



QADirector

Installation Guide

Release 6.0.1

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Introduction

How to Use This Guide

The QADirector Installation Guide includes system requirements and instructions for installing the QADirector application.

Who Should Read This Guide

The QADirector Installation Guide is intended for administrators who are installing QADirector. For reference and usage information, refer to the online help. Compuware assumes that you are familiar with basic Microsoft Windows navigation. If this is not the case, familiarize yourself with the documentation for Microsoft Windows before reading this guide. For information about the integrated products, refer to the documentation shipped with the products.

Related Documentation

The QADirector documentation set includes the following:

- The *QADirector Installation Guide* includes system requirements and instructions for installing the **QADirector Web Server application**, the QADirector database, the **Test Management Server**, the QADirector Integration Plugins, the **QADirector Client, Manual Testing**, and the **Test Execution Agent**.
- The *QADirector Online Help* provides how-to, reference, and conceptual information on the QADirector centers, tools, procedures, and the full Client application.
- The *QADirector Release Notes* contains System Requirements, Known Issues, Technical Notes, and What's New information for each release.
- The *QADirector Integration and SDK Reference* contains information about how to use the QADirector SDK/API and integration components.
- The *Distributed License Management Installation Guide* provides instructions for installing and configuring a license for QADirector.

- The *QADirector - CaliberRM Integration Help* contains reference and how-to procedures for integrating your CaliberRM requirements into QADirector.

Getting Help

At Compuware, we strive to make our products and documentation the best in the industry. Feedback from our customers helps us maintain our quality standards.

Go to <http://frontline.compuware.com> to access online customer support for Compuware products. You can read or download documentation, frequently asked questions, and product fixes, or e-mail your questions or comments. In the **Log In** section, enter your login ID and password and click **Login**. If you are a first-time visitor, click **Register** to receive your free password to access FrontLine. After completing the registration form, your login ID and password are e-mailed to you and your account is activated.

If you need support services, please obtain the following information before calling Compuware's 24-hour product support hotline:

- The name, release (version), and build number of the product. The name and release are on the covers of the product documentation.
- Installation information, including installed options, whether the product uses local or network databases, whether it is installed in the default directories, whether it is a standalone or network installation, and whether it is a client or server installation.
- Environment information, such as the operating system and release on which the product is installed, memory, hardware/network specifications, and the names and releases of other applications that were running.
- The location of the problem in the product software, and the actions taken before the problem occurred.
- The exact product error message, if any.
- The exact application, licensing, or operating system error messages, if any.
- Your Compuware client, office, or site number, if available.

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Getting Started

QADirector Overview

QADirector enables teams to deliver a repeatable functional testing process that helps realize significant gains in productivity and efficiency, from planning requirements and executing tests to analyzing results. QADirector is part of the Compuware Quality Management solution and integrates with the following Compuware products:

File-AID/CS

Helps developers efficiently manage and prepare data for testing. It allows developers to copy, convert, transform, compare, and edit data, validate test data results, and restore test data to its baseline state.

Hiperstation

Tests host-based applications directly from your Microsoft Windows desktop. This integrated, workstation-based interface tool uses 32-bit code that provides improved performance and better stability on 32-bit Windows platforms.

Optimal Trace

Enables the structured capture of requirements. Optimal Trace facilitates all aspects of requirements capture from drafting initial notes at a customer site through generation of final requirements documents.

QALoad

Load tests enterprise systems and associated networks. QALoad can stress-test your system by simulating thousands of users simultaneously performing different operations. It creates and runs test scripts that can simulate application transactions on the system without involving end users or their equipment.

Quality Manager

Provides Complete IT management and governance that enables organizations to maximize the business value of the entire IT portfolio including projects, applications, and infrastructure.

TestPartner

Tests Web- and Microsoft Windows-based applications that use Microsoft technologies. TestPartner records user actions to quickly produce powerful tests. Each recorded test displays as a series of actions in clear, concise steps that can be easily understood by all testers, from novice to expert. You can record user sessions with the application, add validation functions, and replay the sessions later to ensure that the application works as expected.

TrackRecord

Records and reports information about products being developed or supported. Information on team members, testers, schedules, and defect reports is recorded in an object-oriented database; it can be retrieved using TrackRecord's query and reporting features.

Before Installing

Prior to installation, carefully review the following information:

System Requirements

Review the system requirements to ensure that the system meets the prerequisites for the successful installation and operation of the product. System requirements are listed in the Release Notes as well as in this book.

Release Notes

Review the Release Notes for information about new features, technical notes, and known issues that may enhance or impact your product's performance. Release Notes contain recent changes that may not be included in the product documentation.

Release Notes can be viewed from the installation media or on FrontLine (<http://frontline.compuware.com>), Compuware's product support web site. The Release Notes on FrontLine are periodically updated as new information becomes available.

Installing the License

A trial license is supplied with your product. You can install a permanent license at any time during the evaluation period. When the evaluation period expires, you must install a license to successfully run this product. After successfully installing QADirector, you can access the *Distributed License Management Installation Guide*, by clicking **Start>All Programs>Compuware>QADirector>Documentation**.

NOTE

Node locked licenses are not permitted in this release of QADirector. A license server must be installed. Refer to the *Distributed License Management Installation Guide* for additional information.

System Requirements

QADirector components can be installed on one machine or on separate machines. Users must have administrator permissions to install QADirector. The minimum system requirements for each component are as follows:

	Hardware	Operating System	Software
Database Server	2 GHz processor with 2 GB RAM (4 GB RAM recommended) Minimum 20 GB (40 GB recommended) of free disk space	Microsoft Windows Server 2003 SP 2 (32-bit)	Microsoft SQL Server 2005 SP 2 (32-bit) with patch version 3050
		Microsoft Windows Server 2008 (32-bit)	Microsoft SQL Server 2008 (32-bit)
			Oracle 9i Oracle 10g Release 2
Web Server	2 GHz processor with 2 GB RAM (4 GB RAM recommended) Minimum 20 GB (40 GB recommended) of free disk space	Microsoft Windows Server 2003 SP 2 (32-bit or 64-bit)	IIS 6.0 (32-bit)
		Microsoft Windows Server 2008 (32-bit or 64-bit)	IIS 7.0 (32-bit)
Test Management Server	2 GHz processor with 2 GB RAM (4 GB RAM recommended) Minimum 10 GB of free disk space	Microsoft Windows Server 2003 SP 2 (32-bit or 64-bit)	
		Microsoft Windows Server 2008 (32-bit or 64-bit)	
Client Machine	2 GHz processor with 1 GB RAM (2 GB RAM recommended) Minimum 10 GB of free disk space	Microsoft Windows Server 2003 SP 2 (32-bit)	Microsoft Internet Explorer 6.0 SP 2
		Microsoft Windows XP Professional SP 2 OR SP 3 (32-bit)	Microsoft Internet Explorer 7.0
		Microsoft Windows Vista Business SP 1 (32-bit)	Microsoft Internet Explorer 8.0
		Microsoft Windows Server 2008 (32-bit)	Firefox 2.x with FFClickOnce Add-on
			Firefox 3.0 with FFClickOnce Add-on
			Citrix Metaframe Presentation Server 4
QADirector Manual Test			Microsoft Office Excel 2000, 2002, 2003, 2007

Hardware	Operating System	Software
Import Utility		Microsoft Office Word 2000, 2002, 2003, 2007

NOTE

- Adobe Acrobat Reader is required to view the online books in PDF format.
 - On the client machine, administrator permissions are required to install .NET. If .NET is already installed, administrator permissions are not required to install QADirector.
 - TCP/IP protocol must be installed on all computers
-

Installing the QADirector Application

QADirector Architecture

The essential components of QADirector include:

QADirector Web Server

The QADirector web server hosts the central QADirector web application which is then accessed by the QADirector smart client.

QADirector Database Server

The QADirector database server contains all the essential QADirector information and assets.

Test Management Server

The **Test Management Server** receives requests to schedule and execute tests submitted by the users. This application runs as a service and can reside on the same machine as the web server, or on separate machines. Specifically, it reads Job submissions from the database, manages jobs, tracks the machines available for test execution, and manages the licenses used for automated testing. It also reports the status of Jobs in progress.

Client Machine

The QADirector client is a Smart Client application that is downloaded from the QADirector web server to a client machine for execution. The QADirector client can also connect to the QADirector Manual Testing Application.

Test Execution Agent

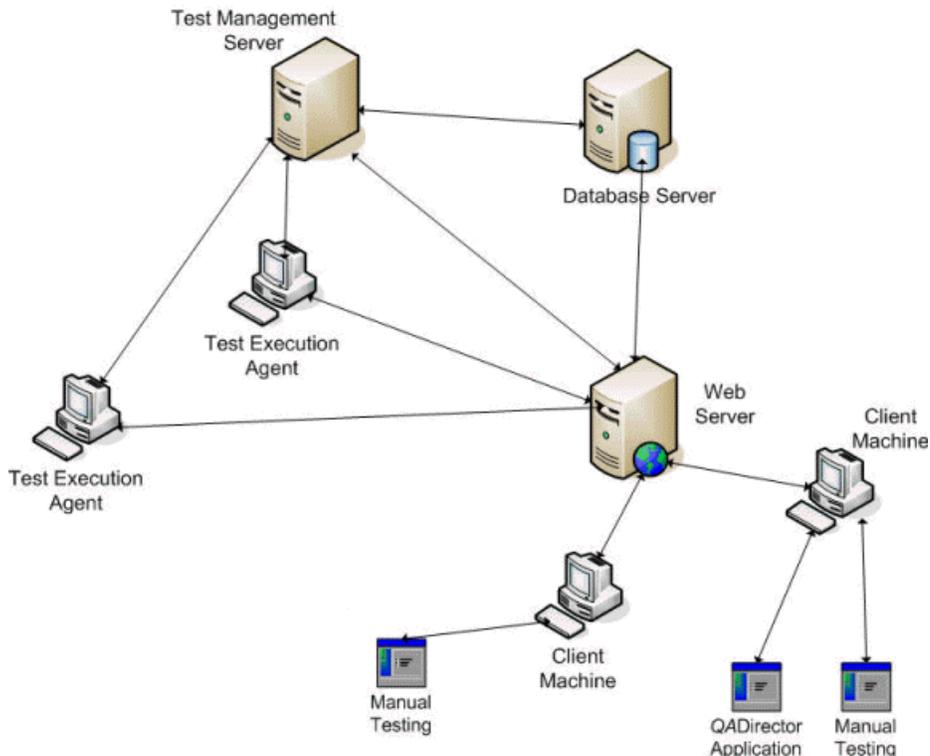
The **Test Execution Agent** is an application that receives the test execution requests from the Test Management Server, then runs the tests and submits the results back to the main QADirector application. Specifically, it stores information about who is permitted to execute Jobs on a computer, and whether the execution is remote or local.

In a typical installation, QADirector is installed on a web server, and the QADirector database is installed separately on a database server. During the installation, you can select Express as

the default database, or install the database separately, either or Oracle. There are several options when installing the QADirector components:

- The Web Server and the Database Server should be on separate machines.
- The **Test Management Server** can be on the same machine as the Web Server, or the Database Server, or on a separate machine.
- The **Test Execution Agent** can be on the same machine as the Client or on separate machines.
- The QADirector application and **Manual Testing** run on the Client machines.

The following figure shows the recommended QADirector system configuration.



NOTE

QADirector also includes several add-on components to use on a client:

- QADirector SDK. For more information, see [Installing the QADirector SDK](#) [p. 31].
- **QADirector Integration Plug-In**. For more information, see [Installing the QADirector Integration Plugin](#) [p. 33].
- **QADirector Manual Test Import Utility**. For more information, see [Installing the QADirector Manual Test Import Utility](#) [p. 41].

License Usage

The following table lists the QADirector components and license usage. Note that license usage is based on component, not on machine. So, if you run the **QADirector Client** application and **Manual Testing** on the same machine, two licenses are checked out.

QADirector Component/Utility	Checks out license
APIs	Yes
Client application	Yes
Manual Testing application	Yes
QADirector Integration Plug-In	Yes
QADirector Manual Test Import Utility	Yes
Test Execution Agent	No
Test Management Server	No
Web server application	No

Installing the QADirector Web Server

This section describes how to install QADirector on the web server machine. Typically a system/database administrator performs this task.

1. From the installation media browser, navigate to the **QADirector** tab.
2. Click **Install QADirector**. The **QADirector InstallShield Wizard** dialog box appears.
3. Click **Next**. The **License Agreement** screen appears.
4. Read the license agreement and click **Yes** to accept the terms of the agreement. The **Customer Information** screen appears.
5. Type your name and company in the **User Name** and **Company Name** fields and click **Next**. The **Choose Destination Location** screen appears.
6. Select a location for the QADirector installation. The default location is: x:\Program Files\Compuware\QADirector, where x is the drive where Microsoft Windows resides on your computer. To specify a different location, click **Browse** and select an existing folder or type the path name in the **Path** field. Click **OK**. Click **Next**. The **Select Features** screen appears.
7. Select the features to install, and clear the check boxes next to any feature that is not being installed. These services can be installed separately and on different machines.
 - a) Click the name of each component to view a brief description in the **Description** field.
 - b) If you are installing the QADirector application, the **Application Server** is a required component.
 - c) Installing QADirector creates the following services:

Compuware Open Server (COS)

Compuware's server-side platform for cross-product integration. If COS is already installed, it will be removed, and the current version is installed.

Compuware QADirector Scheduler

This service is used to schedule application events.

Compuware QADirector Subscriber

This service is used to get subscription messages from Compuware Open Server.

Compuware Test Management Service

This service is installed with the **Test Management Server** and is used to schedule QADirector jobs and manage machines available for test execution.

TRSDKService11

Compuware TrackRecord SDK service. This service should be started to view defects and run queries.

- d) Installing QADirector creates the following virtual directories in IIS:
 - qadirector: required to run the QADirector application.
 - tpservices: required for QADirector to retrieve scripts from TestPartner.
- e) Selecting **Integration Services** installs the required components to integrate with the selected product. This does not install the actual product.

NOTE

If you are migrating from a previous version of QADirector, do not select the database at this step. After this installation is completed, follow the instructions in [Migration](#) [p. 24]. If you are using a database server, do not select the database at this step. If you are installing these services on Windows Vista with IIS7, see [Additional Installation and Configuration](#) [p. 45].

- f) **QADirector Services** include Application Server, Test Management Server and SQL Server 2005 Express Edition.
8. After selecting the features to install, click **Next**. If you did not select a database in the previous step, a message appears stating that a database is required to use QADirector
 9. If there is already one or more web sites in IIS, the **Select a Web Site** screen appears. In the **Web Sites** list, select the web site to use to install QADirector, and click **Next**.
 10. The **Select Program Folder** dialog appears. Select the Program Folder for QADirector. You can accept the default folder, or select a different folder from the list. Click **Next**. The **Start Copying Files** screen appears
 11. Review your settings before starting the installation and click **Next** to begin the installation. To make any changes, click **Back** to return to the previous screen. A progress bar appears and indicates the progress while installing the application. If you are prompted to restart your computer, select the **Restart Your Computer** check box to restart it now.
 12. Click **Finish** to complete the QADirector Web Server installation.

Installing the Test Management Server

The Test Management Server can be installed during the main QADirector application installation on the web server, or separately on a different machine. To install the Test Management Server after installing QADirector:

1. From the installation media browser, navigate to the QADirector tab.

2. Click **Install QADirector**. The **QADirector InstallShield Wizard** dialog box appears.
3. Click **Next**. The **License Agreement** screen appears.
4. Read the license agreement and click **Yes** to accept the terms of the agreement. The **Customer Information** screen appears.
5. Type your name and company in the **User Name** and **Company Name** fields. Click **Next**. The **Choose Destination Location** screen appears.
6. Select a location for the Test Management Server installation. The default location is: `x:\Program Files\Compuware\QADirector`, where `x` is the drive where Microsoft Windows resides on your computer. To specify a different location, click **Browse** and select an existing folder or type the path name in the **Path** field. Click **OK**.
7. Click **Next**. The **Select Features** screen appears.
8. Select **Test Management Server** and click **Next**. If you have not configured a database on this machine, a message appears warning that QADirector will not function properly until a database is configured. Click **Yes** to continue. The **Select Program Folder** screen appears.
9. Select the **Program Folder** for QADirector. You can accept the default folder, or select a different folder from the list. Click **Next**. The **Start Copying Files** screen appears.
10. Review your settings before starting the installation. To make any changes, click **Back** to return to the previous screen.
11. Click **Next** to begin the installation. A progress bar appears and indicates the progress while installing the server. Select the **Display Release Notes** check box to review the information in the Release Notes file. This file contains information about new features, technical notes, and any known issues that may enhance or impact the performance of QADirector. Release Notes contain recent changes that may not be included in your QADirector product documentation.
12. Click **Finish** to complete the Test Management Server installation.

Installing the QADirector Database

This chapter describes the steps required to manually install a database. If you are migrating or if you installed a database during the QADirector installation, you do not need to manually install a database.

This section explains the installation process for the QADirector database. Before starting the installation:

- Review the system requirements to ensure the database will install and operate properly for each QADirector component product.
- Compuware recommends that you exit all non-essential Microsoft Windows programs before running the setup program. Some Microsoft Windows programs may interfere with the installation process.
- Back up existing databases. If you have previous component product databases installed, Compuware recommends that you back up your data.

There are two different ways to create the database: automatically with the installation media or manually. Manually creating and configuring a database consists of a series of procedures. To simplify this process, Compuware provides an installation directly from the product installation media.

NOTE

Use the database installation from the installation media if you do not have database administration experience.

Installing and Configuring Oracle

Oracle Server Requirements

- Existing database server instance that runs a supported version of Oracle.

- You must create an Oracle service prior to installing the QADirector Oracle database. For more information, see [Creating an Oracle Client Service Name](#) [p. 19].
- Use the following information to configure the database instance:
 - For Oracle 9i, in order to improve QADirector performance, it is recommended to set the `optimizer_mode` (see `init.ora`) to 'ALL_ROWS' instead of any Rule-based modes. Note that in Oracle 10g and later, the Rule modes are deprecated, default value of `optimizer_mode` is 'ALL_ROWS', and the Cost-based optimizer has been greatly improved.
 - Unless Windows NT native security is used for your authentication service, it is recommended to set the value of `SQLNET.AUTHENTICATION_SERVICES` to `NONE` instead of `NTS`. This parameter is located in the `sqlnet.ora` file.
 - When the Oracle database instance is defined, specify the *Storage Character Set* as `iso 8859-1 West European`.
 - Set the `NLS_LANGUAGE` parameter file as: `NLS_LANGUAGE = 'AMERICAN'`. If you are using Windows 2000, set the `NLS_LANGUAGE` parameter to `AMERICAN_AMERICA.WE8ISO8859P1` in the following locations:


```
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\NLS_LANG
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\ALL_HOMES\IDO\NLS_LANG
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOME-\NLS_LANG
```
 - Oracle user ID and password to allow the QADirector administrator to set up the database.

Oracle Login

When installing a database, you are prompted to enter Login Information. For any non-DBO user, the user must have the following minimum permissions:

- The user must have permissions to use the objects created by the installer.
- The user must have the `ALTER ANY SEQUENCE` permission.

NOTE

Tip: For assistance with setting permissions, contact your database administrator.

Installing the Oracle Database

To install the Oracle database:

1. Log on to the database server as a user with administrator permissions.
2. From the installation media, click the **QADirector** tab.
3. Click **Install QADirector Database**. The **QADirector Database Installation** wizard appears.
4. Click **Next**. The **License Agreement** screen appears.
5. Read the license agreement and click **Yes**. The **Database Management System** screen appears.
6. Select Oracle 9i or 10g and click **Next**. The **Oracle Server Login Information** screen appears. Type the following information in the appropriate fields:

- **Service:** Service name. For more information, see [Creating an Oracle Client Service Name](#) [p. 19].
 - **Login:** User/schema name.
 - **Password:** User password.
7. Click **Next**. The **Database Information** screen appears. Type the following information:
 - **Name:** Create a user account by entering user name for the database.
 - **Password:** Enter a password for the user account. A schema with this name is also created.
 8. Click **Next**. The **Review Settings** screen appears. Review your settings before starting the installation. Click **Back** to go back and change a setting, or click **Next** to begin the installation. A progress bar appears while the database is being created.
 9. At the end of the installation, the **Command Results** screen displays a log containing all commands that were executed during the database creation. To save the log, select the text, then copy and paste this information into a text file. Save this log file.
 10. Click **Next**. Click **Finish** to complete installation of the QADirector Oracle database.

Configuring the Oracle Database

This section provides information about configuring QADirector to use an Oracle database. The QADirector installation includes the files to execute scripts and create the required tables. To configure the database tables:

1. Create a user account with database administrator privileges for QADirector.
2. Login to Oracle as the user you just created.
3. Navigate to the `Oracle` directory on the installation media:
 - a) Click **Explore this Media**. A Microsoft Windows Explorer window opens.
 - b) Navigate to: `QM Setup\QADirector\Database\sqlscripts\Oracle`
 - c) Execute the following scripts for QADirector in order:
 - i. `1_orcl.sql`
 - ii. `2_orcl.sql`
 - iii. `4_common.sql`
 - iv. `5_orcl.sql`
4. Log out of Oracle.

Creating an Oracle Client Service Name

To create an Oracle client service name:

1. Open the Net Configuration Assistant.
2. Select **Local Net Service Name Configuration**. Click **Next**.
3. Select **Add**. Click **Next**.

4. Type a service name in the **Service Name** (Instance Name or Database Name) field. Click **Next**.
5. Select **Communication Protocol** (TCP). Click **Next**.
6. Type a server name in the **Host Name** field. Validate the **Port number** (host: 1521). Click **Next**.
7. Select **Yes** to perform a test. Click **Next**.
8. Validate the test results. If the Test fails, fix the errors and retest. Click **Next**.
9. Type a Net service name in the Net Service Name field and click Next. Click **Finish**.

Installing and Configuring Microsoft SQL Server

Microsoft SQL Server Requirements

- Existing database server instance that runs a supported version of Microsoft SQL Server.
- Use the following specifics to configure the database instance:
 - Microsoft SQL Server must be case insensitive at the time of installation.
 - If the database instance is defined, you must specify code page 1252 and sort order 52, also known as ISO 8859-1.
 - If you are using Microsoft SQL Server, specify the SQL_Latin1_General_CP1_CI_AS collation.
- Microsoft SQL Server user ID and password to allow the administrator to set up the database.

About the Microsoft SQL Server Express Default Database

The following lists the default values used for the default Microsoft SQL Server Express database:

Server name

<localhost>\QACInst

Database name

QADirector

Owner name

dbo

User name

sa

Password

qacenter

Microsoft SQL Server Login

While installing a database, you are prompted to enter Login Information. The database login account must be assigned to db_owner or db_ddladmin or a user-defined role that has statement permissions (**Create Table, Drop Table, Alter Table, Create Procedure, Drop Procedure,**

Create View, Drop View,) and object permissions (**Insert, Select, Delete, Update, Execute, References**).

NOTE

In SQL 2005, be sure to associate the schema to the user, for example:

```
CREATE SCHEMA <YourSchema> AUTHORIZATION <QADUserID>
ALTER USER <QADUserID> WITH DEFAULT_SCHEMA = <YourSchema>
```

Installing the Microsoft SQL Server Database

To install the SQL database:

1. Log on to the database server as a user with administrator permissions.
2. From the installation media, click the **QADirector** tab.
3. Click **Install QADirector Database**. The **QADirector Database Installation** wizard appears.
4. Click **Next**. The **License Agreement** screen appears.
5. Read the license agreement and click **Yes**. The **Database Management System** screen appears.
6. Select Microsoft SQL Server 2000 or Microsoft SQL Server 2005 and click **Next**. The **Microsoft SQL Server Login Information** screen appears. Type the following information in the appropriate fields:
 - **Server:** Database server name.
 - **Login:** Database user name.
 - **Password:** User password.
7. Click **Next**. The **Database Information** screen appears. You can accept the default name or type the database name. Click **Next**.
8. The **User Account Information** screen appears. Optionally, you can specify a unique login name and password to use with this database, or leave the fields blank. Click **Next**.
9. Review your settings before starting the installation. Click **Back** to go back and change a setting, or click **Next** to begin the installation. A progress bar appears during database installation. At the end of the installation, the **Command Results** screen displays a log containing all commands that were executed during the database creation. To save the log, select the text, then copy and paste this information into a text file. Save this log file.
10. Click **Next** and then **Finish** to complete the database installation.

Configuring the Microsoft SQL Server Database

This section provides information about configuring QADirector to use a Microsoft SQL Server database. The QADirector installation includes the files to execute scripts and create the required tables. To configure the database tables:

1. Login to SQL Server as a user with administrative privileges.
2. Navigate to the MSSQL directory on the installation media:

- a) Click **Explore this Media**. A Microsoft Windows Explorer window opens.
 - b) Navigate to: QM Setup\QADirector\Database\sqlscripts\MSSQL.
 - c) Execute the following scripts in this order:
 - i. 1_mssql.sql
 - ii. 2_mssql.sql
 - iii. 4_common.sql
 - iv. 5_mssql.sql
3. Log out of Microsoft SQL Server.

Configuring QADirector

Configuring QADirector to use Microsoft SQL Server

To configure QADirector for Microsoft SQL Server:

1. Click **Start>All Programs>Compuware >QADirector>System Configuration**. The **QADirector - System Configuration** dialog box appears.
2. Enter appropriate values into the following fields:
 - a) Select **Microsoft SQL Server** from **Database type**.
 - b) Type the server name in the **Server** field.
 - c) Type the database name in the **Database** field.
 - d) Type the schema name in the **Schema** field.
 - e) Type the login ID in the **Login** field.
 - f) Type the login password in the **Password** field.
3. Click **Test Connection** to validate the configuration. If the test is successful click **Connect**. A message verifying the connection appears and the service restarts. When you have successfully connected, click **Close** to close.

Configuring QADirector to use Oracle

To configure QADirector for Oracle on the Web server, you must first create an Oracle Net Service name. For more information, see [Creating an Oracle Client Service Name](#) [p. 19].

NOTE

Compuware recommends using the Oracle driver instead of the Microsoft driver when connecting to the QADirector database.

1. Click **Start>All Programs>Compuware >QADirector>System Configuration**. The **QADirector - System Configuration** dialog box appears.
2. Enter appropriate values into the following fields:

- a) Select **Oracle** from **Database type**.
 - b) Type the service name in the **Service** field.
 - c) Type the schema name in the **Schema** field.
 - d) Type the login name in the **Username** field.
 - e) Type the password in the **Password** field.
3. Click **Test Connection** to validate the configuration. If the test is successful click **Connect**. A message verifying the connection appears and the service restarts. When you have successfully connected, click **Close**.

Configuring the Oracle 9.2 Client and Above

1. Locate the Oracle Install folder in the Oracle installation directory.
2. Right-click on the folder and choose **Properties**. The **Properties** dialog box appears.
3. Click **Security**. If the Security tab is not visible, navigate to Microsoft Windows Explorer and click **Tools>FolderOptions>View** and clear the **Use Simple File Sharing** option.
4. Click **Add**. The **Select Users or Groups** dialog box appears. Add the following users with full permissions:
 - a) IWAM_<MachineName>
 - b) IUSR_<MachineName>
 - c) ASPNET
 - d) Everyone
5. Click **OK** and then click **Advanced**. Select **Allow inheritable permissions from parent to propagate to this object**.
6. Click **OK** to exit.

Migration

If you have a database from the previous version of QADirector or CARS Workbench 5.3.x, you can migrate it to QADirector Release 6.0.

The following tips are provided to help ease the transition to the current version of QADirector. For additional information on any of the tips, refer to the online help.

Migration Tips

Before Migration

QADirector 6.0 tracks Project health based on design time cycles and actual execution cycles for Tests. To help track accurate data for quality index calculations, Compuware recommends mapping cycles to Result folders prior to migration, as follows:

1. From the **Project properties** screen, select the **Requirement** tab and click **Map Folder Cycles**.
2. Map the design time **Test Cycles** to the appropriate **Result folders**. You may also need to re-arrange Jobs within the Result folders based on the planned execution criterias.

NOTE

Only Public Result folders can be mapped to design time cycles.

3. Repeat these steps for each project.

After Migration

- All tests in a project are listed in the Tests Center. After migration, all tests are placed in the Default Test Folder. You have the option of creating new Test folders, then using Search Folders to sort and organize the tests.
- Jobs can contain either automated or manual scripts. If there are jobs prior to migration that included both types of scripts, the job is separated into two jobs.

To Migrate the Database**NOTE**

-
- Use an account with administrator privileges the first time you login to QADirector after migrating the database.
 - For SQL Server, verify that the **Simple Recovery Model** is selected.
-

1. Install the web server portion of QADirector without installing a database. For more information, see [Installing the QADirector Web Server](#) [p. 13].
2. Install the Test Management Server. For more information, see [Installing the Test Management Server](#) [p. 14].
3. Click **Start>All Programs>Compuware>QADirector>System Configuration**. The **System Configuration** dialog box appears. Enter the connection information for the database to upgrade and click **Test Connection**. If the connection succeeds, a message appears saying that “The connection to the database was successful however the database requires an upgrade.” Click **OK** to continue. For more information, see [Configuring QADirector](#) [p. 23].
4. Click **Upgrade** to upgrade the database to the current version of QADirector. A warning appears, reminding you to backup your database. Click **Yes** to continue.
5. Login to QADirector using the admin account. A progress bar appears with a message that the web server is restarting. A progress bar then appears to show progress of the migration.

NOTE

Depending on the size of the existing database, the migration may take a long time to complete.

6. When the migration is completed, a message appears confirming successful completion of the migration. Enter the database password.
7. Close the **System Configuration** dialog box.
When the migration has completed:

- Compuware recommends creating a backup of the database after migration. **DO NOT** overwrite the pre-migration backup of the database.
- If you changed the **Recovery Model** prior to migration, check with your database administrator for the appropriate setting.

Configuring Logging

QADirector contains a configuration file on the web server that you can use to modify the amount of logging for certain QADirector server components.

NOTE

Modifying the default settings may impact performance.

1. Navigate to the root of the QADirector installation directory on the QADirector web server.
2. Open the `TMAApp.config` file with a text editor or XML editor.
3. Navigate to the `<Logging>` node.
4. Navigate to one of the following nodes to select a component:

<OQAD-WebServices>

QADirector web server.

<OQAD-Scheduler>

QADirector Scheduler.

<OQAD-Subscriber>

QADirector Subscriber.

<OQAD-SystemConfiguration>

QADirector database configuration.

<OQAD-TestManagement>

QADirector **Test Management Server**.

5. Move to the `<root>.<Level>` node. In the `Value` attribute, type in one of the following values exactly as they appear below:

Value	Description
OFF	Logging is turned off.
FATAL	A log is created for any fatal errors.
ERROR	General errors are logged.
WARN	General errors are logged.
DEBUG	Informational errors are logged.
INFO	Informational errors are logged.
TRACE	Informational errors are logged.

Value	Description
ALL	All errors are logged.

NOTE

Other than ALL and OFF, the options are not inclusive. For example, setting the value to ERROR will not log FATAL issues as well.

6. Save the file and close it. You will need to restart IIS for the changes to take affect.

Accessing QADirector

After installing the Web Server, provide users with the URL for the **Application Links** web page so that they can install and run QADirector. From this web page, each user can install and run the QADirector application, Manual Testing application, and Test Execution Agents.

Starting QADirector

To start QADirector, open a browser and type the following in the Address field:

```
http://<servername>/qadirector/default.aspx
```

Licensing

The license for each client is installed on the web server. The evaluation license supplied with your installation allows you to install the product and run it for a specific period of time without first installing a license. At any time during the evaluation period, you can obtain and install a permanent license. When the evaluation period expires, you must obtain a license and install it before you can successfully run this product. For instructions on installing a license, refer to the *Distributed License Management Installation Guide*, located on the installation media.

Client Installation

The web address of the QADirector installation is given to the testers, who then access the URL to complete the QADirector client installation. To install the QADirector Client:

1. Navigate to the QADirector web server:

```
http://<servername>/qadirector/default.aspx
```
2. Click **QADirector**. The **Application Run Security Warning** appears. Click **Run** to start the installation. A progress bar appears during installation.
3. After installation, the **Login** screen appears. Type the user name and password in the appropriate fields, click **OK**. The default administrator account for QADirector is **admin**, and the password is **admin**, all lowercase.

4. If your environment uses more than one client, the **Open Client** dialog box appears. Select the client to use and click **OK**.
5. QADirector opens and displays the **List of Projects Center**.

Manual Testing Installation

If you have already installed the QADirector client, you can access **Manual Testing** from QADirector by clicking **Tools>Manual Testing**.

- The Manual Testing application is installed on the client, and the user currently logged into QADirector is automatically logged into Manual Testing.
- If a project is open in QADirector, the same project is automatically opened in Manual Testing.

To install the Manual Testing application:

1. Navigate to the QADirector web server:

```
http://<servername>/qadirector/default.aspx
```
2. Click **Manual Testing**. The **Application Run Security Warning** appears. Click **Run** to start the installation. A progress bar appears during installation.
3. After installation, the **Login** screen appears. Type the user name and password in the appropriate fields, click **OK**. The default administrator account for QADirector is **admin**, and the password is **admin**, all lowercase.
4. If your environment uses more than one client, the **Open Client** dialog box appears. Select the client to use and click **OK**.
5. The **Manual Testing** window opens and you can select a project to being testing.

Installing a Test Execution Agent

A **Test Execution Agent** can be installed on any machine, including the machine running the client portion of QADirector. It can also be installed on a separate machine by itself. To install a **Test Execution Agent**:

1. Navigate to the QADirector web server:

```
http://<servername>/qadirector/default.aspx
```
2. Click **Install Test Execution Agent**. The **Application Install Security Warning** appears.
3. Click **Install** to start the installation. A progress bar appears during installation.
4. When installation is complete, the **Test Execution Agent** starts and the icon appears in the system tray.

NOTE

The **Test Execution Agent** is stopped when a machine is shut down or re-booted. You can automatically start the **Test Execution Agent** by adding it to the Microsoft Windows Startup options.

Installing the QADirector SDK

1. From the Quality Management installation media, click the **QADirector** tab.
2. Click **Install QADirector Software Development Kit**.
3. From the dialog box that opens, click **Run** to start the installation.
4. Walk through the installation steps to install the SDK. After installation, code samples, documentation, and the SDK libraries will be installed on your machine.
5. Click **Start>All Programs>Compuware>QADirector>QADirector SDK>Integration and SDK Reference** to open the documentation to get started with the SDK.

Installing the QADirector Integration Plugin

The **QADirector Integration Plug-In** provides an automated integration solution between QADirector and several requirements management applications. The **QADirector Integration Plug-In** needs to be installed and configured on the client machine to function. To install the **QADirector Integration Plug-In**:

1. Log on as a user with administrator permissions.
2. From the installation media, navigate to the **QADirector** tab.
3. Click **Install QADirector Integration Plugins**. The **QADirector Integration Plugins** wizard appears.
4. Click **Next**. The **License Agreement** screen appears.
5. Review the license agreement, and click **Yes**. The **Customer Information** screen appears.
6. Type the user name and company name in the appropriate fields and click **Next**. The **Choose Destination Location** screen appears.
7. Select a location for the installation. The default location is: `x:\Program Files\Compuware\QADirector Integration Plugins...`, where `x` is the drive where Microsoft Windows resides on your computer. To specify a different location, click **Browse** and select an existing folder or type the path name in the **Path** field. Click **Next**.
8. The **Select Features** screen appears. Select the plugins to install from the **Requirements Management** tree view and click **Next**.
9. The **Select Program Folder** screen appears. Select the folder to use for the installation, and click **Next**.
10. The **Start Copying Files** screen appears. Review the settings and click **Next** to begin the installation. To make any changes, click **Back** to return to the previous screen.
11. The **Setup Status** screen appears and displays the progress for the installation. If Adobe Reader is not installed on the machine, a message appears stating that Adobe Reader is required for viewing the online books. Click **OK**. When installation is complete, the **Install QADirector Integration Plugins** displays a message that the installation is finished. Click **Finish** to complete the installation.

CaliberRM

Migrating a CaliberRM Integration Project

If you have used the QADirector to CaliberRM integration in QADirector 5.3.1, you need to migrate after installation.

1. Update existing CaliberRM user defined attributes with the new names. For more information, see [Required QADirector Custom Attributes](#) [p. 38].
2. Add all new attributes to CaliberRM. For more information, see [Required QADirector Custom Attributes](#) [p. 38].
3. Open the utility's installation directory and run the `QADCaliberRMMigrationTool.exe` migration utility. A login form will display to provide credentials to login to the CaliberRM server. If the login provided is correct, a list of all of the projects available on that CaliberRM Server with checkboxes next to each name is shown. Check the checkbox for each project to migrate, then click **Update**. The utility searches through all of the CaliberRM requirement types in the checked project list, discovers the types that have the proper QADirector attributes, and then adds the default values needed to re-integrate with QADirector. The default values are as follows:
 - QADirector Client ID = 0
 - QADirector Client Name = Client – QADirector
 - QADirector Requirement Folder ID = 1
 - QADirector Requirement Folder Name = Default Requirement Folder

The utility also updates the QADirector Database Key attribute. With the QADirector 5.3.1 integration, a CaliberRM traceid was added to the end of the database key, the utility will remove the traceid and also remove the Trace from CaliberRM if it exists.

Configuring CaliberRM to Integrate with QADirector

Create Menu Options in CaliberRM

The **QADirector Integration Plug-In** requires manually creating **Tools** menu options to launch the integration.

1. In CaliberRM, click **Tools>Options>Menu Options**.
2. In the **Custom Tools** list, create the following entries:

QADirector Login

Command or Document

Browse to the installation directory of the and select `QADCaliberRM.exe`.

Arguments

Login

QADirector Create

Command or Document

Browse to the installation directory of the and select `QADCaliberRM.exe`.

Arguments

Create

QADirector Reset**Command or Document**

Browse to the installation directory of the and select QADCaliberRM.exe.

Arguments

Reset

QADirector Update**Command or Document**

Browse to the installation directory of the and select QADCaliberRM.exe.

Arguments

Update

QADirector Logout**Command or Document**

Browse to the installation directory of the and select QADCaliberRM.exe.

Arguments

Logout

3. Click **OK**.

Creating a CaliberRM Requirement Type

1. Right click a project and click **New>Requirement Type**. This Requirement Type will be used to contain all QADirector requirements.
2. Provide a Name and Tag for the Requirement Type and click **Next**.
3. Type in a description and click **Next**.
4. Click **New** on the next screen to create a tab for the Requirement Type. Click **OK**. Click **Next**.
5. Select the **Show all requirement information and allow users to add requirements** option. Click **Next**.
6. Select the **Everyone (Any)** option. Click **Next** and then **Next** again.
7. Verify that your project is selected and click **Next** and then **Finish**.

The Requirement type and tab are created. The next step is to create the QADirector Custom Attributes.

Creating the Required QADirector User Defined Attributes in CaliberRM

This procedure will walk you through creating the required user defined attributes in CaliberRM.

1. Right click the project in CaliberRM and select **Modify**.
2. Select the custom tab from the **Custom Tabs** list and click **Edit**.

3. You will repeat the following steps for each required QADirector user defined attribute. For more information, see [Required QADirector Custom Attributes](#) [p. 38]. In the **Edit Custom Tab** dialog box, click the **New** button to open the **User-Defined Attribute Creation Wizard**.

- a) **Step 1 of 5**

What would you like to name this attribute?

Type or paste in the name of the QADirector user defined attribute.

What type of attribute would you like this to be?

- Use `Single text line` for fields of 128 characters in size.
- Use `Multiple line text field` for fields of 2000 characters in size.

Description

Optionally provide a description for this user defined attribute. Click **Next**.

- b) **Step 2 of 5**

Min. Characters

Enter 0.

Max Characters

Enter either 128 or 2000, depending on the user defined attribute.

Default Text

Do not enter default text. Click **Next**.

- c) **Step 3 of 5**

Select **Use the attributes default value**. Click **Next**.

- d) **Step 4 of 5**

Select **Make the requirement's traceability link suspect**. Click **Next**.

- e) **Step 5 of 5**

Select the defaults and click **Next** and then **Finish**.

The following example is what a user defined attribute in CaliberRM should look like:

Repeat step 3 and all of its subtasks for each required QADirector attribute.

Refer to the **QADirector Integration Plug-In** online help for more information.

DOORS

Connecting DOORS to QADirector

Complete the following steps in DOORS after installing the **QADirector Integration Plug-In** to integrate with QADirector:

1. Open DOORS and create a new project or open an existing one.
2. Open an existing Formal Module or create a new one and then open it.
3. If you are migrating from a previous version of the **QADirector Integration Plug-In**, you will need to rename the existing QADirector attributes in DOORS. In addition, you need to delete existing QADirector attributes in DOORS that are obsolete. For a list of these attributes, see [Required QADirector Custom Attributes](#) [p. 38] and [QADirector Risk Model Custom Attributes](#) [p. 40].
 - a. Select the Formal Module and click **Edit>Attributes**.
 - b. To edit the name of the attribute, select an item from the list and click **Edit**. Rename the item and click **OK**.
 - c. To delete an attribute, select an item from the list and click **Delete**.
 - d. Repeat these steps for all of the QADirector custom attributes.
4. Click **DOORSConnect>QADirector Integration** to see the integration menu options: **Login, Logout, Create, Update, and Reset**.
5. Click **Login** to begin.

Refer to the **QADirector Integration Plug-In** online help for more information.

Required QADirector Custom Attributes

The table below lists the required custom attributes that must be created in your requirements management tool in order to integrate with QADirector.

If you are migrating from a previous release, rename the custom attributes to the new name. See the **Prior Name** column for the previous version name.

Table 1. Required QADirector Attributes

Name	Max Characters	Description	Prior Name
QADirector Actual Result	128	Contains a Pass, Fail, or Null value. For Tests, it is the last result of the test from when it was executed in an Execution Plan. In QADirector you can view this field in the Coverage View of the Requirements Center .	QACenter Actual Result
QADirector Asset ID	128	Unique Asset ID field from QADirector.	QACenter Requirement ID
QADirector Asset Name	2000	Name of the asset in QADirector.	QACenter Test Name
QADirector Asset Type	128	Name of the Asset type in QADirector, either Requirement or Test.	QACenter TestType
QADirector Client ID	128	Unique ID of the QADirector Client. Do not modify the value returned from QADirector..	
QADirector Client Name	2000	Name of the QADirector Client.	
QADirector Create Tests	128	This field is Null or True, depending on whether Use leaf nodes to create tests was checked during the Create or Update of the integration.	
QADirector Database ID	128	Unique ID of the QADirector database. Do not modify the value returned from QADirector.	QACenter Database ID
QADirector Defect ID	2000	Delimited string of IDs corresponding to defects.	QACenter Defect ID
QADirector Execution Plan ID	128	Unique ID of the QADirector Execution Plan if Create new Execution Plan was checked during the Create or Update of the integration.	QACenter Suite Node ID
QADirector Execution Plan Name	2000	Name of the QADirector Execution Plan if Create new Execution Plan was checked during the Create or Update of the integration.	QACenter Suite Name

Name	Max Characters	Description	Prior Name
QADirector Fail Count	128	Total count of failed tests for a Requirement. In QADirector you can view this field in the Coverage View of the Requirements Center .	
QADirector Last Result Update	128	Indicates the last time that the integration Update function was performed.	QACenter Last Result Update
QADirector Pass Count	128	Total count of passed tests for a Requirement. In QADirector you can view this field in the Coverage View of the Requirements Center .	
QADirector Project ID	128	Unique ID of the QADirector project. Do not modify the value returned from QADirector.	QACenter Project ID
QADirector Project Name	2000	Name of the QADirector project.	QACenter Project Name
QADirector Requirement Folder ID	128	Unique ID of the QADirector Requirement Folder. Do not modify the value returned from QADirector.	
QADirector Requirement Folder Name	2000	Name of the QADirector Requirement Folder.	

NOTE

The following QADirector fields are obsolete: QACenter Elapsed Time, QACenter End Time, QACenter Expected Result, QACenter Job ID, QACenter Job Machine, QACenter Job Owner, QACenter Library ID, QACenter Risk Level, QACenter Start Time, QACenter Failure Description, QACenter Job Folder, and QACenter Job Name.

Ensure that each one of the required attributes created conforms to the following standards:

- Attributes must be created to accommodate the maximum number of characters specified above.
- Attributes must not be given a default value.
- Attributes must use the default value as its initial value and not inherit any value from its parent.
- Attributes must be given the appropriate permission access to allow any user who is running the integration access to change the value of these attributes.
- Attributes must not be modified by users. These attributes are used by the integration add-In and are critical.

QADirector Risk Model Custom Attributes

The following table describes the optional QADirector custom attributes to create in your requirements management tool when you want to view QADirector Risk values for assets.

These attributes are not necessary to create/update the integration. Adding these attributes will allow populating risk values into QADirector assets. The proper attributes must be present for the appropriate QADirector Project Risk Model type for the values to correctly populate. If the values are out of the allowable range, no value is pushed. The value is only pushed the first time the asset is created in QADirector.

To view these fields in QADirector and to set the Risk Model for a project:

1. Open your project in QADirector.
2. Click the **Properties** button.
3. Click the **Risk Model** tab.
4. Select a risk model from the **Risk Model** list: Manual, Quality Point, or Standard.
5. For each item in the **Risk Model Custom Attributes** list, enter the maximum risk value.
6. Depending on which **Risk Model** you chose, be sure to create the appropriate fields described in the table below.
7. Refer to the QADirector online help for more information on using Risk Models with projects.

Table 2. QADirector Risk Model Custom Attributes

Name	Max Characters	Risk Model
QADirector Complexity of Function	128	Quality Point
QADirector Custom Factor 1	128	Quality Point
QADirector Custom Factor 2	128	Quality Point
QADirector Custom Factor 3	128	Quality Point
QADirector Defect Impact	128	Quality Point
QADirector External Testing Effort	128	Quality Point
QADirector Maturity of Function	128	Quality Point
QADirector Prior External Testing	128	Quality Point
QADirector Prior Internal Testing	128	Quality Point
QADirector Usage Frequency	128	Quality Point
QADirector Impact To Release	128	Standard, Quality Point
QADirector Manual Risk Weight	128	Manual Only

Installing the QADirector Manual Test Import Utility

The **QADirector Manual Test Import Utility** is an application that allows you to import Microsoft Office Word documents and Microsoft Office Excel spreadsheets into QADirector as manual scripts.

1. From the Quality Management installation media, click the **QADirector** tab.
2. Click the **Install QADirector Manual Test Import Utility** link to launch the installation.
3. On the **QADirector Manual Test Import Utility - InstallShield Wizard** screen, click **Next**.
4. Read and accept the license agreement and click **Yes**.
5. On the **Customer Information** screen, enter your **User Name** and **Company Name** and click **Next**.
6. On the **Choose Destination Location** screen, use **Browse** to select a new installation directory or use the default. Click **Next**.
7. Select a folder on the **Select Program Folder** screen and click **Next**.
8. Click **Next** on the **Start Copying Files** screen.
9. The **Setup Status** screen appears and displays the progress of the installation. After it is complete, click **Finish** to finish the installation.

Click **Start>Programs>Compuware>QADirector> Manual Test Import Utility** to launch the application.

Maintaining the Installation

Accessing Maintenance Mode

There are two methods for accessing maintenance mode: from the original installation media or from the **Windows Control Panel**.

From the Installation Media Browser

Click **Install product name Products**, where product name is the name of the product suite that you want to maintain.

From the Windows Control Panel

Open the **Windows Control Panel** and choose **Add/Remove Programs**. The **Add/Remove Programs** dialog box appears. Select the product and click **Change/Remove**.

Following either of these methods, the **InstallShield Wizard** appears, and three maintenance mode options are available: modify, repair, and remove. For more information about these options, see the appropriate section in this chapter.

Modifying the Installation

For products with optional components, you can add or remove components. Rather than uninstall and re-install the product, you can modify your installation. To add or remove optional components:

1. Access the **InstallShield Wizard**. For more information, see [Accessing Maintenance Mode](#) [p. 43].
2. Select **Modify** and click **Next**. The **Select Components** screen appears allowing you to add or remove components. Select the check box next to each component to add and clear the check box next to each component to remove. Click **Next**. Setup adds or removes the appropriate components.

3. If you are prompted to restart your computer, you can restart it now (recommended) or to restart it later. You must restart the computer before accessing the program again. Click **Finish** to complete the maintenance.

Repairing the Installation

There may be times when you will need to repair a damaged product installation. This could be due to an inadvertent deletion or corruption of the program. To repair your product:

1. Access the InstallShield Wizard. For more information, see [Accessing Maintenance Mode](#) [p. 43].
2. Select **Repair** and click **Next**. Setup repairs the specified product. If you are prompted to restart your computer, you can restart it now (recommended) or to restart it later. You must restart the computer before accessing the program again.
3. Click **Finish** to complete the maintenance.

Removing the Web Server

You have the option of removing the QADirector Web Server. To remove the installation:

1. Access the **InstallShield Wizard**. For more information, see [Accessing Maintenance Mode](#) [p. 43].
2. Select **Remove** and click **Next**. The selected files are removed from the web server.

NOTE

Removing the **Client** or the **Test Execution Agent** affects only the selected computer. Removing other components of QADirector affects the entire installation and all users.

3. If you are prompted to restart your computer, you can restart it now (recommended) or to restart it later. Click **Finish** to complete the maintenance.

Removing Test Execution Agents

The **Test Execution Agent** can be removed using the Add/Remove Programs option in the **Windows Control Panel**. **Test Execution Agents** are installed separately on each machine, and need to be uninstalled on each machine as well.

Removing the Clients

To remove the client from a machine, delete the following directory:

```
C:\Documents and Settings\\Local Settings\Apps\2.0
```

NOTE

Removing this directory deletes all smart client applications currently on the machine. This directory needs to be deleted from each client machine.

Additional Installation and Configuration

Configuring QADirector with Citrix

QADirector will run in a Citrix environment using the configuration specified below. Refer to the *QADirector Release Notes* for supported versions.

1. Login to the Citrix server that will host the QADirector application.
2. From the Citrix server machine, login to the QADirector webserver and run the QADirector client application. This will download all requisite files to the the Citrix server.
3. Use **Start>Search** to locate the QADirector.exe file in the Documents and Settings\

NOTE

Be sure to check the **Search hidden files and folders** option.

4. Copy all of the contents of the directory containing the qadirector.exe file.
5. Create a new directory on the Citrix web server in Program Files called QADirector. Paste all of the files copied in the previous step into the new directory.
6. In the new directory, locate the TApp.config file. Open this file with an XML or text file editor.
7. Find the following string in the file:

```
<add key="NonNetworkDeployedURL" value="http://localhost/qadirector/" />
```
8. Replace "localhost" in the value "http://localhost/qadirector/" with the name of the QADirector web server.
9. Save and close the file.
10. Create and publish a Citrix application that will point to the qadirector.exe file.

Installing QADirector on a Foreign OS

Additional permissions are needed to install QADirector on an operating system using a language other than English. The user performing the installation needs full access to the following directories on the web server:

```
<Installation Directory>\Logs  
<Installation Directory>\TMServices\Temp
```

Configuring Microsoft Windows 2003 for QADirector

Microsoft Windows 2003 requires additional steps in order to use the Internet Information Service (IIS) Web server with QADirector. To configure IIS on the Microsoft Windows 2003 server:

1. Open the **Internet Information Service Manager**. For more information, refer to the Microsoft Windows documentation.
2. Select the **Web Service Extensions** option.
3. Select **Allow** from the **All Unknown ISAPI extensions** list.
4. If **Internet Data Connector** exists, select **Allow**.
5. If the **ASP.NET v2.0** option exists, select **Allow**.
6. If **ASP.NET v2.0** option does not exist:
 - a) Open the Microsoft Windows **Add/Remove Programs** utility. Click **Add/Remove Windows Components**. The **Windows Component Wizard** opens.
 - b) Select **Application Servers** from the **Components** list and click **Details**. Select **ASP.NET** from the **Subcomponents** list and click **OK**. Click **Next**.
 - c) Open **Internet Information Service Manager**. Select **Web Service Extensions** option. Select **Allow for ASP.NET v2.0** option.
7. Click **OK**.

Installing the QADirector Application Server on Windows 2008

If you are only installing the QADirector Application Server with no other features selected, a message box displays the IIS7 features to enable for QADirector to function properly. The message box displays the necessary features similar to the way the features are listed in the **Windows Features** dialog box, accessed from the **Windows Control Panel**.

NOTE

Refer to the Microsoft Windows help documentation for information on enabling Windows Features.

The Windows Features to enable appear in the message box as follows:

```
World Wide Web Services  
Application Development Features:  
- Asp  
- ASP.NET  
- ISAPI Filter
```

- ISAPI Extensions
- Server Side Includes

Cancel the installation, close the installation media window, and open the **Windows Control Panel** to enable these Microsoft Windows Features, as explained in the Microsoft Windows help documentation.

File-AID/CS Integration Components on Windows 2008

A message box displays the IIS7 features to enable. The message box displays the necessary features similar to the way that the features are listed in the **Windows Features** dialog box, accessed from the **Windows Control Panel**.

NOTE

See Microsoft Windows help documentation for information on enabling Windows Features.

The **Windows Features** to enable appear in the message box as follows:

```

Web Management Tools:
  - IIS 6 Management Compatibility

World Wide Web Services
  Application Development Features:
    - Asp
    - ASP.NET
    - ISAPI Filter
    - ISAPI Extensions
    - Server Side Includes

Common HTTP Features
  - Directory Browsing
  - HTTP Errors
  - Static Content

```

Cancel the installation, close the installation media window, and open the **Windows Control Panel** to enable these Microsoft Windows Features, as explained in the Microsoft Windows help documentation.

Glossary

Actual Quality Index (AQI)

The AQI is a calculated value that indicates the overall quality of a project. The AQI indicates the current relative quality at the current stage of the project. As a project progress in time, this value should continue to rise, unless there are offsetting factors, such as defects.

Asset

Asset is a generalized term for all QADirector objects. Examples include: Requirement, Test, and Script.

Associated Files

Some Tests require additional files in order to execute properly. Associated Files are files that are added to a Test by a user that relate to the Test. During Execution, Associated Files are copied to the machine running the test.

Automated Testing

Automated Testing is defined as using computer programs to execute Tests and to compare results. QADirector facilitates Automated Testing by managing, executing, and reporting on your automated tests.

Clients

Clients are a collection of QADirector assets that add a layer of organization and security to the testing process. Clients contain Projects, Global Custom Attributes, Global Scripts, Tools, and Tool Domains. These assets cannot be shared among Clients. Users, however, are application-level (above Clients) and are assigned to Clients.

Client Application

The QADirector client is a Smart Client application that is downloaded from the QADirector web server to a client machine for execution. The QADirector client can also connect to the QADirector Manual Testing Application.

Compuware User Administration (CUA)

The Compuware User Administration is used to manage users from a central location and perform administrative tasks from a single point when you register supported products with the CUA.

Custom Attributes

Custom Attributes are user-defined fields that store information about QADirector assets. During execution, Custom Attributes are saved as environment variables for usage in automated testing.

All Custom Attributes are global. When you create a Custom Attribute in a project, it is first added to the global list, and then associated with the project. Any changes made to a custom attribute are reflected in all projects that use the Custom Attribute.

Custom attributes can also be calculated from system fields or other custom attributes. Custom Attributes can be assigned to individual assets or assigned to assets in relation to other assets. Custom attributes, like all assets in QADirector, must have unique names.

Cycle

Cycles are used to group Tests for both planning and execution purposes. They are used as an aid for selecting Tests to create Jobs. Cycles are created at the project level and set at the Test level. When you create your Tests, you specify one or more Cycles that the Test will run in.

When you create your Execution Plans/Jobs, you specify a single Cycle that they run in. This is referred to as the Execution Cycle and is a property of an Execution Plan and Job. After Job execution, you can go to the **Results Center** and change which Cycle that the Job ran in. You can also filter on the Execution Cycle field in a report.

Dashboard

The Dashboard is a snapshot of a project's current state. It includes statistical data about Test distribution and coverage as well as defect status. Use the **Dashboard** tab in the **Project Properties** dialog box to set the filtering criteria used by the Dashboard.

Database Server

The QADirector database server contains all the essential QADirector information and assets.

Exchange File

An Exchange File is the type of the file created during a QADirector project or asset export. An Exchange File has a .qad extension.

Execution

Execution is the process of running either an automated or manual test.

Execution Groups

Execution Groups are logical groupings of Tests that are organized to run in an **Execution Plan**. Execution Groups also contain execution properties that may affect the outcome of an execution.

Execution Groups (Public)

A Public Execution Group is an Execution Group that is saved as Public. A Public Execution Group only contains the original Execution Group properties, not the associated assets.

Execution Plan

An Execution Plan is an organized structure of Execution Groups and Tests that are executed as a Job.

Filter

Filters provide a way to reduce the amount of assets being displayed by only showing the ones that match the predefined criteria. Filters are available in the **Requirements Center** and the **Execution Center**.

Filters offer the same functionality as Search Folders, which are available in the other centers.

Folder

QADirector Folders are containers for QADirector Assets. The following centers offer Folders for organization: **Requirements Center**, **Tests Center**, **Scripts Center**, and **Results Center**. You can also create and configure Search Folders to view specific assets.

Global Custom Attributes

Global Custom Attributes are the entire list of Custom Attributes for a given Client.

For more information, see [Custom Attributes](#) [p. 49].

Job

A Job is an Execution Plan that is scheduled to run.

For more information, see [Execution Plan](#) [p. 50].

Manual Script

A Manual Script is a Script made up of Steps designed for a user to manually process. QADirector has the **Manual Script Editor** to create Manual Scripts.

Manual Test Import Utility

The **QADirector Manual Test Import Utility** is an application that allows you to import Microsoft Office Word documents and Microsoft Office Excel spreadsheets into QADirector as manual scripts.

Manual Testing

Manual Testing is the process of a software tester manually going through an application according to the instructions of one or more Tests, Scripts, or Steps.

Planned Quality Index (PQI)

The PQI is a calculated value that indicates the overall quality of a project. The PQI indicates the relative quality (in terms of passed and failed tests, and open defects) at the end of the project.

Projects

Projects are contained within Clients and contain Requirements, Tests, Scripts, Defects, product integration information, user information, and testing Results.

Project Schedule

Quality Optimizer

The **Quality Optimizer** is an optional planning tool that allows you to view risk and coverage statistics associated with adding or removing Tests. It also allows you to plan tests, execute what-if scenarios, visualize risk and time distribution, and anticipate test status.

QualityPoint (QP)

QualityPoint is a software testing methodology that defines the necessary steps for an organization to meet its quality testing goals. It is used to create a customized quality assurance testing process that works with each organization's unique requirements. QualityPoint is the methodology that drives the Quality Management Solution. Quality Management combines Compuware's professional service staff, the QualityPoint testing methodology and products into a total application quality solution for the customer.

Requirement

A Requirement is a defined need for a software application. QADirector contains a **Requirements Center** that captures all Requirements for a product. These Requirements are stored in Requirement Folders.

QADirector also integrates with several requirements management tools, including Compuware Optimal Trace, for pulling in requirements and pushing back Test Results.

Result

A Result is the status of a Test/Script executed within a Job. Script results determine the status of a Test. Test Results can then propagate back to a Requirement.

Results Propagation

Results Propagation is the concept of linking Job Results back to Requirements. You set Result Propagation via a Test in an Execution Plan.

Risk

Risk is a specialized field in QADirector used to prioritize assets for testing. Setting a Risk on an asset allows a tester to define high or low priority test cases. Risk fields are defined within a Risk Model at the Project level.

Risk Model

Risk models provide a guideline and apply a set of standard custom attributes to use in calculating Risks for requirements and tests.

Role

A Role is a type of user tied to a permission set. Roles are predefined and cannot be created.

Rule

A Rule is a command that performs a specific action during execution. Rules are used with Execution Groups, Tests, and Jobs.

Scheduler

The **Scheduler** is a QADirector component that runs on the web server used to process reporting metrics. Use the **Administration - Project Schedules** dialog box to adjust scheduled statistical calculations.

Script

A Script is a QADirector asset contained within a Test that is designed to execute during a Job. Scripts can be manual or automated and can have the following statuses: Pass, Fail, Not Executed. Use the **Scripts Center** or **Manage Global Scripts** dialog box to manage your Scripts.

Search Folder

Search Folders provide a way to reduce the amount of assets being displayed by only showing the ones that match the predefined criteria. Search Folders are available in the **Tests Center**, **Scripts Center**, **Results Center**, and **Defects Center**.

Search Folders offer the same functionality as Filters, which are available in the **Requirements Center** and **Execution Center**.

For more information, see [Filter](#) [p. 50].

Single Sign On

Single Sign On provides QADirector Users with customization options to connect to third-party products via QADirector Tool Domains. Access these options in the **User Properties** dialog box.

SSL Enabled

Connects the QADirector client to the QADirector server via secure socket layers. SSL provides security for TCP/IP networks. Use the QADirector **Application Configuration** dialog box to modify this setting.

Step

A Step is unit of action to perform within a Script. Use the QADirector **Manual Script Editor** to define Steps for a Script.

Stored Procedure

Stored Procedures are used to perform custom calculations for Custom Attributes and Risk Models.

Test

A Test is a group of Scripts designed to satisfy a requirement. Tests are contained within Requirements (but not required to be) and contain Scripts. Use the QADirector **Tests Center** to manage Tests.

Test Execution Agent (TEA)

The **Test Execution Agent** is an application that receives the test execution requests from the Test Management Server, then runs the tests and submits the results back to the main QADirector application. Specifically, it stores information about who is permitted to execute Jobs on a computer, and whether the execution is remote or local.

Test Management Server (TMS)

The **Test Management Server** receives requests to schedule and execute tests submitted by the users. This application runs as a service and can reside on the same machine as the web server, or on separate machines. Specifically, it reads Job submissions from the database, manages jobs, tracks the machines available for test execution, and manages the licenses used for automated testing. It also reports the status of Jobs in progress.

Tool

A Tool defines parameters required to connect to an external product. Each tool can have multiple tool domains.

Tool Domain

A **Tool Domain** defines values for each parameter in a Tool.

User

Users are created globally and assigned to Clients and then assigned to Projects. Each User has a Role and that Role can be modified on a project basis.

Web Server

The QADirector web server hosts the central QADirector web application which is then accessed by the QADirector smart client.

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