

# ***QADirector***

## **Installation and Configuration Guide**

Release 6.0



Customer support is available from our Customer Support Hotline or via our FrontLine Support Web site.

Customer Support Hotline:  
1-800-538-7822

FrontLine Support Web Site:  
<http://frontline.compuware.com>

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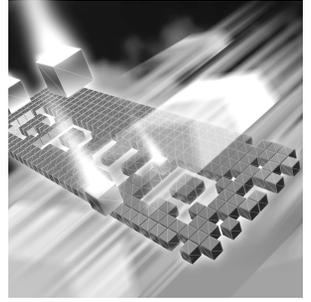
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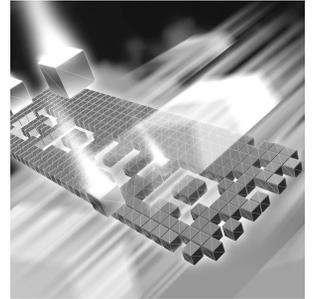
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# Introduction



- ◆ How to Use This Guide
- ◆ Who Should Read This Guide
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## How to Use This Guide

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

## Who Should Read This Guide

The *QADirector Installation and Configuration Guide* is intended for administrators who are installing the QADirector application. 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 Publications

The QADirector documentation set includes the following references:



- ◆ The *QADirector Integration and SDK Reference* provides code samples and integration information for connecting QADirector to third-party requirements management, automated testing, and defect tools.
- ◆ *Distributed License Management Installation Guide* provides instructions for installing and configuring a license for QADirector. This guide is provided in PDF format.
- ◆ The QADirector online help provides descriptions of the QADirector centers, tools, procedures, and reference information.
  - ◇ On the **Help** menu, click **Contents** to view an outline of available topics.
  - ◇ Click **Help** on an active dialog box or window for specific help with that feature.

## Viewing and Printing Online Books

You can view QADirector documentation in PDF format directly from the installation media. PDF format requires Adobe Acrobat Reader 8.0 or above. To install Acrobat Reader, either access the Acrobat Reader setup file from the installation media or from Adobe's Web site at [www.adobe.com](http://www.adobe.com).

You have the option of viewing the online books directly from the installation media. To view the online books from the media, navigate to the documentation section, and select the book to view.

Because PDF is based on PostScript, a PostScript printer is the most reliable way to print the online books. In most cases, you can also print PDF files to PCL printers. If you cannot print the PDF files to your printer, refer to Adobe's Web site at [www.adobe.com](http://www.adobe.com) for troubleshooting information.

## World Wide Web Information

To access Compuware Corporation's site on the World Wide Web, point your browser at <http://www.compuware.com>. The Compuware site provides a variety of product and support information.

**FrontLine Support Web Site:** You can access online customer support for Compuware products via the FrontLine support web site. FrontLine provides fast access to critical information about your Compuware products. You can read or download documentation, frequently asked questions, and product fixes, or e-mail your questions or comments.

To access FrontLine:

- 1 Open a Web browser and go to: <http://frontline.compuware.com>  
The FrontLine page appears.
  - 2 In the **Log In** section, enter your login ID and password and click **Login**.
- Note:** 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.
- 3 From the list in the center of the page, select a product and click **Go**. The product's FrontLine home page appears, and you can access documentation, technical information, fixes, and other support items.

## 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. 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 QADirector 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 QADirector 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.



Compuware Customer Support

Compuware Corporation

One Campus Martius

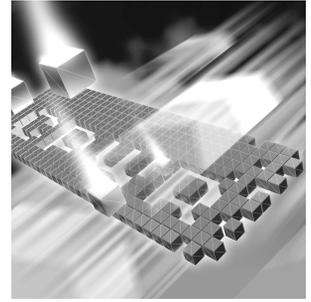
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# Chapter 1

## Getting Started



- ◆ QADirector Overview
- ◆ Before You Install
- ◆ Installing the License
- ◆ Viewing Online Books
- ◆ System Requirements

### 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 products:

**Quality Manager:** Provides complete IT management and governance that enables organizations to maximize the business value of the entire IT portfolio including:

- ◆ projects
- ◆ applications
- ◆ infrastructure

**File-AID/CS (ComparePro, ConverterPro):** 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:** QADirector works with Hiperstation to test host-based applications directly from your Windows desktop. This integrated,

workstation-based interface tool uses 32-bit code that provides improved performance and better stability on 32-bit Windows platforms.

**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.

**TestPartner:** Tests Web- and 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.

**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.

## Before You Install

Before installing QADirector, 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, see “[System Requirements](#)” on page 8.

### 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, Compuware's product support web site. The Release Notes on FrontLine are periodically updated as new information becomes available.

To access the Release Notes from the installation media:

- 1 From the installation media browser, click the **QADirector** tab.
- 2 Click the associated link for the **Release Notes**. The **Release Notes** open in your default Web browser.
- 3 View the Release Notes or print the document.
- 4 After viewing or printing the Release Notes, close the document to return to the installation media browser.

To access the QADirector Release Notes on FrontLine:

- 1 Open a Web browser and go to: <http://frontline.compuware.com>  
The **Welcome to FrontLine** page appears.
- 2 On the right side of the page, enter your login ID and password and click **Login**.

**Note:** If you are a first-time visitor, click **Register** to receive your free password to access FrontLine. After you complete the registration form, your login ID and password are e-mailed to you and your account is activated.

- 3 From the list in the center of the page, select **QADirector** and click **Go**. The **QADirector FrontLine** page appears.
- 4 On the left side of the **QADirector** page, select the **Documentation** link. The **QADirector** documentation page includes links to Release Notes and other documentation types.
- 5 Click the **HTML** or **PDF** icons to view the associated documents.

## Installing the License

A trial license is supplied with your QADirector 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.

## Viewing Online Books

You can view and print the installation guides from installation media or from Compuware's FrontLine customer support Web site at <http://frontline.compuware.com>

Acrobat Reader is required to view the online books in PDF format. Because PDF is based on PostScript, a PostScript printer is the most reliable way to print the installation guides. In most cases, you can also print PDF files to PCL printers.

If you cannot print the PDF files to your printer, refer to Adobe's Web site at <http://www.adobe.com> for troubleshooting information.

## System Requirements

QADirector components include: Database Server, Web Server, and a Test Management Server. These 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: :

### Database Server

- |                  |  |
|------------------|--|
| Hardware         | <ul style="list-style-type: none"><li>◆ 2 GHz processor with 2 GB RAM (4 GB RAM recommended)</li><li>◆ Minimum 20 GB (40 GB recommended) of free disk space</li></ul>  |
| Operating System | <ul style="list-style-type: none"><li>◆ Microsoft Windows 2000 SP 6 (32-bit) OR</li><li>◆ Microsoft Windows 2003 Server SP 2 (32-bit)</li></ul>  |
| Software         | <ul style="list-style-type: none"><li>◆ Microsoft SQL Server 2000 SP 4 (32-bit), or 2005 SP 2 (32-bit) with patch version 3050 OR</li><li>◆ Oracle 9i or 10g Release 2</li><li>◆ Adobe Acrobat Reader to view the online books in PDF format</li></ul> |

## Web Server

- Hardware**
- ◆ 2 GHz processor with 2 GB RAM (4 GB RAM recommended)
  - ◆ Minimum 20 GB of free disk space

- Operating System**
- ◆ Microsoft Windows 2000 SP 6 (32-bit) OR
  - ◆ Microsoft Windows Server 2003 SP 2 (32-bit or 64-bit) OR
  - ◆ Microsoft Windows XP Professional SP 2 OR SP 3 (32-bit or 64-bit) OR
  - ◆ Microsoft Windows Vista Business SP 1 (32-bit)

- Software**
- ◆ IIS 5.0 (32-bit), Microsoft Windows 2000 OR
  - ◆ IIS 5.1 (32-bit), Microsoft Windows XP Professional OR
  - ◆ IIS 6.0 (32-bit), Microsoft Windows Server 2003 and Microsoft Windows XP Professional x64 Edition OR
  - ◆ IIS 7.0 (32-bit), Microsoft Windows Vista OR
  - ◆ Adobe Acrobat Reader to view the online books in PDF format

## Test Management Server

- Hardware**
- ◆ 2 GHz processor with 2 GB RAM (4 GB RAM recommended)
  - ◆ Minimum 10 GB of free disk space

- Operating System**
- ◆ Microsoft Windows 2000 SP 6 (32-bit) OR
  - ◆ Microsoft Windows Server 2003 SP 2 (32-bit or 64-bit) OR
  - ◆ Microsoft Windows XP Professional SP 2 OR SP 3 (32-bit or 64-bit) OR
  - ◆ Microsoft Windows Vista Business SP 1 (32-bit)

- Software**
- ◆ Adobe Acrobat Reader to view the online books in PDF format

## Client Machine

On the client machine, administrator permissions are required to install .NET. If .NET is already installed, administrator permissions are not required to install QADirector.

- Hardware**
- ◆ 2 GHz processor with 1 GB RAM (2 GB RAM recommended)

- ◆ Minimum 10 GB of free disk space

#### Operating System

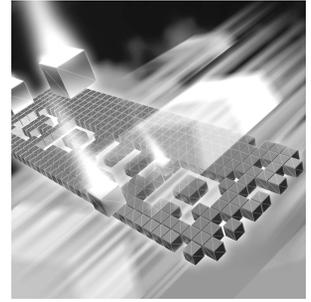
- ◆ Microsoft Windows 2000 SP 6 (32-bit) OR
- ◆ Microsoft Windows Server 2003 SP 2 (32-bit) OR
- ◆ Microsoft Windows XP Professional SP 2 OR SP 3 (32-bit) OR
- ◆ Microsoft Windows Vista Business SP 1 (32-bit)

#### Software

- ◆ Microsoft Internet Explorer 6.0 SP 2 or 7.0 OR
- ◆ Firefox 2.x with FFClickOnce Add-on
- ◆ Acrobat Reader to view the online books in PDF format

# Chapter 2

## Installing the QADirector Application



- ◆ QADirector Architecture
- ◆ Installing the QADirector Web Server
- ◆ Installing the Test Management Server
- ◆ Requirements Manager Add-On Component

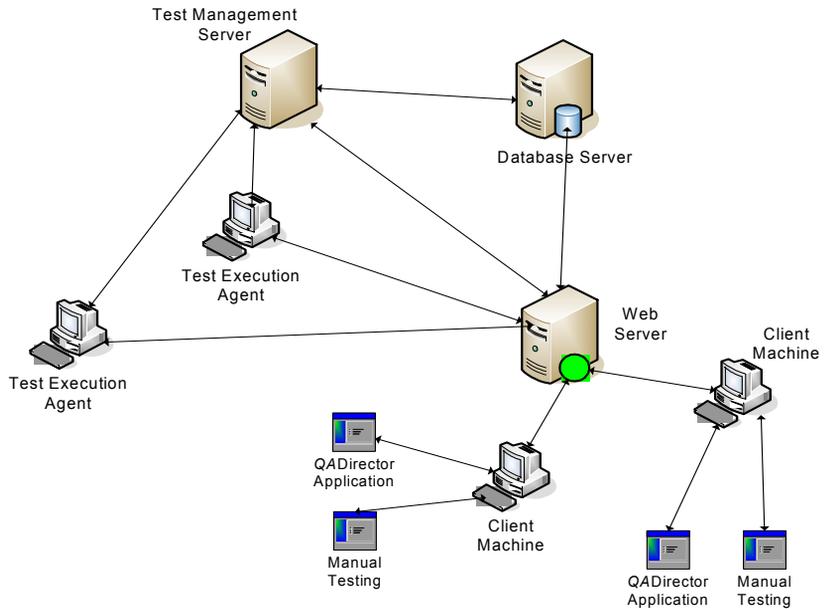
### QADirector Architecture

This section describes the QADirector architecture and explains installation tasks and responsibilities as well as how the application is accessed by end users. [Figure 2-1](#) shows the recommended QADirector system configuration.

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.
- ◆ Test Execution Agents can be on the same machine as the Client or on separate machines.
- ◆ The QADirector application and Manual Testing run on the Client machines.

Figure 2-1. QADirector Architecture



The essential components of QADirector are listed below:

- ◆ **Web Server:** hosts the central QADirector application, which is then accessed by a smart client.
- ◆ **Database Server:** contains all the essential QADirector information and assets.
- ◆ **Test Management Server:** receives requests to schedule and execute tests submitted by the users. This runs as a service and can reside on the same machine as the web server, or on separate machines.
- ◆ **Client Machine:** a basic workstation that uses an internet browser to access the main QADirector application and Manual Testing on the web server, which then installs the smart client software.
- ◆ **Test Execution Agent:** a workstation 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.

In a typical installation, QADirector is installed on a web server, and a database is installed separately on a database server. During the installation, you can select SQL Server Express as the default database, or install the database separately, either SQL Server or Oracle.

An add-on component that integrates Requirements Management tools with QADirector can also be installed on the client machines.

## Installing the QADirector Web Server

This section describes how to install QADirector on the web server machine. Typically a System or 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 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 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.
  - ◇ Click the name of each component to view a brief description in the **Description** field.
  - ◇ If you are installing the QADirector application, the **Application Server** is a required component.
  - ◇ Installing QADirector creates the following services:
    - Compuware Open Server: 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.
- ◇ 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.
- ◇ Selecting **Integration Services** installs the required components to integrate with the selected product. This does not install the actual product.

---

**Required:** 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”](#) on page 29.

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 [“Product Integrations”](#) on page 45.

---

- ◇ QADirector Services include **Application Server, Test Management Server and SQL Server 2005 Express Edition**.
- 9 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.
  - 10 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**.
  - 11 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.
  - 12 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.
- 13 A progress bar appears and indicates the progress while installing the application.
    - ◇ **Restart Your Computer:** If you are prompted to restart your computer, select this check box to restart it now.
    - ◇ The computer must be restarted before launching QADirector.
  - 14 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 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.
- 9 The **Select Program Folder** screen appears.

- 10 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.
  - ◇ To make any changes, click **Back** to return to the previous screen.
- 12 Click **Next** to begin the installation. A progress bar appears and indicates the progress while installing the server.
  - ◇ **Display Release Notes:** Select this 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.
- 13 Click **Finish** to complete the Test Management Server installation.

## Requirements Manager Add-On Component

Compuware's Requirements Management Integration add-on components provide an automated integration solution between QADirector and Requirements Management applications such as Optimal Trace. The **Requirements Manager Add-on** component needs to be installed and configured on the client machine for the add-on tools to function.

To install the QADirector Plugins:

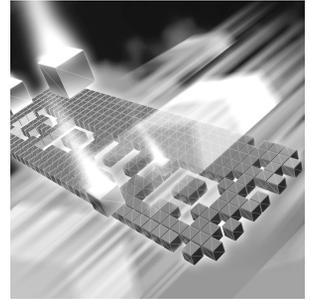
- 1 Log on as a user with administrator permissions.
- 2 From the installation media, navigate to the QADirector tab.
- 3 Click **Install QADirector Integration Plugins**. The **QADirector Integration Plugins** wizard appears.
- 4 Click **Next**. The **License Agreement** screen appears.
- 5 Review the 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 QADirector Integration Plugin installation. The default location is: `x:\Program Files\Compuware\QADirector Integration Plugins`, where *x* is the drive where 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 and click **Next**. Selecting any Requirements Management tool automatically installs the API.
- 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.
- 12** 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**.
- 13** When installation is complete, the **Install QADirector Integration Plugins** displays a message that the installation is finished. Click **Finish** to complete the installation.



# Chapter 3

## Installing the QADirector Database



- ◆ Installing the QADirector Database on the Database Server
- ◆ Installing the SQL Server Database
- ◆ Installing the Oracle Database
- ◆ Configuring the 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.

### Installing the QADirector Database on the Database Server

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.
  - ◇ For SQL Server, review “[SQL Server Requirements](#)” on page 21.
  - ◇ For Oracle, review “[Oracle Server Requirements](#)” on page 22.
- ◆ Compuware recommends that you exit all non-essential Windows programs before running the setup program. Some 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.

This section provides information about installing a QADirector SQL Server or Oracle database.

---

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

---

## Login Information

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

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

### Oracle

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

### SQL Server 2000, in SQL Server Enterprise Manager

The user must be added to the database with the following permissions:

- ◆ db\_datareader
- ◆ db\_datawriter
- ◆ db\_ddladmin OR edit permissions for the user, and select EXEC for all stored procedures with names starting "qac\_"

### SQL Server 2005, in SQL Server Management Studio

The user must be created at the system level and added to the project, and one of the following options:

- ◆ The user is the schema owner of the objects in the database.
- ◆ The user has the following permissions:
  - ◇ db\_datareader
  - ◇ db\_datawriter

- ◇ db\_ddladmin OR go to the **Securables** tab, click **Add..** Select "**All objects belonging to the schema**", then select the schema the objects were created under, and click **OK**. For each stored procedure with names starting "qac\_", select **Grant** for the **Execute** permission.

## **Installing the SQL Server Database**

### **SQL Server Requirements**

- ◆ Existing database server instance that runs a supported version of SQL Server.
- ◆ Use the following specifics to configure the database instance:
  - ◇ 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 SQL Server, specify the SQL\_Latin1\_General\_CP1\_CI\_AS collation.
- ◆ SQL Server user ID and password to allow the administrator to set up the database.

### **Installing the 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 **QACenter 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 2005** and click **Next**. The **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.
- 8 You can accept the default name or type the database name. Click **Next**.
- 9 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**.
- 10 Review your settings before starting the installation. Click **Back** to go back and change a setting, or click **Next** to begin the installation.
- 11 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.
- 12 Click **Next** and then **Finish** to complete the database installation.

## ***Installing the Oracle Database***

### **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. See [“Creating an Oracle Client Service Name”](#) on page 42.
- ◆ Use the following information to configure the database instance:
  - ◇ 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.

## 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 **QACenter 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.
  - ◇ **Login**: User/schema name.
  - ◇ **Password**: User password.
  - ◇ For additional information, See “Creating an Oracle Client Service Name” on page 42.
- 7 Click **Next**. The **Database Information** screen appears.
- 8 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.
- 9 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.
- 10 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.
- 11 Click **Next**. Click **Finish** to complete installation of the **QADirector** Oracle database.

## Configuring the Database

If you have manually created a database, there are a number of scripts that need to be run against the database before QADirector can access the database.

If you are migrating or if you created a database using the installation media, these steps are not required.

### Configuring a SQL Server Database

This section provides information about configuring QADirector to use a 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 Windows Explorer window opens.
  - b Navigate to: QM Setup\QADirector\Database\sqlscripts\MSSQL
- 3 Execute the following scripts in this order:
  - a 1\_mssql.sql
  - b 2\_mssql.sql
  - c 4\_common.sql
  - d 5\_mssql.sql
- 4 Log out of SQL Server.

### Configuring an 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:

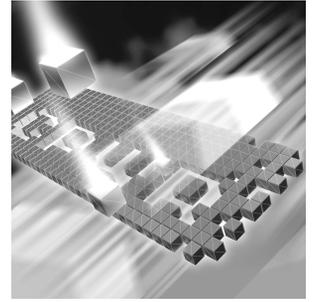
- 1 Create a user account with database administrator privileges for QADirector.
- 2 Login to Oracle as the user you just created.
- 3 Navigate to the Oracle directory on the installation media.
  - a Click **Explore this Media**. A Windows Explorer window opens.
  - b Navigate to: QM Setup\QADirector\Database\sqlscripts\Oracle

- 4 Execute the following scripts for QADirector in order:
  - a 1\_orcl.sql
  - b 2\_orcl.sql
  - c 4\_common.sql
  - d 5\_orcl.sql
- 5 Log out of Oracle.



# Chapter 4

## Configuring QADirector



- ◆ Configuring QADirector to use SQL Server
- ◆ Configuring QADirector to use Oracle
- ◆ Migration

### Configuring QADirector to use SQL Server

To configure QADirector for SQL Server:

- 1 Click **Start>All Programs>Compuware >QADirector>System Configuration**. The **QADirector - System Configuration** dialog box appears.
- 2 Select **Microsoft SQL Server** from **Database type**.
- 3 Type the server name in the **Server** field.
- 4 Type the database name in the **Database** field.
- 5 Type the schema name in the **Schema** field.
- 6 Type the login ID in the **Login** field.
- 7 Type the login password in the **Password** field.
- 8 Click **Test Connection** to validate the configuration.
- 9 If the test is successful click **Connect**. A message verifying the connection appears.
- 10 The service restarts. When you have successfully connected, click **Close** to close the dialog box.

## Configuring QADirector to use Oracle

To configure QADirector for Oracle on the Web server, you must first create an Oracle Net Service name. See “[Creating an Oracle Client Service Name](#)” on page 42.

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

To configure QADirector with Oracle:

- 11 Click **Start>All Programs>Compuware >QADirector>System Configuration**. The **QADirector - System Configuration** dialog box appears.
- 12 Select **Oracle** from **Database type**.
- 13 Type the service name in the **Service** field.
- 14 Type the schema name in the **Schema** field.
- 15 Type the login name in the **Username** field.
- 16 Type the password in the **Password** field.
- 17 Click **Test Connection** to validate the configuration.
- 18 If the test is successful click **Connect**. A message verifying the connection appears.
- 19 Once you have successfully restarted the service and connected, click **Close** to close the dialog box.

## 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 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.
- 5 Add the following users with full permissions:
  - ◇ IWAM\_<MachineName>
  - ◇ IUSR\_<MachineName>
  - ◇ ASPNET
  - ◇ Everyone

- 6 Click **OK** and then click **Advanced**.
- 7 Select **Allow inheritable permissions from parent to propagate to this object**.
- 8 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.

### *Tips for Migrating*

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.

#### 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:

- a From the **Project properties** screen, select the **Requirement** tab and click **Map Folder Cycles**.
- b 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 criteria's.

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

- c Repeat these steps for each project.

#### After Migration

- ◆ All tests in a project in 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.

## Migrating the database

---

**Required:** 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.

---

To migrate an existing database:

- 1 Install the web server portion of QADirector *without* installing a database, as described in “[Installing the QADirector Web Server](#)” on page 13.
- 2 Install the Test Management Server, as described in “[Installing the Test Management Server](#)” on page 15.
- 3 Click **Start>All Programs>Compuware>QADirector>System Configuration**. The **System Configuration** dialog box appears.
- 4 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. See “[Configuring QADirector](#)” on page 27 for additional information.
- 5 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.
- 6 Login to QADirector using the `admin` account.
- 7 A progress bar appears with a message that the web server is restarting. A progress bar then appears to show progress of the migration.

---

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

---

- 8 When the migration is completed, a message appears confirming successful completion of the migration.
- 9 Enter the database password.
- 10 Close the **System Configuration** dialog box.

---

**Required:** If you are using SQL Server or SQL Server Express, reboot the SQL Server after migrating.

---

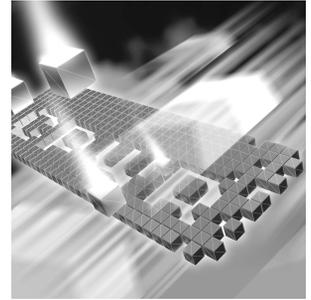
When the migration has completed:

- ◆ 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.



# Chapter 5

## Accessing QADirector



- ◆ Starting the QADirector Application
- ◆ Client Installation
- ◆ Manual Testing Installation
- ◆ Installing Test Execution Agents

After installing the Web Server, the URL for the Application Links web page is given to users to 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 the QADirector Application

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

```
http://<server name>/qadirector/default.aspx
```

The evaluation license supplied with your installation of QADirector 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. Refer to the Distributed License Management Installation Guide, which you can access from the installation media, for instructions on installing a license.

The license for each client is installed on the web server.

## 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 Open the internet browser and navigate to the location of the web server portion of QADirector.
- 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

The web address of the **Manual Testing** installation is given to the testers, who then access the URL to complete the 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 Open the internet browser and navigate to the location of the web server portion of QADirector.
- 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 be testing.

## Installing Test Execution Agents

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:

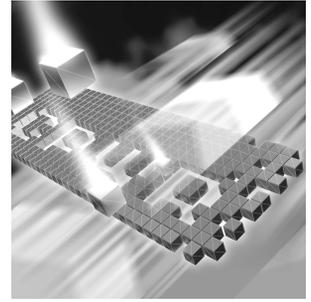
- 1 Open your internet browser and navigate to the location of the web server portion of QADirector.
- 2 Click **Install Test Execution Agent**. The **Application Install Security Warning** appears.
- 3 Click **Install** to start the installation. A progress bar appears during installation.
- 4 When 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 Windows Startup options.



# Chapter 6

## Maintaining the Installation



- ◆ Accessing Maintenance Mode
- ◆ Modifying the Installation
- ◆ Repairing the Installation
- ◆ Removing the Web Server

### Accessing Maintenance Mode

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

---

**Caution:** Compuware recommends that you exit all non-essential Windows programs before running the setup program. Some Windows programs may interfere with the installation process.

---

From the installation  
media browser

To access maintenance mode:

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

To access maintenance mode:

- 1 Open the Windows Control Panel. For more information, refer to the Microsoft Windows documentation.
- 2 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** using one of the methods described in [“Accessing Maintenance Mode”](#) on page 37.
- 2 Select **Modify** and click **Next**. The **Select Components** screen appears allowing you to add or remove components.
- 3 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.
- 4 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.
- 5 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** using one of the methods described in [“Accessing Maintenance Mode”](#) on page 37.
- 2 Select **Repair** and click **Next**. Setup repairs the specified product.
- 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.
- 4 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** using one of the methods described in “[Accessing Maintenance Mode](#)” on page 37.
- 2 Select **Remove** and click **Next**. The selected files are removed from the web server.

---

**Caution:** 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.
- 4 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

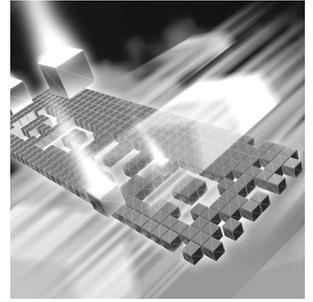
**Note:** Removing this directory deletes all smart client applications currently on the machine.

This directory needs to be deleted from each client machine.



# Appendix A

## Additional Configuration



- ◆ Configuring Microsoft Windows 2003 for QADirector
- ◆ Installing The QADirector Application Server
- ◆ Creating an Oracle Client Service Name

### 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

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

To configure IIS on the 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 Windows **Add/Remove Programs** utility.
  - b Click **Add/Remove Windows Components**. The **Windows Component Wizard** opens.
  - c Select **Application Servers** from the **Components** list and click **Details**.
  - d Select **ASP.NET** from the **Subcomponents** list and click **OK**.
  - e Click **Next**.
  - f Open **Internet Information Service Manager**.
  - g Select **Web Service Extensions** option.
  - h Select **Allow for ASP.NET v2.0** option.
- 7 Click **OK**.

## Installing The QADirector Application Server

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 Windows help documentation for information on enabling Windows Features in Windows Vista.

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 Windows Features, as explained in the Windows Vista help documentation.

## Creating an Oracle Client Service Name

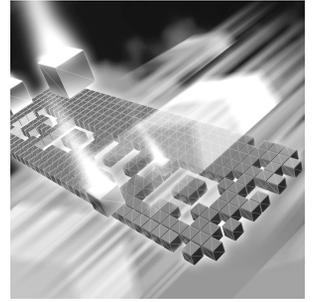
To create a client service name:

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



## Appendix B

# Product Integrations



### ◆ Installing File-AID/CS Integration Components



## Installing File-AID/CS Integration Components

If you are only installing the File-AID/CS installation components, 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 Windows help documentation for information on enabling Windows Features in Windows Vista.

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 Windows Features, as explained in the Windows Vista help documentation.

## **Configuring QADirector with File-AID/CS Integration**

If you are installing both the QADirector Application Server and the File-AID/CS installation components, 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:** Refer to the Windows help documentation for information on enabling Windows Features in Windows Vista.

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:

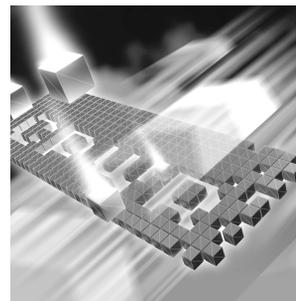
- Asp
- ASP.NET
- ISAPI Filter
- ISAPI Extensions
- Server Side Includes

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 Windows Features, as explained in the Windows Vista help documentation.

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