section provides the software, client, operating system, and installation user account requirements for QAD Alerts 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

Software Requirements

This section describes the software needed to install, configure, and use QAD Alerts.

Unzip Utilities

QAD's Download Center provides product downloads as compressed ISO files in `.zip` or `.7z` format. The `.7z` format is used to overcome a limitation that prevents the zipping of files larger than 2 GB.

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

http://www.7-zip.org

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

Third-party Components

- Additional Progress Components

  In addition to the Progress software required for QAD Enterprise Applications, QXI requires the Progress AppServer, NameServer, and AdminServer if you use the code APIs.
- Apache Tomcat Application Server 5.5.20 or higher

  This is available from:

  http://tomcat.apache.org/
- Java 1.5.0 JDK (for Tomcat 5)

  For Linux, Sun, and Windows versions:

  http://java.sun.com

  For Hewlett-Packard systems:

  http://www.hp.com/products1/unix/java/index.html

  For AIX systems:

  http://www.ibm.com/developerworks/java/jdk/aix/service.html
- Microsoft Silverlight 3

  This is available from:

  http://www.silverlight.net/getstarted/silverlight3/

Supporting Technologies

QAD Alerts transparently incorporates various Web-based technologies. They are listed here to credit the open-source projects that created them:

- Struts is an open-source framework for building Web applications. It is part of the Jakarta Project sponsored by the Apache Software Foundation.

  http://struts.apache.org/index.html

- Apache AXIS is an implementation of the SOAP (Simple Object Access Protocol) submission to W3C.

  http://ws.apache.org/axis/

- All QDoc requests and responses are logged using Log4j from Apache, a reliable, fast, and flexible logging framework for Java.

  http://logging.apache.org/log4j/docs/index.html

Client Requirements

QAD Alerts client systems are browser-based and require only Internet Explorer version 6.0+.

Operating Systems

The QXI and QXO servers support the following platforms:

- Linux (Red Hat and SUSE)
- UNIX (HP-UX, HP-Tru64, Sun Solaris SPARC, and IBM AIX)
- Windows (including Windows 2000, 2002 Server, 2003 Server, 2008 Server, XP, and 64-bit variants)

Installation User Account

To avoid potential access permission problems, you must carefully select the user accounts used to install Alerts and the start environment. An easy and effective way to prevent these issues is to use an administrator (rather than root) account to perform the entire installation. This includes starting Tomcat, installing Alerts, performing post-install activities, and starting the whole environment (QAD Enterprise Applications and Alerts).

Chapter 3

Prerequisites

This section describes the actions you must perform before installing QAD Alerts.

Overview

Several tasks must be performed before QAD Alerts installation. They are as follows:

- Verify the Active Maintenance license.
- Install the Tomcat Application Server.
- Install the current version of QAD QXtend.
- Prepare the environment.
- Complete the QDCS worksheet on page 13.

Verify Active Maintenance License

QAD Alerts requires that an Active Maintenance license exist for QAD Enterprise Applications. Use License Registration (36.16.10.1) to see if an Active Maintenance license is in place. If not, add the Active Maintenance license (if you have one) or contact QAD to order one.

For eB2.1 SP4, if the .NET UI version is earlier than 2.8.1, you cannot add the Active Maintenance license to MFG/PRO. Attempting to add the Active Maintenance code to the database results in the error:

```
**Error: Application does not exist in License Application Master**.
```

To work around this issue, execute the following Progress code in qaddb to create the missing License Application Master record:

```
if not can-find(lpm_mstr where lpm_product = "MAINT")
then do:
create lpm_mstr.
assign lpm_product = "MAINT"
lpm_desc = "Active Maintenance"
lpm_lic_req = YES.
end.
```

You should then be able to register the Active Maintenance license key.

Install the Tomcat Application Server

Install the Tomcat application server using the installation instructions provided in the *Tomcat User Guide* on the Apache Tomcat Web site.

Install QXtend

Install QAD QXtend using the instructions in *Installation Guide: QXtend*.

Prepare the Environment

Prepare the environment as follows:

1. Ensure that the `JDKHOME` and `JREHOME` variables are set in non-Windows environments.
2. Create a server for SQL connections to the qaddb.

   Start qaddb by entering:

```
$DLC/bin/proserve /dr01/mfgpro/eB21sp10/db/dbname -L 8000 -S
db-service-name -c 350 -B 1000
```

Note Use `proserve` rather than `_mprosrv` to start the qaddb. `proserve` sets up the SQL environment variables required by the OpenEdge JBDC drivers.

3 Verify that the qaddb has a client/network connection configured and that an entry for the connection exists in the `/etc/services` file.

4 QAD recommends that you start a 4GL server process and an SQL server process for the qaddb database. This prevents the alerts server process from consuming 4GL connections when accessing the qaddb during processing.

You can start these processes using the `-ServerType` startup parameter. Refer to the OpenEdge database administration documentation for further information.

Complete the QDCS Worksheet

QAD recommends that you use the worksheet in Table 3.1 to record installation-related information such as server names and locations, port numbers, and other settings before you start an installation. You enter these parameter settings into the QDCS; for details, see “Installing QAD Alerts in a GUI Environment” on page 16.

Table 3.1
QDCS Worksheet

Group	Description	Setting
Tomcat	Tomcat Home	
	Tomcat Admin User	
	Tomcat Admin Password	
	Tomcat Port	
Server WebApp	WebApp Name	
SMTP Server	SMTP Server	
	SMTP Port	
	Sender E-mail Address	
	E-mail Authentication	
	E-mail User Name	
	E-mail Password	
QAD ERP Database	Name	
	Host	
	Service Name	
	DB File Owner	
	QAD Client Username	
	QAD Client Password	
	QAD Version	
	QAD Service Pack	

Table 3.1 — *QDCS Worksheet* (Page 1 of 2)

Group	Description	Setting
QXtend Configuration	Host	
	Port	
	WebApp Name	
	Username	
	Password	
	Receiver Name	
	Source Application	
	Subscriber	
	Message Sender	
	Message Publisher	
Alert Delivery Service	Polling Frequency	
	Delivery Agents	
Alerts Database	Physical name	
	Directory	
	Progress Directory	
	Port	
	Use Service Name	
	Service Name	
	Update Services File	
	Admin User	
	Admin Password	
	Alerts User	
	Alerts Password	
.NET UI Plug-in	Version	
	WebApp Name	
	Tomcat Port	
	Tomcat Home	
	Tomcat Username	
	Tomcat Password	
	Configuration Name	
Alerts Toolkit	Alerts Toolkit Directory	

Table 3.1 — *QDCS Worksheet* (Page 2 of 2)

Chapter 4

Installing QAD Alerts

This section describes how to install QAD Alerts in a GUI or character environment.

Overview

The QAD Alerts physical product media and downloaded ISO file contain the Alerts installer. The Alerts installation options are as follows:

- Installation in a GUI environment.
- Installation in a character environment. You first run the installer in a GUI environment to populate the QDCS with the required settings. See “Installing QAD Alerts in a Character Environment” on page 26.

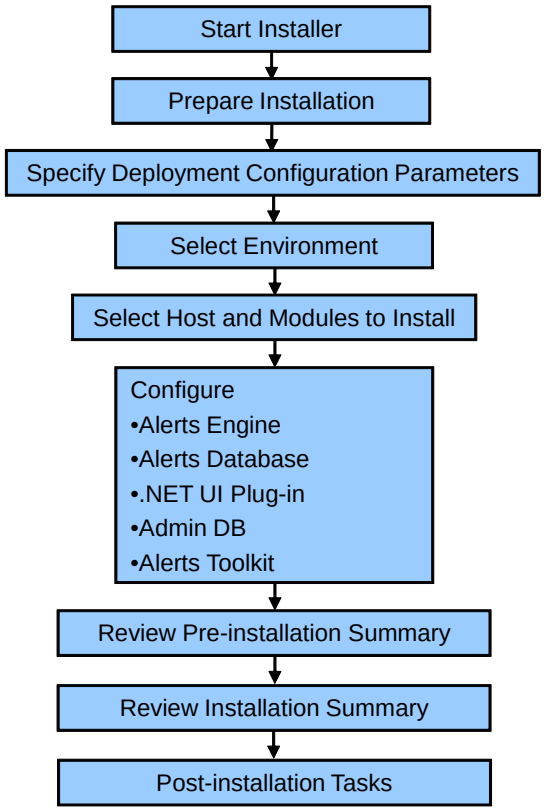
Installing QAD Alerts in a GUI Environment

This section describes the installation of QAD Alerts using the QDCS on the same host in a Windows GUI environment.

Figure 4.1 summarizes the QAD Alerts installation workflow.

Note The sequence below applies when all components are installed on a single host. The deployment sequence may vary depending upon your configuration.

Fig. 4.1
QAD Alerts Install Workflow



Prerequisites

Before installing QAD Alerts, do the following:

1. QAD recommends that you shut down any virus protection programs. This can significantly reduce the time required for installation and implementation.
2. Verify that Tomcat is running.
3. Verify that you have the appropriate folder permissions to perform the install.
4. To use the GUI installer from an X-Windows session in a Linux or UNIX environment, set the `DISPLAY` variable using the command:

   ```
   export DISPLAY=HOST_NAME:0.0
   ```

   For example:

   ```
   export DISPLAY=plli13:0.0
   ```

5. If you are installing Alerts from QAD physical product media, go to “Start the Installer” on page 17.

   Otherwise, download the ISO file from the QAD Download Center, unzip it using the appropriate utility (see “Unzip Utilities” on page 8), and go to“Start the Installer” on page 17.

Start the Installer

1. Insert the release media into the drive or mount the release media image on your file system.
2. Navigate to the exectuable files. The executable files for each environment type are located under `Disk1/InstData/<env_type>/[No]VM/QADAlerts.[bin|exe]`.

   Note If you choose to copy the files from the release media, make sure the directory structure remains the same, including the folder called `Disk 1`. If this is changed, the installer will not run. The directory structure should be as follows:

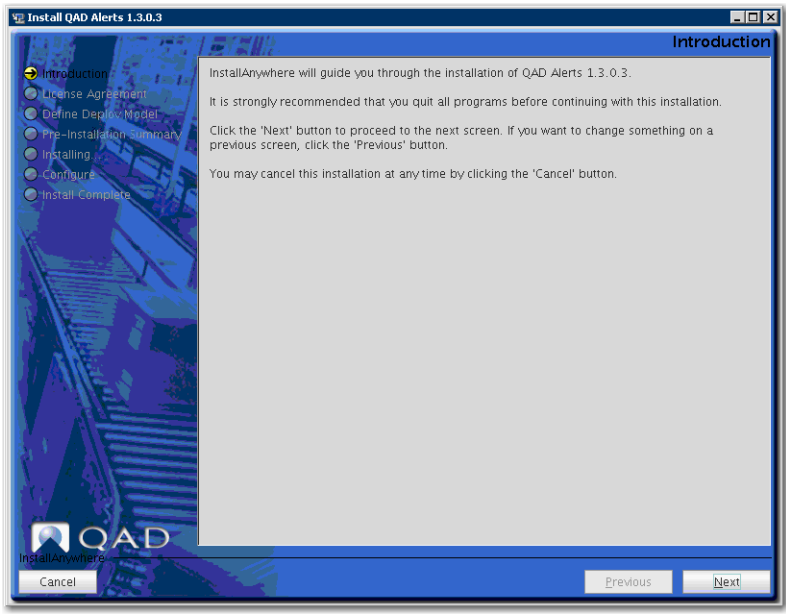
   ```
   <CD MEDIA>
       +Disk1
           +InstData
               -Resource1.zip
               -MediaId.properties
               +{environment type}
                   +NoVM
                       QADAlerts.[bin|exe]
                   +VM
                       QADAlerts.[bin|exe]
   ```

Prepare the Installation

3. If you have downloaded the installer, double-click on `QADAlerts.exe`.

   The installer is extracted and the Introduction screen displays.

Fig. 4.2
Introduction Screen



4 Click Next. The License Agreement screen displays.

5 Scroll to the end of the license agreement.

6 Select the “I accept the terms of the License Agreement” option, then click Next.

Note The option to accept the license agreement is only enabled when you scroll to the bottom of the agreement.

The Log File Directory screen displays.

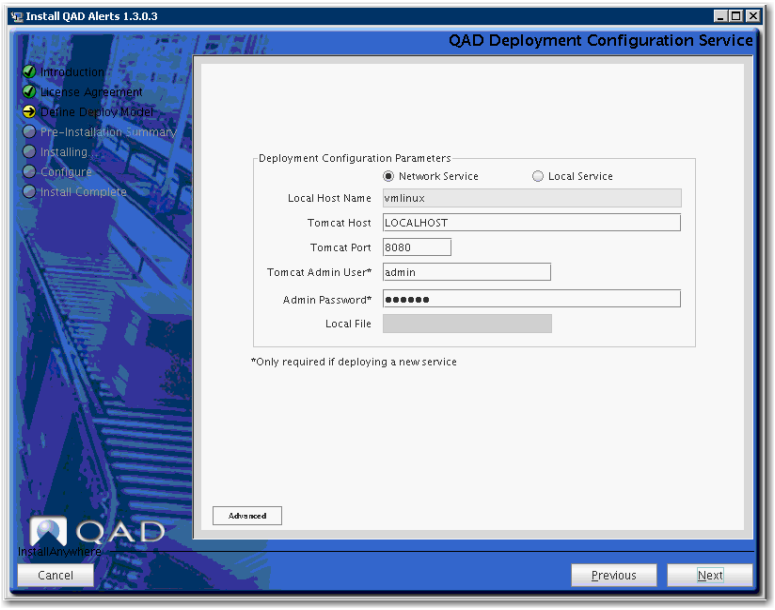
7 Accept the default location for the install log files (`C:\instlog`), or enter a different path.

8 Click Next. The QAD Deployment Configuration Service screen displays.

Specify Deployment Configuration Parameters

For details about the QDCS, see “QAD Deployment Configuration Service” on page 3.

Fig. 4.3
Specify Deployment Configuration Parameters



Network Service. Select this option to use a QDCS located on your network.

Note Tomcat must be installed and running to use Network Service.

Local Service. Select this option to use a QDCS file located on your local machine. Selecting this option disables all fields except Local File.

Local Host Name. Displays the name of the current machine (read-only).

Tomcat Host. Enter the Tomcat server name (for Network Service only).

Tomcat Port. Enter the Tomcat port number (for Network Service only).

Tomcat Admin User. Enter the user name for the Tomcat manager role (for Network Service only).

Admin Password. Enter the password of the user with the manager role (for Network Service only).

Local File. Enter the file name on the local machine that contains the parameter settings (for Local Service only).

Advanced. Click this button to display a dialog that allows you to specify the name of a new QDCS.

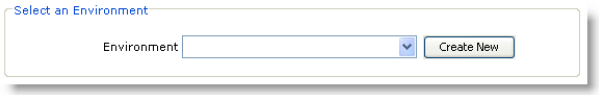
9 A pop-up window may display that says a QAD Deployment Configuration Service (QDCS) was not detected on a host. This means the QDCS is not deployed on the Tomcat server just specified or the wrong server was specified. Click Yes if you want the installer to deploy the QDCS.

10 Click Next. The Environment Selection screen displays.

Select Environment

11 In the Select an Environment panel, specify the environment to use. To create a new environment, click Create New and enter the name of the environment you want to create.

Fig. 4.4
Select an Environment

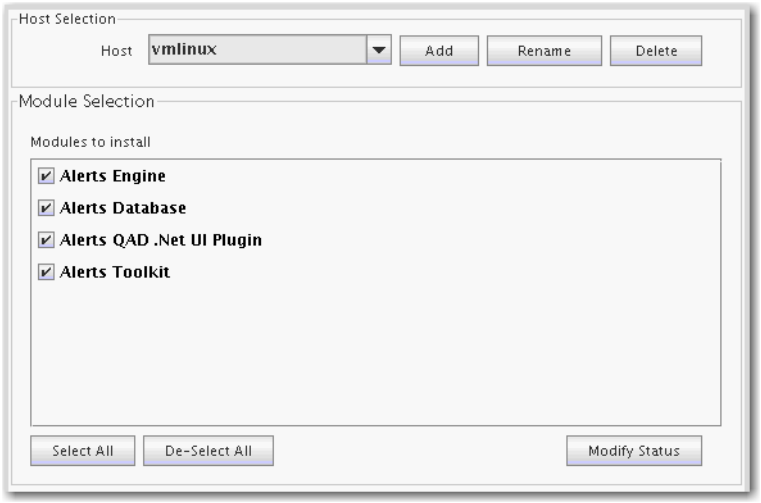


12 Click Next. The Select an Installation Option screen displays.

QAD Alerts Installation

Select the Host and Modules to Install

Fig. 4.5
Choose the Host and Install Set



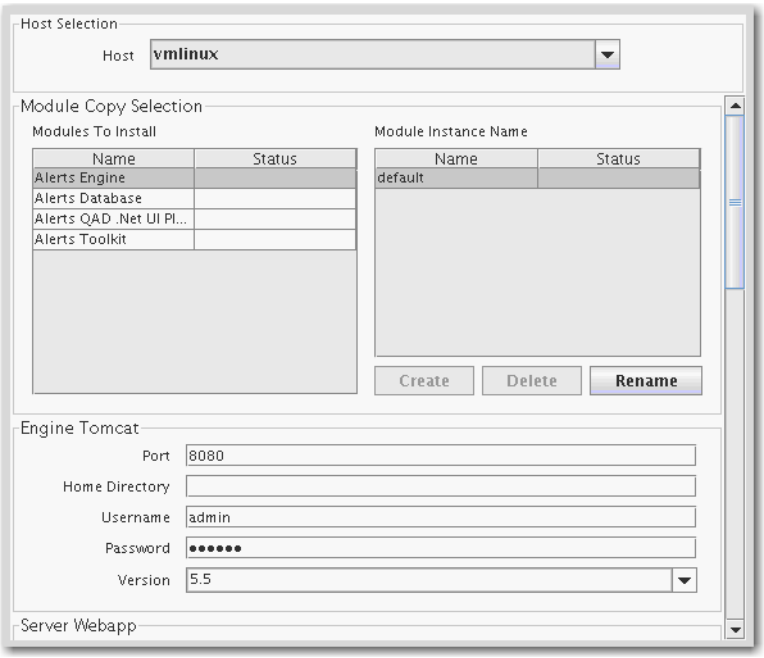
1 In the Host Selection panel, enter the host on which to install the components.

2 Use the Add and Delete buttons to create and delete hosts as required.

3 In the Module Selection panel, select the components to install on the specified host. Under each environment (“QDCS Information Hierarchy” on page 4 and “Select Environment” on page 20), you can select each component once across all hosts that make up the configuration.

4 Click Next to display the Module Copy Selection screen.

Fig. 4.6
Module Copy Selection



The component list on the left shows the components available for installation. The Status column to the right indicates the installation status of each component. The first time the installer is run, the Status column is blank. After an installation, the Status column shows Incomplete, indicating the component was not installed successfully, or Complete, indicating the component was installed successfully.

5 For each selected component, enter all required parameter settings as described in the following sections.

Note You cannot select a different component until you have entered all of the required configuration information for the currently selected component. You must provide information in the fields highlighted in orange.

Configure the Alerts Engine

6 In the Engine Tomcat panel, complete the required fields.

Port. Enter the Tomcat port.

Home Directory. Enter the location of the home directory where Tomcat is installed.

Username. Enter the user name for the Tomcat manager role.

Password. Enter the password of the user with the manager role.

Version. Select the Tomcat version.

7 In the Server WebApp panel, complete the required fields.

WebApp Name. Enter the name of the WebApp for the main server engine.

8 In the SMTP Server panel, complete the required fields.

SMTP Server. Enter the SMTP server used to send alerts via e-mail.

SMTP Port. Enter the SMTP port to send alerts via e-mail.

Sender Email Address. Enter the “from” address that messages will display.

Email Authentication. Enable or disable e-mail authentication.

Email Username. Enter the user name for e-mail authentication.

Email Password. Enter the password for e-mail authentication.

9 In the QAD ERP Database panel, complete the required fields.

Name. Enter the physical name of the database.

Host. Enter the host for the database.

Service Name. Enter the service name that is accessible through a SQL connection.

DB File Owner. Enter the user name that owns the `.db` file. This restricts access to the appropriate tables in the database.

QAD Client Username. Enter the name the system can use to log in to the QAD ERP application to acquire user and groups information.

QAD Client Password. Enter the password the system uses to log in to the QAD ERP application to acquire user and groups information.

QAD Version. Select the software version.

QAD Service Pack. Select the software service pack.

10 In the QXtend Configuration panel, complete the required fields.

Host. Enter the host of the QXtend Inbound installation.

Port. Enter the Tomcat port of the QXtend Inbound installation.

WebApp Name. Enter the name of the QXtend Inbound WebApp.

Username. Enter the username for Tomcat security.

Password. Enter the password for Tomcat security.

Receiver Name. Enter the name of the receiver to use for the authentication and directory services.

Note The receiver must already exist in QXtend Inbound and a corresponding SIAPI connection pool must already be configured for the receiver.

Source Application. Enter the name of the source application to receive events from.

Note The source application must already exist in QXtend Outbound.

Subscriber. Enter the name of the subscriber who will register the profiles to the Alerts System.

Message Sender. Enter the message sender to add the subscriber to.

Message Publisher. Enter the message publisher that will publish the BOs.

11 In the Alert Delivery Service panel, complete the required fields.

Polling Frequency. Enter the time (in seconds) to wait before checking for new alerts to send.

Delivery Agents. Enter the number of agents that can send messages simultaneously.

Configure the Alerts Database

12 In the Database panel, complete the required fields.

Name. Enter the name of the database.

Directory. Enter the directory for the database.

Progress Directory. Enter the location of the Progress installation.

Port. Enter the port to use to communicate with the database.

Use Service Name. Enable or disable the use of a service name.

Service Name. Enter the service name.

13 In the Admin User panel, complete the required fields:

Update Services File. Enable or disable the ability to modify the services file through the installer (you must have the appropriate permissions).

Username. Enter the user name for the database administrator; this is used to create and modify the schema.

14 In the Alerts User panel, complete the required fields:

Password. Enter the password for the database administrator; this is used to create and modify the schema.

Username. Enter the user name the system will use to create transactions in the database.

Password. Enter the password the system will use to create transactions in the database.

Configure the .NET UI Plug-in

15 In the QAD .NET UI Tomcat Server Plug-in panel, complete the required fields.

Version. Select the AppShell version.

WebApp Name. Enter the WebApp name of the QAD .NET UI home server.

Port. Enter the port to use to access Tomcat.

Tomcat Home Directory. Enter the home directory where the Tomcat server is installed.

Username. Enter the user name for the Tomcat manager role.

Password. Enter the password of the user with the manager role.

Configuration Name. Enter the configuration name where you want to install the plug-in.

Configure the Admin Database

16 In the MFG/PRO Admin Database panel, complete the following settings:

Progress Directory. Enter the Progress installation directory used by the QAD Admin DB.

Physical Name. Enter the physical name of the QAD Admin database.

Connection Type. Specify whether to use a Local or Client server connection.

Multi User. Select this check box to connect in multi-user mode.

Directory. Enter the QAD Admin database directory.

Host. If a connection type of Network is selected, specify the host name to use for the connection.

Service Name. If a connection type of Network is selected, specify the service name (or port) to use for the connection.

Configure the Alerts Toolkit

17 In the Alerts Toolkit panel, complete the required fields.

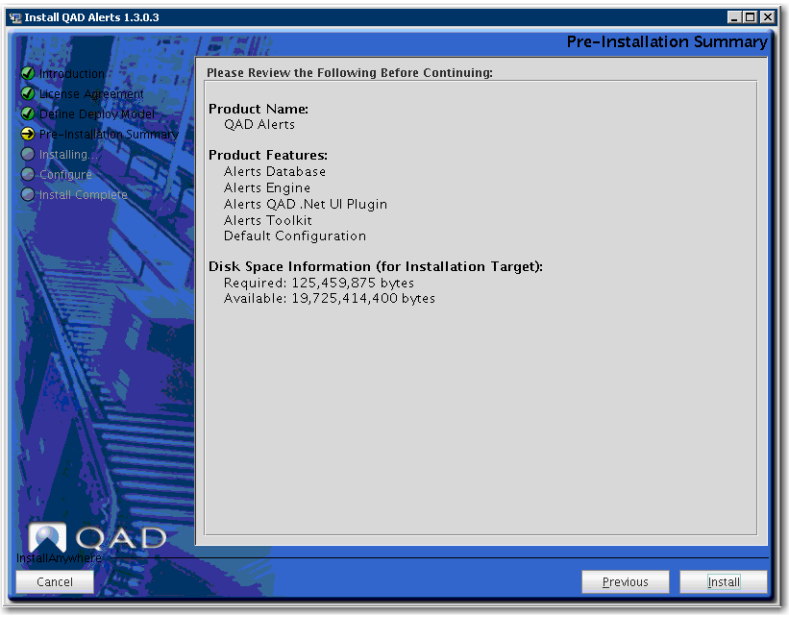
Directory. Enter the directory where you want to install the tools.

Review the Pre-installation Summary

The Pre-installation Summary screen lists the components selected for install and provides disk space information.

Note If no components were selected for installation on the current host, a message appears. Move to each host that is part of the installation and point to the configuration you have just created.

Fig. 4.7
Pre-installation Summary

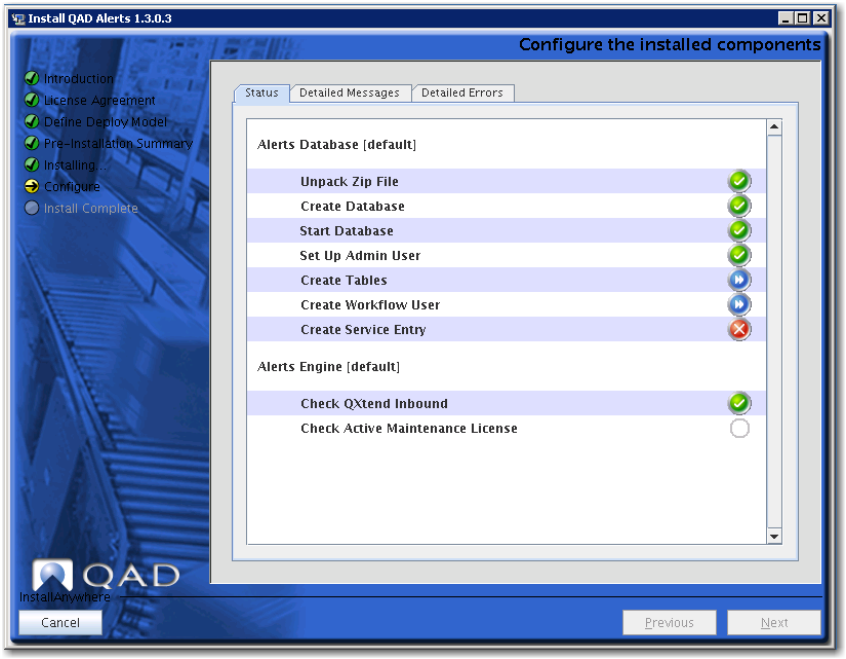


Review the information and click Install to continue with the installation.

Note If the installer encounters an error, it pauses, allowing you to correct the problem. Refer to Appendix B, “Process Control,” on page 45 for more information. If you have difficulty resolving a problem, refer to Chapter 6, “Troubleshooting QAD Alerts Installs,” on page 33.

Review the Installation Summary

Fig. 4.8
Install Status Screen



1 Use the Status screen to review the results of the install.

2 A red cross symbol indicates that an error occurred. If one or more red crosses are displayed, see Chapter 6, “Troubleshooting QAD Alerts Installs,” on page 33.

   If only green check marks or green check marks and one or more blue double arrows are displayed, the install was successful. Click Next.

3 The Install Complete screen appears. Press Done.

To finalize an installation, see Chapter 5, “Post-installation Tasks,” on page 29.

Installing QAD Alerts in a Character Environment

The following procedure assumes you are performing a character installation in a Windows or Linux/UNIX environment.

1 Verify that Tomcat is running.

2 Verify that you have the permissions needed to access the relevant folders.

3 Run the GUI installer to populate the QDCS with the required parameter settings.

4 Specify an environment and host, select the components to install, and specify the required parameters.

   Note For information about the QDCS, see “QAD Deployment Configuration Service” on page 3.

5 Move to the host you created in Step 4.

6 Mount the release media.

7 Open an appropriate console application for your environment:

   a Windows: Choose Start|All Programs|Accessories|Command Prompt.

   b Linux/UNIX: Any appropriate terminal will suffice. If you are running an X11 display, `xterm`, `gnome-terminal`, or `konsole` (for example) is suitable. Use `bash`/`sh` for TTY displays.

8 Navigate to the `InstData` directory on the CD-ROM.

9 Navigate to the appropriate directory for your environment. For example, in a Linux environment, navigate to the Linux directory.

10 Navigate to the `VM` directory.

11 Start the executable by entering one of the following commands:

   - Windows: `QADAlerts.exe -i console`
   - Linux/UNIX: `sh ./QADAlerts.bin -i console`

12 The Introduction text displays. Press Enter to continue. The first page of the License Agreement text displays.

13 Press Enter to move through and read the pages.

14 On the final page of the License Agreement, press Y to accept the terms, and then press Enter. The Log File Directory text displays.

15 Press Enter to accept the default location of the log file directory, or enter a different directory.

16 Select the Parameter Service type. Enter Y for network (the default) or N for local file.

17 The Get User Input text displays. These settings permit the use of the settings you defined using the QDCS in the GUI installer.

18 Enter the following:

   - Local parameter settings file name
   - Environment name

   Note All of the above entries are case-sensitive.

19 Choose to perform an install.

20 The list of components being installed displays. Review the list and press Enter to continue.

   The installation begins. The installer uses the parameter settings stored in the QDCS.

   Note If the installer encounters an error, it pauses, allowing you to correct the problem. Refer to Appendix B, “Process Control,” on page 45 for more information. If you have difficulty resolving a problem, refer to Chapter 6, “Troubleshooting QAD Alerts Installs,” on page 33.

21 The Install Complete screen appears.

22 Review the results of the install. If it was unsuccessful, refer to Chapter 6, “Troubleshooting QAD Alerts Installs,” on page 33. If the install was successful, press Enter.

23 After installing QAD Alerts, you must restart the Tomcat AppServer and start QAD Enterprise Applications.

Chapter 5

Post-installation Tasks

This section describes post-installation tasks.

Overview

This section describes post-installation tasks. These consist of:

- Verifying qaddb access
- Setting up qadalerts database connections
- Configuring the event types
- Checking the QAD Enterprise Applications Character UI
- Loading translated labels

Verify qaddb Access

After installation, verify you have qaddb access using the following steps:

1. Connect to the qaddb using the `sqlenv` script. Enter:

   ```
   sqlexp mfgprod -S mfgprod-service
   ```

2. Run the following `select` statement:

   ```
   select * from pub.gl_ctrl
   ```

   This should display a large amount of data.

Set Up qadalerts Database Connections

After installation, you must also specify the connection details for the qadalerts database. This is required to run the Alert Queue Monitor in the .NET UI, which connects to the qadalerts database to query the pending message data.

To specify the connection details for the qadalerts database, add an entry similar to the following in the QADERP database connection file (for example, `base-live-set.pf` or `Demonstration.pf`):

```
-cpcoll ICU-UCA
-db /dr01/qadapps/db/mfgprod -ld qaddb -trig triggers
-db /dr01/qadapps/db/admprod -ld qadadm -trig triggers
-db /dr01/qadapps/db/hlpprod -ld qadhelp -trig triggers
-db /dr01/Alerts/db/qadalerts
-pf /dr01/qdt/envs/pilot/scripts/qxtend.pf
```

Configure Event Types

After Alerts installation, all QXtend configuration for standard alerts have been completed, except for the corresponding event types. To use standard alerts, you must explicitly activate the event types. This is done as follows:

1. Go to the Business Object tab and identify the table used by the standard alert business object (for example, business object BO QADMobileCall uses table ca_mstr).

2. Go to the Configuration tab and activate the Event Type (for example, ca_mstr for QADMobileCall).

3 Select the Active check box for the table (for example, ca_mstr).

4 The Data Object Listening window opens and displays a list of all of the business objects and data objects associated with the event type (for example, ca_mstr). Select the check box for the correct business object/data object and click OK.

5 Click Save to save the event type change.

6 Open the Subscriber Profile Configuration Parameters page by selecting Subscriber|AlertSub|CallMaintained.

7 Verify that the Listen check box for the event type (for example, ca_mstr) is selected.

Check QAD Enterprise Applications Character UI

Start the QAD Enterprise Applications Character UI to verify that it is available. The UI should start without any errors. However, you may receive the following error message:

> "You have attempted to connect to a database with too many users connected to it. Retry the connection later, or increase -n on the server (5291)."

In such cases, modify the alerts database start scripts to include `-n` and set them to the same value as the `-n` in the qaddb start scripts. Then restart the alerts database.

Load Translated Labels

Translated labels are installed to the qadadm directory in the Alerts Tool Kit Directory as shown in step 17 on page 24. You can load the `lbl_mstr.d` label file in the corresponding language directory for your language.

Chapter 6

Troubleshooting QAD Alerts Installs

This section describes how to resolve QAD Alerts installation problems.

Overview

This section describes how to resolve issues encountered during, or after, an Alerts installation.

Diagnosing the Problem

The Installation Summary screen displays three types of information about the installation:

- Status
- Detailed Messages
- Detailed Errors

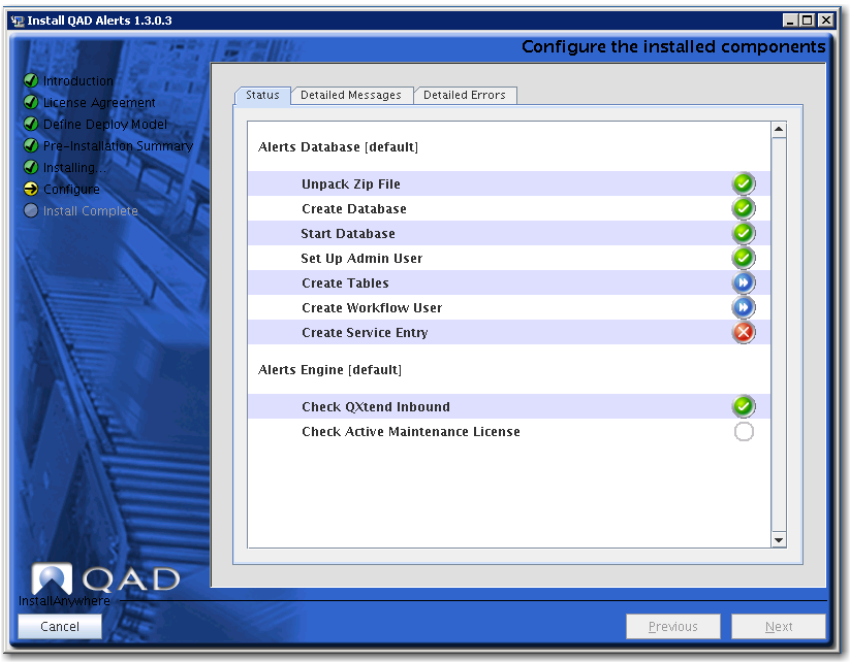
All system messages generated during installation are recorded in the install log.

Status

The Status screen uses colored symbols to indicate the status of each component:

- A green check mark indicates the operation completed successfully (success status).
- A red cross indicates that non-fatal and fatal errors occurred (failure status).
- A blue double arrow indicates a task you can skip (previously completed or irrelevant).

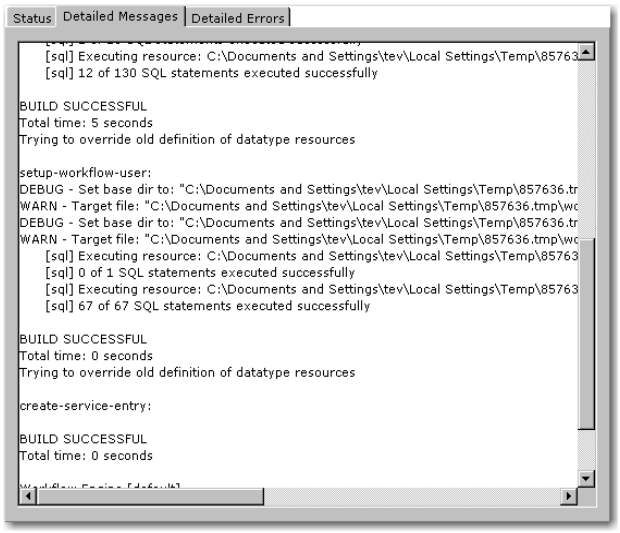
Fig. 6.1
Installation Status Screen



Detailed Messages

The Detailed Messages screen displays a record of all status messages generated during the installation process. All of the displayed messages are logged in the install log file.

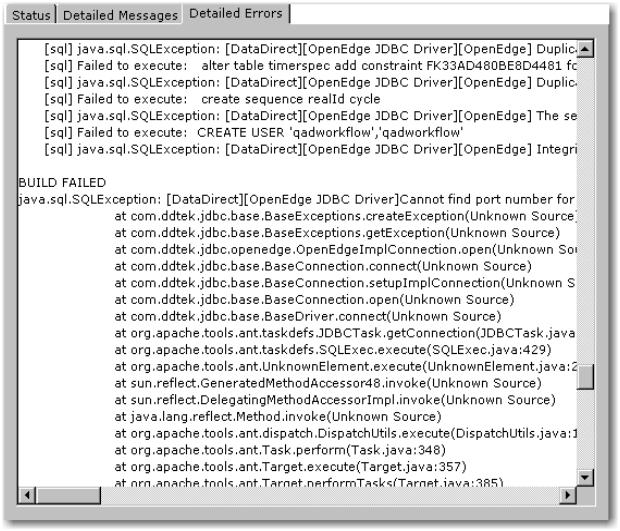
Fig. 6.2
Installation Detailed Messages Screen



Detailed Errors

The Detailed Errors screen shows a log of any fatal system errors noted during the installation or upgrade. These messages indicate a serious problem with the system (for example, a corrupted Java or Progress executable). Some of these errors are recorded in the log file.

Fig. 6.3
Installation Detailed Errors Screen



Checking repository.xml

The installer stores the installation configuration and status of all install-related tasks in the install `repository.xml` file.

Note Do not modify this file manually. Instead, modify it through the GUI installer (see “Installing QAD Workflow Alerts in a GUI Environment” on page 16). You are also able to modify the status of routines and modules. For more information, see “Using Process Control” on page 44.

The `repository.xml` file can give you a high-level view of the results of an install, particularly when doing a console install, which presents less information.

Figure 6.4 shows the contents of a typical `repository.xml` file.

Fig. 6.4
repository.xml File

A `repository.xml` file has the following features:

1. Environment: The name attribute is the environment set during the installation.
2. Product: There may be more than one product in the environment. You need to verify that the name and version match the targeted install.
3. Host: There can be multiple hosts in an installation. Verify that this is the correct one.
4. Routine: These are granular tasks that the installer performs. A group of routines make up a component. Routines can have a status of Done, Skipped, Error, or Pending.

5 Component: The component node is the parent to the status and the parameters. Check the component name and proceed to observe the install nodes.

   a Status: The status of that particular component instance (indicated by the copy attribute). It can be:

      - Complete if all routines are marked as Done
      - Forced Complete if any routine is marked as Skipped
      - Incomplete if any routine is marked as Pending or Error

   b ModuleStatus: The status of all the instances of a component. If there are three instances (indicated by copy), all three must have a status of Complete or Forced Complete before the ModuleStatus is marked as Complete.

Checking the status of a component (more specifically a routine) will lead you to the installation step that failed. This makes the installation log easier to navigate because you know what to look for.

The `repository.xml` file is located under the `data` directory in the `QADDeployService` servlet in the `tomcat/webapps` directory. If you are using a local file, `repository.xml` is in the location specified during the install.

Reading the Installation Log

The Alerts installation log, named `Alerts-InstallLog-<`*`TimeStamp`*`>.log`, resides in the configured directory that was chosen when running the installer. The log file captures all of the standard output from the JVM during the install. If you are running the GUI installer, this is the same as the Detailed Messages tab.

If an error occurred, you can read the log file during or after the install. If the pause occurred during installation (see Appendix B, “Process Control,” on page 43), you can view the file without exiting the installer. In some cases, you can fix the problem and rerun the routine that failed.

If the installation process completed with a non-fatal error, you can identify the error by looking in the `repository.xml` file (see “Checking repository.xml” on page 33). To find the problem, look for the component that owns the failed routine. Then search the log file for the beginning of that component by finding the name followed by the instance in square brackets:

```
Alerts Engine [default]
================================================
```

The failed routine will have a corresponding ant task with a name that is similar to that of the routine.

```
add-tomcat-users:
   [copy] Copying 1 file to /qad/tomcat-164-8110/conf
   [xslt] Processing /qad/tomcat-164-8110/conf/tomcat-users.xml.bak
   to /qad/tomcat-164-8110/conf/tomcat-users.xml
   [xslt] Loading stylesheet
   /tmp/656641.tmp/resources/Transformations/tomcat-users.xsl
```

If the routine is successful, you will see a message similar to this:

```
BUILD SUCCESSFUL
Total time: 1 second
Trying to override old definition of datatype resources
```

If the routine is unsuccessful, you will see a message similar to the following:

```
BUILD FAILED
java.net.ConnectException: Connection refused
```

The failure message includes a Java stack trace for the error. Since stack traces are sometimes hard to understand, QAD provides Helpful Hints when the installer pauses for an error.

Reading the steps around the error can provide clues about its cause.

Environment Issues and Common Mistakes

This section describes problems that may occur during Alerts installation. For more detailed information regarding potential installation issues, refer to the QAD Knowledge Base or contact QAD support.

No X11 DISPLAY variable was set

This error appears when trying to run the install in a console without GUI capability. To run the installer in console mode, add the `-i console` option to the command.

Unable to Deploy

If the Web Applications do not deploy properly, Tomcat may have failed to fully start during installation. Verify that the Tomcat server is fully operational (a good test is to access the Manager application in your browser). If it is running, but produces out-of-memory exceptions, you can increase the maximum and default Tomcat heap size (`-Xmx` and `-Xms`). See your operating system documentation.

Cannot Connect to Database

The install log may report that the database cannot be reached, or that the user is not authorized to access those tables. In either case, verify the database setup and connection parameters. You can use `sqlexp` to verify that a connection is possible.

Default Configuration

The QAD Alerts installation loads configuration information to QXtend, as well as its own configuration database. These requests and responses can be found in the logs directory.

No Features to Install on this Host

The following message may appear during Alerts installation:

> The information stored in the QAD Deployment Configuration Service indicates that there are no features to install on this host (xxx). If this is unexpected, you may wish to rerun the installer on a Windows or X-Platform and update the configuration. If this is correct, continue the installer on the next host. The installer will now exit.

This message is an indication that there are no installs to do on the machine on which you are running the install. You can continue the install on the servers you are using.

This message can display for a number of reasons:

- When you first run the installer on a PC in a multi-tier install, it builds the QAD Deployment Service (QADDeployService.V1), interrogates the user for configuration values (data gathering), and sees if it should also deploy on the same PC. Generally the answer is no because you are just building the configuration data through a GUI interface, but you plan to deploy the components on a different server or servers. In this case you can safely ignore the message and proceed.
- During `QXtend.bin -i console`, you were prompted for an environment to install and entered an invalid environment name. Most likely, when you ran the installer, you provided an environment name like Test, Prod, and so on. If your answer was not valid, the installer looks in the `respository.xml` file for an environment tag called `<what_you_entered>`. The tag will not be there, resulting in a "nothing to install on this Host" message. If you forgot your environment name, you can check the `respository.xml` file for the name you provided. You can also run a GUI installer and observe the option at the environment selection screen. Then rerun the installer.
- To determine if an incorrect host name was entered, compare `xxx` from the error message with the result of `hostname` or an equivalent command in a console window. Always use the shortened host name when using the QXtend installer (but do not include the domain).

IATEMPDIR Space

The installer must self-extract a number of files before it can run. This can cause an error before the installer finishes loading, particularly when using the bundled Java VM. This occurs because there is insufficient space in the default extract location. To resolve this, you can set the environment variable `IATEMPDIR` to a storage area with sufficient space.

Java Memory

If you experience out-of-memory errors during installation before the installer finishes initializing, do the following:

1. Create a directory called `bin` under `$HOME` as user `mfg`.
2. Create a file named `java` under the `bin` directory and add following parameters in the file:
   - `- /opt/java1.5/bin/java -verbose -Djava.awt.headless=true -XX:HeapDumpOnOutOfMemoryError -client`
   - `-Xms1024M -Xmx2048M $@`
   - Set `JAVA_HOME` to `$HOME/bin`.
   - Add `$HOME/bin` in the beginning of the `PATH`.

The installer should now be able to complete the installation process.

Unable to Access UI

The Alerts UI uses QXtend to authenticate the users logged in to the QAD .NET UI. The UI runs as a plug-in and must pass the userid/password through to QXI to authenticate. If your QAD SI AppServer and/or connection pool is not running, you will encounter an error when trying to access the UI.

To resolve this problem, run:

```
start.alertsdb.ksh -n xx
```

where `xx` is the maximum number of users.

Known Issues

Installer Menu Items Difficult to Select

Starting the Alerts Installer UI in X-Windows while using X-Windows clients (such as `xterm`) can make installer UI menu items difficult to select.

This is a known environment-related issue with the Java X-Windows component. To work around it, use the Up and Down keys to make a selection.

Unclear Error Message

If you run the Alerts installer and the QXtend default configuration fails, the system can return an unclear error message. The message says:

```
Check qxtendConfigResponse with error 'configure
subscriberProfileEventType error: invalid subscriber profile'
```

There are three known causes for this type of failure:

- An authentication failure. Check the `qdocResponses.log` in QXtend Inbound to see if an authentication failure occurred.
- No active maintenance license. Verify that QAD EA has an active license type of MAINT.
- An invalid or unsupported QXI receiver. Verify that the receiver specified in the install has a receiver defined in QXtend Inbound. The receiver must also have a corresponding SIAPI connection pool defined.

Appendix A

Typical Installation Parameters

This section describes the typical parameters provided for basic QAD Alerts installations.

Overview

QAD Alerts provides a simplified installation process using a default Alerts configuration bundled with the product. The default configuration automatically populates the various installer fields.

If you want to modify any of the default configuration parameters, use Alerts' advanced installation mode.

Tokens

Tokens enable you to dynamically reference parameters from other fields. You can use any parameter name as a token by placing the parameter name between @ symbols. Tokens also work recursively.

For example, to resolve `QXODB_DIR`:

```
QXODB_DIR = @QXOSERVER_DIR@/db
QXOSERVER_DIR = @GLOBAL_QXTEND_DIR@/qxoserver
GLOBAL_QXTEND_DIR = /qad/qxtend
```

The result is:

```
QXODB_DIR = /qad/qxtend/qxoserver/db
```

Values are stored as tokens in the repository and resolved at runtime as ant properties or during configuration in the UI.

Note Hovering over a field label displays the corresponding parameter name. If you hover over the field itself, the fully resolved parameter appears as a tool tip.

Parameters

The following table describes the parameters provided with the default Alerts configuration.

Table A.1 Default Alerts Installation Parameters

Group	Description	Setting
Tomcat	Tomcat Home	<mandatory field>
	Tomcat Admin User	admin
	Tomcat Admin Password	mfgpro
	Tomcat Port	8080
Server WebApp	WebApp Name	alerts-server
SMTP Server	SMTP Server	<mandatory field>
	SMTP Port	25
	Sender E-mail Address	"QAD Alerts" <alerts@qad.com>
	E-mail Authentication	False
	E-mail Username	
	E-mail Password	

Table A.1 — *Default Alerts Installation Parameters* (Page 1 of 2)

Group	Description	Setting
QAD ERP Database	Name	<mandatory field>
	Host	localhost
	Service Name	<mandatory field>
	.db File Owner	mfg
	QAD Client Username	mfg
	QAD Client Password	
	QAD Version	QADSE
	QAD Service Pack	2010+
QXtend Configuration	Host	localhost
	Port	8080
	WebApp Name	Qxi
	Username	admin
	Password	mfgpro
	Receiver Name	QADERP
	Source Application	QADERP
	Subscriber	AlertSub
	Message Sender	MS1
	Message Publisher	MP1
Alert Delivery Service	Polling Frequency	30
	Delivery Agents	2
Wokflow Database	Physical name	qadalerts
	Directory	<mandatory field>
	Progress Directory	<mandatory field>
	Port	3390
	Use Service Name	false
	Service Name	qadalerts-service
	Update Services File	false
	Admin User	admin
	Admin Password	mfgpro
	Alerts User	qadalerts
	Alerts Password	qadalerts
.NET UI Plug-in	Version	2.9.1
	WebApp Name	qadhome
	Tomcat Port	8080
	Tomcat Home	<mandatory field>
	Tomcat Username	admin
	Tomcat Password	mfgpro
	Configuration Name	qadui
Alerts Toolkit	Alerts Toolkit Directory	<mandatory field>

Table A.1 — *Default Alerts Installation Parameters* (Page 2 of 2)

Appendix B

Process Control

This section describes QAD Alerts installation process control.

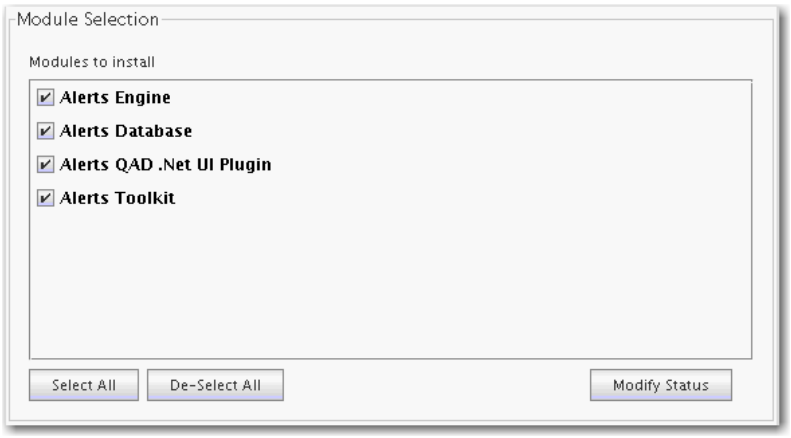
Overview

Process Control provides a higher level of control over the installation process that can greatly enhance the efficiency of the install.

Using Process Control

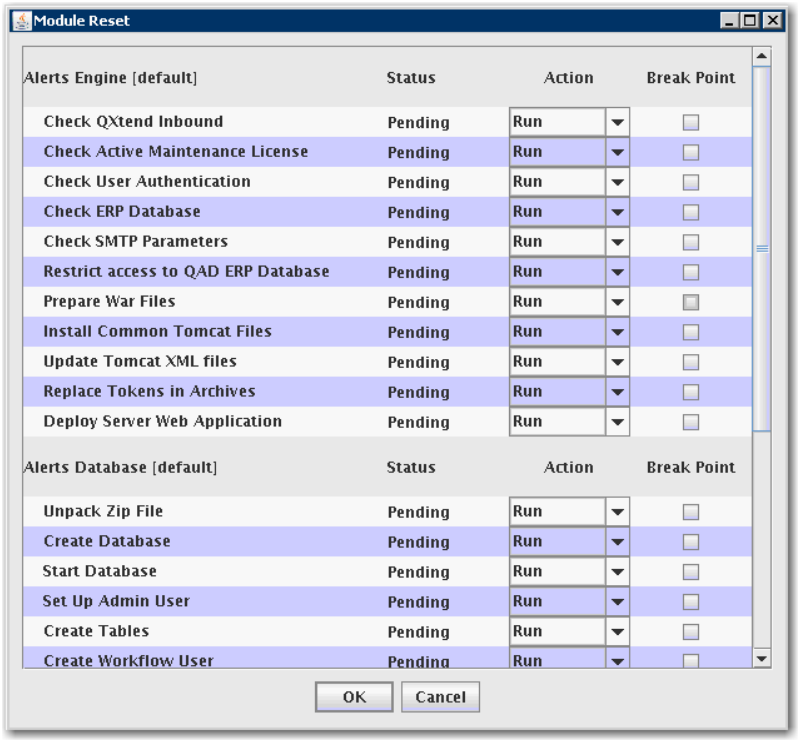
Click the Modify Status button on the Module Selection Screen.

Fig. B.1
Module Selection Screen



The Modify Status pop-up appears.

Fig. B.2
Modify Status Pop-up



Changing the action via the selection lists enables you to run, rerun, or skip each of the routines. It may be useful to skip redundant tasks that were run in previous installs (such as installing the common Tomcat files), or to rerun a specific routine (such as creating the Alerts database tables).

Note All routines are included for a reason. Skipping a routine could result in an incomplete or non-functional installation. Only skip routines that are definitely not needed.

Selecting a routine's breakpoint check box will pause the installer before it runs the routine. This allows you to pay particular attention to that part of the install.

If the installer encounters an error while running, it pauses, allowing you to fix environment problems on the fly. For example, if Tomcat is not running when it tries to deploy the servlets, the installer pauses. You can investigate using the log file, see that Tomcat was not started, and start up Tomcat. The installation continues as if nothing had happened.

Fig. B.3
Console Prompt After an Error

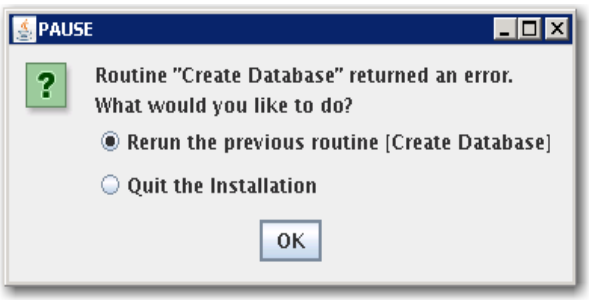
```
================================================================================
Run deployment routines
-------------------------------

Component/Routine                                                       Status
--------------------------------------------------------------------------------
Alerts Database [default]
   Unpack Zip File                                                      Skip
--------------------------------------------------------------------------------
PAUSE
--------------------------------------------------------------------------------
What would you like to do?
    1- Run the next routine [Create Database] without pausing
    2- Run the next routine [Create Database] and pause
    3- Quit the Installation

Enter your selection: 1
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
PAUSE
--------------------------------------------------------------------------------
Routine "Create Database" returned an error.
What would you like to do?
    1- Rerun the previous routine [Create Database]
    2- Quit the Installation

Enter your selection:
```

Fig. B.4
GUI Prompt After an Error



Note You cannot correct configuration errors in the repository file. For example, if you forgot to add a custom element to the compile `PROPATH`, you cannot add it once the installation starts and rerun the routine after it fails. You must restart the installer and let it pick up the new value.

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