

*Industry-specific*

**QAD SOLUTIONS**

*Manufacturing Applications*

# **Installation Guide QAD Customer Self Service (QAD CSS)**

Installation Overview  
Installing QAD CSS  
Configuration Options  
Installation Test



78-0618A  
QAD CSS Version 4.1 and higher  
January 2004

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## About QAD CSS

QAD Customer Self Service (QAD CSS) is a Web-based storefront application designed to work with QAD's MFG/PRO system. It lets you extend your MFG/PRO system to the Web in support of either business-to-business (B2B) order entry or business-to-customer (B2C) order entry.

QAD CSS features include:

- Supports rapid integration and implementation, using a cost-effective approach and flexible Web technology
- Lets you easily model your own business processes without invasive code changes
- Style sheets that let you easily customize the user interface
- Lets your customers enter orders through a browser that updates MFG/PRO in real time.
- Lets your customers check their order status, credit history, and inventory levels
- Automatically generates e-mails based on rules that you define

## Other QAD CSS Documentation

This guide includes instructions for installing QAD CSS on UNIX, Linux, and Windows platforms, as well as configuring the product to communicate with MFG/PRO.

These instructions are for the QAD CSS system administrator who is installing the QAD CSS database and is familiar with the UNIX operating system, the Microsoft Windows operating system, Progress software, and networking as necessary. The system administrator should also be familiar with MFG/PRO installation and administration.

For details on how to implement QAD CSS and how to use the product in day-to-day operations, see *Administration Guide: QAD CSS*.

## QAD Web Site

The QAD Web site provides a wide variety of information about the company and its products. You can access the Web site at:

<http://www.qad.com>

For QAD CSS users with a QAD Web account, product documentation is available for viewing or downloading at:

<http://support.qad.com/documentation/>

**Important** Before you start the installation, make sure you have the most recent version of this document.

You can register for a QAD Web account by accessing the Web site and clicking the Accounts link at the top of the screen. Your customer ID number is required. Access to certain areas is dependent on the type of agreement you have with QAD.

Most user documentation is available in two formats:

- Portable document format (PDF). PDF files can be downloaded from the QAD Web site to your computer. You can view them with the free Adobe Acrobat Reader. A link for downloading this program is also available on the QAD Web site.
- HTML. You can view user documentation through your Web browser. The documents include search tools for easily locating topics of interest.

Features also include an online solution database to help QAD CSS users answer questions about setting up and using the product. Additionally, the QAD Web site has information about training classes and other services that can help you learn about QAD CSS.

## Conventions

### Typographic Conventions

This document uses the text or typographic conventions listed in the following table.

<b>If you see:</b>	<b>It means:</b>
monospaced text	A command or file name.
<i>italicized monospaced text</i>	A variable name for a value you enter as part of an operating system command; for example, <i>YourCDROMDir</i> .
indented command line	A long command that you enter as one line, although it appears in the text as two lines.
<b>Note</b>	Alerts the reader to exceptions or special conditions.
<b>Important</b>	Alerts the reader to critical information.
<b>Warning</b>	Used in situations where you can overwrite or corrupt data, unless you follow the instructions.

### UNIX and Windows Conventions

This document supports the installation of QAD CSS for both UNIX and Windows platforms. Some steps are unique to a particular platform and are documented in separate sections and marked as UNIX or Windows only. In steps that are common to UNIX and Windows, UNIX file and path conventions are used when needed. If you are installing on the Windows platform, substitute the drive letter and path conventions for your operating system.

# Installation Overview

This chapter includes an overview of the QAD CSS product architecture and various deployment options. It then provides details needed to prepare for installation.

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## Configuration Overview

QAD CSS is designed as an N-tier application using Progress WebSpeed supported by several other technologies:

- HTML
- DHTML
- XML
- JavaScript
- Progress 4GL

▶ See “Deployment Options” on page 7.

The product is constructed in multiple layers that can be deployed on different tiers—or platforms—based on client-server architecture and scalability requirements.

Each layer has specific responsibility for handling an aspect of QAD CSS functionality and is differentiated based on the functional services it provides and the technology used to create it. The layers are:

- **User interface (UI) layer.** This layer presents and collects information that interacts with the user interface. It is written using HTML, Progress SpeedScript, and JavaScript. The UI layer creates the main container for the QAD CSS application and works with the UI business rule layer to dynamically generate page content when requested.

The UI layer ensures that the JavaScript and style sheets are included. In this context, JavaScript validates UI data entry. Additionally, the UI layer controls the overall placement of UI elements.

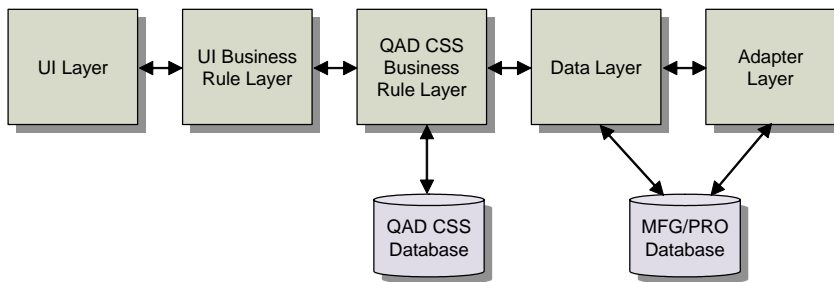
- **UI business rule layer.** This layer, written using WebSpeed, interacts with the UI layer and the application business rule layer (ABRL). It controls requests for data and data submission to the ABRL. It also controls dynamic creation of page content.

The UI business rule layer includes three base components:

- One that works with the UI layer to provide the base dynamic content
- A component that provides the default customizable UI generations for the product registry
- A UI extension component, where user modification to dynamic content takes place

- Application business rule layer (ABRL). The primary function of this layer, written in Progress 4GL, is to process data requests, as well as to perform QAD CSS business rule processing. It interacts with the UI Business Rules layer and Data layer using a series of APIs that pass information and directives between the two layers. To satisfy these requests, the ABRL interacts with the Data layer, Adapter layer, and the QAD CSS database.
- Data layer. This layer provides a set of centralized procedures for retrieving and navigating through sets of records. The Data layer also provides common procedures for updating the MFG/PRO database that include the necessary change control processes required to maintain stateless applications.
- Adapter layer. This layer controls access to the MFG/PRO database and code, and translates the QAD CSS API to the API required by MFG/PRO.

Figure 1.1 illustrates the QAD CSS layer architecture.



**Fig. 1.1**  
QAD CSS Layer  
Architecture

## Deployment Options

QAD CSS can be deployed in various configurations ranging from locally hosted to enterprise-wide options. In planning your deployment, you should consider these major factors:

- Your MFG/PRO configuration.
- The Web server and its platform. QAD CSS can work with most major Web servers; supported operating systems include Windows, Sun Solaris, IBM AIX, HP-UX, Compaq UNIX Tru64, SCO UnixWare 7, and Linux.

- Progress WebSpeed. WebSpeed includes separate components to support single-machine or distributed implementation.
- QAD CSS. Based on such factors as performance, you can implement all the components of QAD CSS—static Web files, dynamic HTML, business rules, adapter rules, QAD CSS database—on a single machine, or spread them across several. When your environment includes a Progress Application Server, each QAD CSS component can reside on a different tier of the enterprise network.

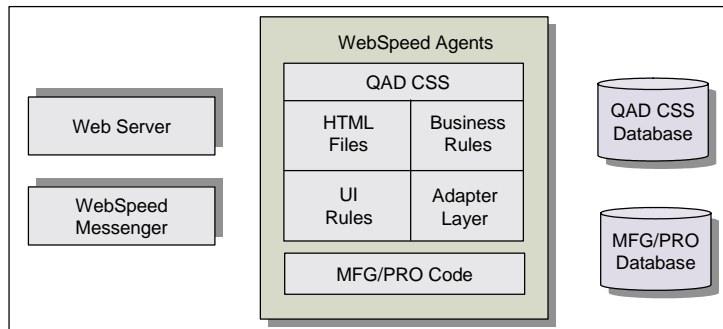
## Deployment Examples

This installation guide assumes that you are installing all QAD CSS components on a single server. If you want to distribute components, this section also illustrates distributed deployment featuring Web server installation on a separate machine.

### Simple Deployment

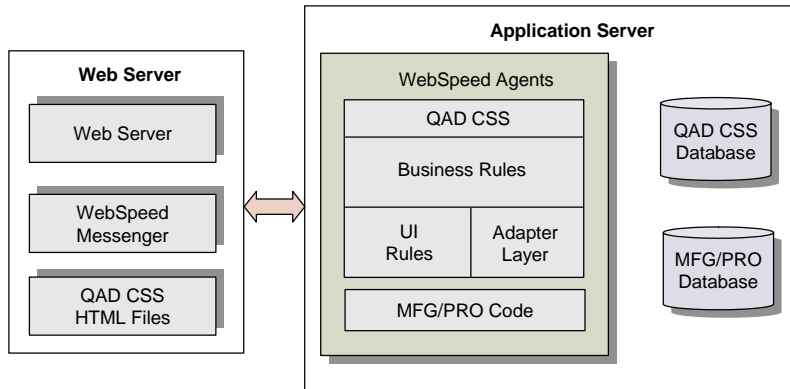
The simplest deployment of QAD CSS is to put all the components on the same server. This method is highly efficient, as well as easy to implement and maintain. However, it does not let you apply the kind of security typically required when users access an application over the Internet. For this reason, it is most often used to create development environments. Figure 1.2 illustrates an example of a simple deployment.

**Fig. 1.2**  
Simple Deployment  
of QAD CSS



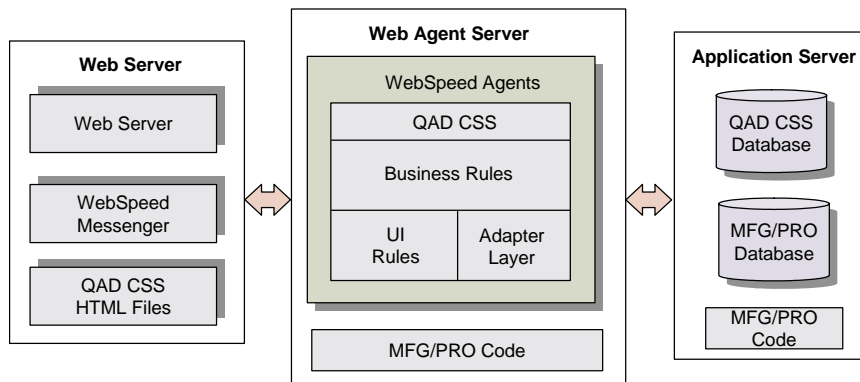
### Distributed Deployment

A more common deployment involves separating the Web server from the rest of the product. It is still very efficient for low- to medium-load situations, and is also relatively easy to implement and maintain. Figure 1.3 illustrates an example of a distributed deployment.



**Fig. 1.3**  
Distributed  
Deployment of  
QAD CSS

Another common example of a distributed implementation is to have the production MFG/PRO database on another platform. This offers more scalability, and—depending on the speed and network configuration of the database server—can improve performance. Figure 1.4 illustrates an example of this type of deployment.



**Fig. 1.4**  
Distributed  
Deployment of  
QAD CSS with  
Separate Database

## Prerequisites

### Hardware and Networking Requirements

Your system should meet the following basic requirements:

- Access to the Internet.
- Support for the TCP/IP and UDP protocols. The platforms that WebSpeed supports provide built-in support for these protocols.
- At least 100 MB of free space for the QAD CSS application.

### Software Requirements

You should have the following software elements installed and configured before you install QAD CSS:

- MGF/PRO, version eB or eB2.
- Progress 4GL, version 9.1C or higher including:
  - Latest Progress version-specific patches
  - Sufficient Progress licenses for your database deployment method
- Progress WebSpeed, version 3.1C or higher.
- A Web server that supports one of the following interfaces:
  - ISAPI; for example, Microsoft Internet Information Server (IIS), version 3.x and 4.x
  - NSAPI; for example, Netscape Enterprise or Fast Track Server, Version 3.x
  - CGI 1.1; for example, Apache
- To use the browser-based editor in WebSpeed version 3.1C, you must have Microsoft Internet Explorer version 5.0 or later or Netscape Navigator 4.5 or later.

## Preparing to Install

Before you begin the installation process, make sure you know and write down the following information:

- Some systems have a specific area where applications are to be installed. Where is this product going to be installed?

The QAD CSS install directory is: \_\_\_\_\_

This document refers to the install directory as *CSSInstallDir*.

The QAD CSS database directory is: \_\_\_\_\_

This document refers to the database directory as *CSSDbDir*.

- During the installation, certain tasks may require additional privileges that may require a user ID that belongs to an administrative group.

What rights and/or permissions does the installer have on the system?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- What is the installer's current knowledge of the operating system? Some installation tasks require knowledge of the operating system and commands, such as:

- Mounting a CD-ROM
- Creating a directory
- Navigating directory paths
- Changing file attributes

- To work correctly, WebSpeed brokers and agents need to have available TCP port ranges. As well, the QAD CSS database may be started with a server that allows TCP connections.

What TCP ports are available on the system?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- Depending on setup requirements, modification of the Web server configuration may be necessary to deliver files (JavaScript, images, style sheets) to the Web.

What Web server software is being used?

---

What is the directory location of the Web server software?

---

This document refers to this location as *webServerDir*.

What is the Web server’s machine name or IP address?

---

This document refers to this IP address as *webServer*.

**Note** WebSpeed and QAD CSS allow for a distributed environment setup. See Chapter 3.1, “WebSpeed Configuration Choices,” in the Progress *WebSpeed Installation and Configuration Guide* for more information.

- The version and location of the Progress/WebSpeed installation are required to perform multiple tasks in this installation.

What version of Progress/WebSpeed is installed? \_\_\_\_\_

What is its directory location?

---

**Note** This document refers to this location as *ProgressInstallDir*.

- Are the Progress/WebSpeed manuals available? References are made throughout this document to the Progress/WebSpeed documentation.

**Note** Progress documentation is available online at:

<http://www.progress.com/products/documentation/index.ssp>

## Installation Directories

Table 1.1 lists the directory naming convention used to reference locations that vary for each installation.

**Table 1.1**  
Installation  
Directories

Directory Component	Description
<i>CSSInstallDir</i>	The root directory where QAD CSS is installed on your system.
<i>CSSDbDir</i>	The directory location of the QAD CSS database.

Directory Component	Description
<i>ProgressInstallDir</i>	The root directory where Progress and WebSpeed are installed on your system.
<i>WebServerDir</i>	The directory location of the Web server software.

## Installation Media

The installation media includes all files required for the installation in compressed format. Extract the file structure from the .tar or .zip file appropriate to your installation platform:

- *qadcscs.tar* for UNIX platforms
- *qadcscs.zip* for Windows platforms

Table 1.2 lists the components included in the compressed files and summarizes their purpose.

Directory Component	Content Description
<i>defs</i>	Data definition files and data files used to create the QAD CSS database.
<i>demo</i>	Data you can use to add a sample catalog to illustrate the storefront.
<i>demo/defs.css</i>	QAD CSS data.
<i>demo/defs.qad</i>	MFG/PRO data.
<i>demo/items</i>	Images for the catalog.
<i>qadcscs</i>	Multiple subdirectories with core product files.
<i>qadcscs/appstart.p</i>	Additional optional startup options.
<i>qadcscs/appstart.pf</i>	Additional optional startup options.
<i>qadcscs/Compme3.1.html</i>	Default compiler program.
<i>qadcscs/qadcscs.ini</i>	QAD CSS configuration file.
<i>qadcscs/qadcscs.pf.</i>	Default start parameters for WebSpeed agents.
<i>qadcscs/startex.p</i>	Variable setup file.
<i>qadcscs/css</i>	Multiple subdirectories with QAD CSS program files.
<i>qadcscs/css/ad</i>	Administrative programs.
<i>qadcscs/css/adr</i>	Administrative report programs.

**Table 1.2**  
QAD CSS  
Components

Directory Component	Content Description
qadcsc/css/br	Browser programs.
qadcsc/css/ca	Feedback and FAQ programs.
qadcsc/css/cc	Credit card programs.
qadcsc/css/cl	License clearance programs.
qadcsc/css/ext	Extend layer programs.
qadcsc/css/he	Help maintenance programs.
qadcsc/css/lg	Log-in programs and programs used to implement the B2C order module.
qadcsc/css/lib	Common libraries.
qadcsc/css/messages	Error message program for serious errors.
qadcsc/css/op	Order processing programs.
qadcsc/css/opr	Order processing report programs.
qadcsc/css/qad	Programs that directly interface with MFG/PRO database. Contains a subdirectory for each supported MFG/PRO release.
qadcsc/css/rep	Replication templates for populating items.
qadcsc/css/sys	System programs and base report programs.
qadcsc/css/tools	Utility programs.
qadcsc/css/tt	Temp table definitions used with all programs.
qadcsc/images	QAD CSS default images.
qadcsc/images/eng	Images for the English language.
qadcsc/images/items	Images for items in the catalog. Initially empty.
qadcsc/images/oe_icons	Images for action icons. Initially empty.
qadcsc/logs	WebSpeed server logs. Empty when created.
qadcsc/scripts	Java scripts used by QAD CSS.
qadcsc/scripts/eng_msg	English-based JavaScripts.
qadcsc/scripts/menu	Menu JavaScripts.
qadcsc/styles	Default cascading stylesheets used by QAD CSS.
qadcsc/temp	QAD CSS stores temporary files. Empty when created.
qadcsc/web	Files that extend the functionality of WebSpeed agents.
qadcsc/web/objects	WebSpeed files for Progress 9.1D.

Table 1.2 — QAD CSS Components — (Page 2 of 3)

Directory Component	Content Description
qadcsc/web/objects.91c	WebSpeed files for Progress 9.1C.
utils_ms	Sample scripts for use on Windows systems.
utils_ux	Sample scripts for use on UNIX systems.

Table 1.2 — QAD CSS Components — (Page 3 of 3)

## Installation Summary

Installing QAD CSS is completed in four major steps. First you install the QAD CSS files and configure QAD CSS to work on your system. Then you perform steps to connect QAD CSS with your MFG/PRO database. You choose various QAD CSS options to accommodate your company requirements. Finally, you test and verify the success of the installation.

- 1 Install and configure QAD CSS files:
  - a Copy source files to disk and expand the compressed files.
  - b Create the Progress database that contains QAD CSS data and set up the database server.
  - c Set up WebSpeed to function with QAD CSS.
  - d Configure WebSpeed and QAD CSS startup files.
  - e Compile QAD CSS source code.
  - f Update final QAD CSS settings.
- 2 Connect to the MFG/PRO database through QAD CSS.
- 3 Define options that implement your company-specific requirements in QAD CSS.
- 4 Test and verify the installation.

Some tasks vary for UNIX and Windows environments. In these cases, the appropriate information for each operating system is outlined separately.



# Installing QAD CSS

Use the instructions in this chapter to install and configure QAD CSS on a UNIX, Linux, or Windows platforms.

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## Overview

Use the instructions in this chapter to install and configure QAD CSS on a UNIX, Linux, or Windows platforms.

Using these procedures, you can:

- Load the files used in installation.
- Set up the database from QAD-supplied files.
- Set up the database server.
- Set up and administer Progress WebSpeed, including the creation of a new WebSpeed broker.
- Configure startup files and verify that the new files work correctly.
- Compile the source code.
- Perform several related setup tasks:
  - Administration
  - System and order control maintenance
- Integrate QAD CSS with your MFG/PRO database.

▶ See Chapter 3.

Based on how you plan to use the product, you can adjust various configuration options after you begin using QAD CSS.

▶ See Chapter 4.

After completing the installation and preliminary configuration process, test the new installation to verify that your MFG/PRO environment communicates data correctly with QAD CSS.

## Setting Up the Installation Environment

QAD CSS source code is provided on the CD in `.tar` format for UNIX platforms and `.zip` format for Windows platforms. Install from the compressed file appropriate for your system.

### Create Working Directory

The installation directory on the server where the QAD CSS source is kept is also known as the QAD CSS working directory or *CSSInstallDir*.

If this directory does not exist, create it before you begin the installation.

**Important** Do not use blank spaces in the directory path or name.

**Note** The QAD CSS source code should not be mixed with code from other software on your system.

## Copy Source Files to Disk

Follow these steps to copy the install files from the product CD to your system:

- 1 On UNIX systems, log on as user `mfg` in the group `qad`. This user and group should have been created during the installation of MFG/PRO. On Windows systems, log in as a user with Administrator privileges.
- 2 On UNIX systems, mount the CD-ROM. On Windows, place the CD in a CD-ROM drive.

Example UNIX commands are listed in Table 2.1.

Hardware	Mount Command
Sun	<code>volcheck cdrom</code>
HP	<code>/etc/mount -F cdfs /dev/dsk/YourCDDevice /cdrom</code>
Digital	<code>mount -r -o noversion -t cdfs /dev/YourCDDevice /cdrom</code>
AIX	<code>smitty mountfs</code> Then select file system, directory, and file system type ( <code>cdarfs</code> ).
Linux	<code>mount /dev/hdb /mnt/cdrom</code> Where <code>/hdb</code> could be <code>hdc</code> or <code>hdd</code> among other possibilities.
All others	Refer to your operating system documentation or vendor for requirements to mount a CD-ROM. You may be able to type <code>man mount</code> to determine the correct command.

**Table 2.1**  
UNIX CD Drive  
Mount Commands

**Note** Copying the distribution file from CD to a temporary directory on disk can increase extraction speed.

- 3 Change to the QAD CSS working directory (`CSSInstallDir`). On UNIX platforms, perform the following command to unbundle the QAD CSS distribution files:

```
tar -xvf tempDir or CDRomDir qadcss.tar
```

On Windows platforms, use your `unzip` utility to extract the source files from `qadcss.zip`.

- 4 Verify that the directories and files listed in Table 1.1, “Installation Directories,” on page 12 have been created in *CSSInstallDir*.

## Validate Permissions

### Windows Systems

Ensure that none of the files are read only.

### UNIX Systems

Note the permissions on the QAD CSS installation directory and all subdirectories. The WebSpeed agents are given a user ID when they run. Make sure that the group the user ID belongs to has sufficient rights in the QAD CSS working directory and all subfolders to perform the following tasks:

- Create files.
- Write to all files.
- Read all files.

For more information on configuring WebSpeed on UNIX, see Chapter 8, “Configuring WebSpeed on UNIX,” in the Progress *WebSpeed Installation and Configuration Guide*.

If the Web files (images, JavaScript, style sheets) are to be served from their current location, a more secure set of permissions may be required on those directories.

## Creating the QAD CSS Database

When building the QAD CSS database, create a directory in your QAD CSS working directory (*CSSInstallDir/database*) or the directory on the server where databases are normally stored. This guide refers to the directory as *CSSDbDir*.

All the files necessary to build a new QAD CSS database are in the *CSSInstallDir/defs/* directory.

## Create a Database on UNIX

Follow these steps to create a QAD CSS database on UNIX platforms:

- 1 Make sure that the \$DLC environment variable is set to the Progress home directory.

- 2 Change to the database directory (*CSSDbDir*).

**Note** If the directory does not exist, you should create it first.

QAD recommends that you store all QAD CSS database files separately from those of other databases on your system.

- 3 Create an empty database using the following command:

```
$DLC/bin/procopy $DLC/empty8 qadcsc
```

```
Database copied from ProgressInstallDir/empty8. (1365)
```

In this example, the command creates a database with an 8K blocksize.

See Chapter 4, “Creating and Deleting Databases,” in the *Progress Database Administration Guide and Reference* for details.

- 4 Use the following command to start a client session with the new database and launch the Progress Data Dictionary:

```
$DLC/bin/_progres -db qadcsc -p _dict
```

- 5 Load database definitions using the following steps:

- a From the Admin menu, select Load Data and Definitions|Data Definitions (.df file)...
- b In the Input File field, enter the full path to the .df file, or select Files to navigate to the appropriate file.

**Note** The *qadcsc.df* file is in the *CSSInstallDir/defs* directory.

- c Choose OK or press F1.

**Note** This load can take several minutes depending on the server processor speed.

- d When the Load Completed prompt displays, choose OK.

- 6 Load QAD CSS data using the following steps:
  - a From the Admin menu, select Load Data and Definitions|Table Contents (.d files).
  - b From the Select Tables screen, press F5.  
A list of table names displays.
  - c Press F1 to use the asterisk (\*) default.  
The Select Tables screen redisplay. All tables are selected.
  - d Press F1.
- 7 Load QAD CSS sequence values using the following steps:
  - a From the Admin menu, select Load Data and Definitions|Sequence Current Values.
  - b Enter the full path to the Input File (`_seqvals.d`) or choose Files to find the correct file to load.  
  
`CSSInstallDir/defs/_seqvals.d`
  - c Choose OK or press F1 to load the sequences into the database.  
**Note** This task should complete very quickly.
  - d When the sequence load completes, choose OK.
- 8 Choose Database|Exit to close the Progress Data Dictionary.

## Create a Database on Windows

Follow these steps to create a QAD CSS database:

- 1 Make sure that the DLC environment variable is set to the Progress home directory.
- 2 From the Windows Start menu, choose Programs|Progress|Data Administration.
- 3 Choose Database|Create.

- 4 Enter the path to the database directory and name the database `qadcass`; for example:  

```
CSSDbDir\database\qadcass
```
- 5 Select Copy of Some Other Database. Click Files to find and select `empty8.db` under the Progress directory.
- 6 Click OK. When the Connect Database screen displays, click OK.
- 7 Select Admin|Load Data and Definitions|Data Definitions. The Load Data Definitions screen displays.
- 8 Click Files to find the `CSSInstallDir` directory. Open `defs`, highlight `qadcass.df`, and click Open.  
The Load Data Definitions screen remains open.
- 9 Select the first three checkboxes: Stop if error found, Output errors to file, and Output errors to screen. Click OK.  
All definitions begin loading; this should only take a few moments. A message displays when the load is finished.
- 10 Choose Admin|Load Data Definitions|Table Contents (.d files). The Select Tables screen displays.
  - a Click Select Some to display the Select Tables by Pattern Match dialog. This displays the wild card (\*) by default.
  - b Click OK. The Select Tables screen displays with all tables highlighted.
  - c Click OK.
- 11 The Load Data Contents for All Tables dialog displays. Enter the full path to the data content (`CSSInstallDir\defs`). Select the Output Errors to Screen option and click OK.  
The data begins loading; this should only take a few moments. A message displays when the load is finished.
- 12 Select Admin|Load Data Definitions|Sequence Current Values. The Load Sequence Values screen displays.
- 13 Click Files. Open the `defs` directory, highlight the `_seqvals.d` file, click Open, and click OK.

Loading sequences should complete quickly. A message displays when the load is finished.

#### 14 Choose Database|Exit.

## Setting Up the Database Server

The QAD CSS database needs to be run in multi-user mode to allow connections from multiple WebSpeed agents. Depending on the server configuration and Progress and WebSpeed versions used, a TCP connection to the database may be required.

**Important** Make sure you execute this sequence successfully. The QAD CSS database must be started before you continue with the installation procedure.

See Chapter 5, “Starting Up and Shutting Down,” in the *Progress Database Administration Guide and Reference* for details.

Example scripts for starting and stopping databases are included in the following directories:

- `utils_ms`: utilities formatted for use with Windows
- `utils_ux`: utilities formatted for use with UNIX and Linux

If a TCP connection is used, QAD recommends that the port number be documented in the `services` file. This is usually `/etc/services`; see the server documentation for information.

The following is an example entry in the `/etc/services` file:

```
#EXAMPLE ENTRY:
# <service_name>      <portnumber/protocol> #<description>
qadcSSDB              5661/tcp                # QAD CSS DB
```

## Start the Database on UNIX

Examples of database start and stop scripts include:

- `startdb`

```
DLC=ProgressInstallDir; export DLC;
$DLC/bin/proserve CSSDbDir/qadcSS -L 1000 -B 5000
-S qadcSSDB -N TCP;
```

- stopdb

```
DLC=ProgressInstallDir; export DLC;
$DLC/bin/proshut CSSDbDir/qadcscs -by
```

Below is the output produced when the database is started using the sample startdb script:

```
./startdb

PROGRESS Version 9.1C as of Thu Jun 7 10:03:59 EDT 2001
17:53:19 BROKER 0: Multi-user session begin. (333)
17:53:19 BROKER 0: Begin Physical Redo Phase at 320 . (5326)
17:53:20 BROKER 0: Physical Redo Phase Completed at blk 435 off
3894 upd 6970. (7161)
17:53:21 BROKER 0: Started for qadcscsDB using TCP, pid 24729.
(5644)
```

## Start the Database on Windows

- 1 From the Windows Start menu, select Programs|Progress|Progress Explorer Tool.  
A list of AdminServers displays.
- 2 Verify that the correct AdminServer is on the list. (If the AdminServer is on the system from which you are running Progress Explorer, it is shown as localhost.) If the correct server is not on the list, consult the Progress documentation for instructions on adding a new server service.
- 3 Right-click the server where QAD CSS is installed and select Connect. Enter the user ID and password to administer the service.
- 4 Right-click Database in the right window and select New. Enter the name for the database as `qadcscs` and click OK.
- 5 Specify the complete path the QAD CSS database in `CSSDbDir` and click OK.
- 6 In the left window, expand the service, the database just created, the configuration, and defaultConfiguration.

- 7 Right-click defaultServerGroup and choose Properties. In the dialog box:
  - a Select 4GL Only.
  - b Enter a free service port number in the Ports section. (If necessary, contact the system administrator for a number.)
  - c Click OK.
- 8 Right-click the database name in the left window and choose Start.
- 9 Right-click the database again and choose Status. The database should be running.

## Setting Up the WebSpeed Environment

This section describes how to create a new WebSpeed broker for the QAD CSS installation either manually or using the Progress Explorer tool.

If you are installing on a Windows platform, use Progress Explorer to complete these steps. If you are installing on UNIX and have a Windows machine network-connected to the UNIX server, also use the Progress Explorer, since this method is easier and less error prone.

▶ See page 30.

On a UNIX only system, follow the steps to manually update the `ubroker.properties` file.

**Note** This procedure assumes you are installing all QAD CSS components on one server.

### Set Up the WebSpeed Server on Windows

**Additional Resource:** Review the “Configuring WebSpeed on Windows” chapter in the *Progress WebSpeed Installation and Configuration Guide*.

This section provides instructions for setting up the WebSpeed Server instance using the Progress Explorer, which runs on Windows machines only. You can use these instructions to set up:

- A Windows server
- A UNIX server using a network-connected Windows machine

In the following instructions, use the Progress Explorer to modify the WebSpeed section of the `ubroker.properties` configuration file. This file is located in the `properties` subdirectory below the Progress installation directory.

### Launch the Progress Explorer

Start the AdminServer and launch the Progress Explorer.

**Note** Depending on your specific Progress version, system configuration, and operating system, the Progress Explorer navigation and display layout may differ slightly from the following instructions. Refer to the Progress Explorer online help for detailed help.

#### 1 Verify that the AdminServer process is running.

- If the software is located on a Windows server, enter the following command from the system command line:

```
ProgressInstallDir\bin\proadsv -query
```

If the AdminServer is not running, open Settings|Control Panel|Services from the Windows Start button. Then, select the AdminService for Progress 9.1 and click Start.

- If the software is located on a UNIX server, run the following command on that server:

```
ProgressInstallDir\bin\proadsv -query
```

If the AdminServer is not running, start it using the following command:

```
ProgressInstallDir\bin\proadsv -start
```

#### 2 Once the AdminServer is started, start Progress Explorer from the Windows Start button. The Progress Explorer window displays.

**Tip**  
Review the log files in the Progress work directory for additional information.

- 3 If you are configuring a remote machine, use the following instructions to add an icon for the remote machine to the Progress Explorer. If you are configuring the Progress servers for this machine, use the localhost icon.
  - a Click on Progress Explorer and then select Action|Add Progress Server. The Server Properties window displays.
  - b Complete the General tab in the Server Properties window using the following table as a guide:

Field	Description
Server	Enter the machine name of the server you want to configure.
User	Enter the user name under which you want to log in to the remote machine. If you are configuring a remote UNIX machine, log in as a user with root-level permissions. If you are configuring a remote Windows machine, log in as a user with administrator permissions.
Password	Enter the password for the user that you are using to log in to the remote machine.

- c Click OK to continue.
- 4 In the Progress Explorer window, right-click the server icon for the machine on which you want to configure the WebSpeed server instance. Choose Connect.
- 5 If you are configuring a remote machine, you are prompted for a user name and password. Use the same name and password that you specified in step 3.

The Progress Explorer connects to the AdminServer process running on the machine where you are configuring the WebSpeed instance. A connection is indicated by a green arrow in the machine icon.

## Set Up the WebSpeed Broker

- 1 Once you have connected to the remote or localhost server machine, click on the server name. Several folders display. Right-click the WebSpeed folder and choose New.
- 2 In the New Object window, enter the name you want to use for the WebSpeed broker. The following instructions use `qadcsc` as an example.  
When ready, click OK to continue.
- 3 Expand the WebSpeed directory; right-click the broker that was just created and choose Properties. A Properties dialog box displays.
  - a For Working Directory, click Browse and select the `CSSInstallDir\qadcsc` directory.
  - b Enter a free port number (verified as available by the system administrator).
  - c Leave the Operating Mode set to Stateless and Auto start set to No.
- 4 Expand the Broker by clicking its name in the left side of the Explorer window and select Logging Settings to display a new set of options:
  - a Click Browse to find the `logs` directory under the QAD CSS installation directory. Open the `logs` directory and in the Open dialog box, enter the file name `BrokerName.broker.log`.
  - b Click Open.
  - c Choose Error Only in the Broker logging level drop-down list.
  - d Uncheck Append to broker log file.
- 5 If you are not using the NameServer, click ControllingNameServer under the Broker. In the NameServer properties, uncheck Register with NameServer.
- 6 Expand Agent and repeat step 4, specifying `BrokerName.server.log` as the file name.
- 7 Click Pool Range under the Agent section. Set each value to 1 and click OK.

▶ See “Register Your Serial Number” on page 48.

**Note** After you register your QAD CSS clearance code, return to this section and update the pool settings based on the licensed number of agents.

## Update the `ubroker.properties` File on UNIX

**Additional Resource:** Review the “Configuring WebSpeed on UNIX” chapter in the Progress *WebSpeed Installation and Configuration Guide*.

▶ See “Set Up the WebSpeed Server on Windows” on page 26.

**Note** If you have a Windows machine network-connected to the UNIX server, QAD recommends you use the Progress Explorer to set up the WebSpeed server.

In the following instructions, modify the `ubroker.properties` configuration file. This file is located in the `properties` subdirectory of your Progress installation directory. Review the comments sections of the `ubroker.properties` file for details on the entries in the file and how they affect your environment.

**Note** The Progress AdminServer should not be running when you modify the `ubroker.properties` file. See Chapter 8.2, “WebSpeed Administration,” in Progress *WebSpeed Installation and Configuration Guide* for instructions on stopping the AdminServer.

- 1 Change directories to the `properties` subdirectory of your Progress installation directory.

```
cd ProgressInstallDir/properties
```

- 2 Generate a universal unique identifier (UUID) using the following command:

```
$DLC/bin/genuuid
```

- 3 Record the system-generated UUID; for example:

```
PROGRESS Version 9.1C as of Thu Jun 7 10:03:59 EDT 2001
11d1def534ea1be0:a134e7:ec44c53772:-8000
```

**Note** All letters in the UUID are lower-case. This prevents 0 (zero) from being confused with O (capital O).

- 4 Make a backup copy of the `ubroker.properties` file and name it `ubroker.orig`.

```
cp ubroker.properties ubroker.orig
```

**Tip**  
A UUID is required for each WebSpeed broker.

- 5 Open the `ubroker.properties` file in a text editor:

```
vi ubroker.properties
```

- 6 Update the following values as shown below. Figure 2.1 shows a sample file.

<code>brokerName</code>	The name used to refer to this broker
<code>CSSInstallDir</code>	Location where QAD CSS is installed
<code>brokerPort</code>	The port the broker should use for communication
<code>uuid</code>	The UUID generated in step 2

**Note** Figure 2.1 shows the standard subset of variables that need to be set for your broker.

```
[UBroker.WS.brokerName]
appserviceNameList=brokerName
brokerLogFile=CSSInstallDir/qadcsc/logs/BrokerName.broker.log
srvrLogFile=CSSInstallDir/qadcsc/logs/BrokerName.server.log
description=[Enter your description here]
environment=
workDir=CSSInstallDir
portNumber=brokerPort
uuid=uuid
controllingNameServer=NS1
defaultService=0
groupName=
initialSrvrInstance=1
maxSrvrInstance=1
minSrvrInstance=1
srvrAppMode=Development
srvrDebug=Disabled
userName=
srvrStartupParam=-p web/objects/web-disp.p -weblogerror -pf
CSSInstallDir/qadcsc.pf
```

**Fig. 2.1**  
Sample  
`ubroker.properties`  
File

**Note** In Figure 2.1, the `initialSrvrInstance`, `maxSrvrInstance`, and `minSrvrInstance` values are set to 1. You should keep these settings until QAD CSS setup is complete. Once the product is functioning properly, you can change these values to match the number of agents in the QAD CSS license for this installation.

## Configuring QAD CSS

Use these procedures to update the QAD CSS startup files, then verify that the modified files work correctly.

### Modify WebSpeed Startup Files

This section describes how to modify the following WebSpeed program files to support QAD CSS:

- `web-disp.p`
- `web-util.p`

For reference, example files are provided in:

- `CSSInstallDir/qadcsc/web/objects` for Progress 9.1D
- `CSSInstallDir/qadcsc/web/objects.91C` for Progress 9.1C

**Important** Do not use an example file. Instead, update the files you copy from your WebSpeed implementation. This ensures that you have updated the latest version of the file if there have been other changes to it, such as a Progress service pack.

**Tip**  
Search for QAD CSS in the sample files to find where changes are needed.

The content of the files has changed between Progress 9.1C and 9.1D. These instructions assume you are editing the files associated with 9.1D. If you are working with 9.1C, make exactly the same changes, but the file context may be slightly different.

Follow these steps to update the WebSpeed programs:

- 1 Copy the existing `web-disp.p` and `web-util.p` files located in the `ProgressInstallDir/src/web/objects` directory to the `CSSInstallDir/qadcsc/web/objects` directory.
- 2 Make the following modifications to `web-disp.p` and `webutil.p` in `CSSInstallDir/qadcsc/web/objects`. The changes are marked with QAD CSS MODIFICATION. Refer to the sample files if needed.

**Important** Do not modify the files in the Progress installation directory.

## web-disp.p Modifications

```
{ src/web/method/cgiarray.i NEW } /* standard WS cgiarray.i: vars */
{ src/web/method/tagmap.i NEW } /* standtagmap.i: TT tagmap */
{ src/web/method/webutils.i NEW }

/* Dummy variable for logical assign. */
DEFINE VARIABLE lDummy AS LOGICAL NO-UNDO.

/***** QAD CSS MODIFICATION *****/
/**/ { css/lib/lib_sys_globalui.i new global }
/**/ { css/lib/lib_startex.i }
/***** QAD CSS MODIFICATION END *****/
```

```
IF lStateAware THEN
  {&MANUAL-WSEU-INCREMENT}

/***** QAD CSS MODIFICATION *****/
/**/ IF NOT startex ("qadcss.ini",yes) THEN WAIT-FOR WEB-NOTIFY OF
DEFAULT-WINDOW EXCLUSIVE-WEB-USER.
/***** QAD CSS MODIFICATION END *****/

/* Wait for a web-request to come in */
WAIT-FOR-BLOCK:
```

## web-util.p Modifications

```
&GLOBAL-DEFINE WEB-UTIL_P TRUE /* lets proto.i know where to find
functions */

{ src/web/method/cgidefs.i } /* Basic CGI variables */
{ src/web/method/cgiarray.i } /* Extended CGI array variables */
{ src/web/method/tagmap.i } /* Tagmap Temp-Table definition */

/***** QAD CSS MODIFICATION *****/
/**/ DEFINE STREAM myrptstream.
/**/ DEFINE VARIABLE sttime AS INTEGER NO-UNDO.
/**/ DEFINE VARIABLE edtime AS INTEGER NO-UNDO.
/**/ DEFINE VARIABLE vhClean AS HANDLE NO-UNDO.
/**/ DEFINE VARIABLE vhFind AS HANDLE NO-UNDO.
/**/ OUTPUT STREAM myrptstream TO logs/runtime.log.
/**/ PUT STREAM myrptstream UNFORMATTED "LOG OPENED " TODAY SKIP.
/**/ OUTPUT STREAM myrptstream CLOSE.
/***** QAD CSS MODIFICATION END *****/
```

```

EXECUTE-BLOCK:
  DO ON ERROR UNDO EXECUTE-BLOCK, LEAVE EXECUTE-BLOCK
  ON ENDKEY UNDO EXECUTE-BLOCK, LEAVE EXECUTE-BLOCK
  ON STOP UNDO EXECUTE-BLOCK, LEAVE EXECUTE-BLOCK
  ON QUIT , LEAVE EXECUTE-BLOCK:

/***** QAD CSS MODIFICATION *****/
/**/ DELETE WIDGET-POOL "exDataPool" NO-ERROR.
/**/ CREATE WIDGET-POOL "exDataPool" PERSISTENT.
/**/ ASSIGN sttime = etime.
/***** QAD CSS MODIFICATION END *****/

/* Assumes state-aware support is on. Run run-web-object in
   web/objects/stateaware.p. */
   IF glStateAware THEN RUN SUPER (pcFileName).
   ELSE RUN VALUE(pcFilename) NO-ERROR.

/***** QAD CSS MODIFICATION *****/
/**/ ASSIGN edtime = etime.
/**/ OUTPUT STREAM myrptstream TO logs/runtime.log APPEND.
/**/ PUT STREAM myrptstream UNFORMATTED pcFileName " "
string((edtime - sttime) / 1000) SKIP.
/**/ OUTPUT STREAM myrptstream CLOSE.
/***** QAD CSS MODIFICATION END *****/

END.

/* Did the code run okay? Also trap for compiler error here,
/*since some code may run a program directly without running it
/*through run-web-object */

```

## Update QAD CSS Setup Files

Edit the following QAD CSS files to make them specific to your installation:

- qadcscs.pf
- qadcscs.ini

### qadcscs.pf

Update the QAD CSS startup parameter file `qadcscs.pf` in `CSSInstallDir/qadcscs` to point to the directory where the system creates temporary Progress files. Use the `-T` parameter to specify the path to the temporary directory. This is typically:

```
CSSInstallDir/qadcscs/temp
```

Another parameter of special interest in this file is `-rereadnolock`. Setting this value instructs the system to read values directly from database tables rather than from stored memory. This ensures that various WebSpeed agents get the most current value when data changes.

## qadcass.ini

QAD CSS gets its database connections and PROPATH settings from a file called `qadcass.ini`. Follow these steps to update this file:

- 1 Make a backup copy of the existing `qadcass.ini` file located in `CSSInstallDir/qadcass`.
- 2 Modify the original file based on the following considerations:
  - a Database connections
    - Initially, the `qadcass` database is the only database required. Integration with MFG/PRO is defined in a later step.
    - The connection parameters specified must be specific to the type of database server started.
    - Be certain the changes are saved to the `qadcass.ini` file.

▶ See “Connecting to MFG/PRO” on page 48.

The following example shows the database connections portion of `qadcass.ini`.

```
Database Connections # Do not edit or remove this line.
#All database connection entries should be after this line.
#
-db CSSDbDir/qadcass -ld qadcass
```

## b PROPATH

- Initially, the minimum required PROPATH for a QAD CSS install is shown below. Integration with MFG/PRO is defined in a later step.
- The Progress default PROPATH is appended to the PROPATH entries specified here.
- Verify that the changes are saved to the `qadcass.ini` file.

▶ See “Connecting to MFG/PRO” on page 48.

The following example shows the QAD CSS PROPATH portion of `qadcsc.ini`.

```
# Allow Muti Propath Entry
# All Propath entries should be after this line.
Propath # Do not edit or remove this line.

./
./css/qad/qad.MFG_PROVersion
./css
```

`MFG_PROVersion` indicates the version number of the MFG/PRO release you are integrating with. For example, if you use MFG/PRO eB, specify:

```
./css/qad/qad.91
```

If you install patches or make customizations, you should update the PROPATH to include these directories before the `qadcsc` and `qadcsc/css` directories.

**Important** Only certified QAD CSS professionals should change the product name or product version. QAD CSS may not function properly if the product name or product version entries are modified.

## Verify Setup

Use the procedures in this section to verify that the modifications to the setup files have been done correctly.

### Starting the Broker

When any modifications are made to either `web-disp.p` or `qadcsc.ini`, the QAD CSS WebSpeed broker must be restarted.

#### Starting the Broker in Windows

In Windows environments, you can use Progress Explorer to stop and restart the broker. Right-click the QAD CSS service name under the WebSpeed subdirectory and choose the appropriate command.

- 1 Right-click the broker name in the left window and choose Start.

The startup process may take several minutes.

- 2 Right-click the broker name again and choose Status.
  - a On the Summary tab, confirm that the Broker Status is Active.
  - b On the Details tab, confirm that State is Available for all agents.

### Starting the Broker in UNIX

Figure 2.2 illustrates the command and display sequence for restarting the WebSpeed broker in UNIX. The commands to start or restart the broker are based on those in the furnished example scripts.

▶ See “Configuring QAD CSS” on page 32.

The WebSpeed broker may need some time to start. Monitor the startup process by performing a query. Check the server log for this WebSpeed environment for appropriate startup messages.

**Note** The WebSpeed agent must have a state of Available in order to continue with the installation.

**Fig. 2.2**  
Sample  
Verification  
Process

```

CSSInstallDir# ./stop
PROGRESS Version 9.1C as of Thu Jun 7 10:03:59 EDT 2001

Connecting to Progress AdminServer using rmi://localhost:20931/
Chimera (8280)
Searching for brokerName (8288)
Connecting to brokerName (8276)
Shut down brokerName (8277)

CSSInstallDir# ./start
PROGRESS Version 9.1C as of Thu Jun 7 10:03:59 EDT 2001

Connecting to Progress AdminServer using rmi://localhost:20931/
Chimera (8280)
Searching for brokerName (8288)
Connecting to brokerName (8276)
Starting brokerName. Check status. (8296)

CSSInstallDir#
CSSInstallDir# ./status
PROGRESS Version 9.1C as of Thu Jun 7 10:03:59 EDT 2001

Connecting to Progress AdminServer using rmi://localhost:20931/
Chimera (8280)
Searching for brokerName (8288)
Connecting to brokerName (8276)

Broker Name           : brokerName
Operating Mode        : Stateless
Broker Status         : ACTIVE
Broker Port           : brokerPort
Broker PID             : 2740
Active Agents         : 1
Busy Agents           : 0
Locked Agents         : 0
Active Agents         : 1
Active Clients (now, peak) : (0, 0)
Client Queue Depth (cur, max) : (0, 0)
Total Requests        : 0
Rq Wait (max, avg)    : (0 ms, 0 ms)
Rq Duration (max, avg) : (0 ms, 0 ms)

PID  State      Port  nRq   nRcvd  nSent  Started  Last Change
02680 AVAILABLE 03202 000000 000000 000000 [start]  [last change]

```

## Verify Database Connection

Use the following steps to access the WebSpeed Workshop and confirm that the databases are connected:

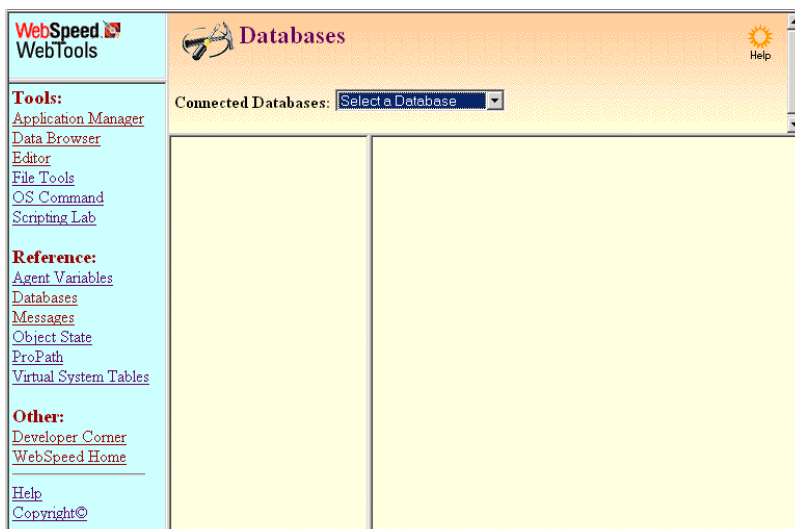
- 1 Using a Web browser, go to the WebSpeed Workshop by entering the following URL:

```
http://webServer/webServerScriptsDirectory/wspd_cgi.sh/
WService=brokerName/workshop
```

A screen similar to the following should display:



- 2 Click the Databases link from the menu.  
A drop-down list displays the connected databases.



**Important** The QAD CSS database must be connected in order to continue with the installation.

## Verify PROPATH

Because you must update the PROPATH as part of the configuration process, you should use WebSpeed Workshop to validate your changes.

- 1 From the WebSpeed Workshop, click the ProPath menu item.  
The resulting screen displays the WebSpeed PROPATH.
- 2 Confirm that these values match the entries in the `qadcsc.ini` file.

▶ See “PROPATH” on page 35.

## WebSpeed Administration

To help ease the task of WebSpeed/QAD CSS administration, the installation CD provides example scripts, demonstrating how to start, stop and monitor the WebSpeed brokers and AdminServer. The files are in the following directories:

- `utils_ms`: utilities formatted for use with Windows
- `utils_ux`: utilities formatted for use with UNIX and Linux

Example scripts include:

- startadm

```
DLC=ProgressInstallDir; export DLC
$DLC/bin/proadsv -start
```

- start

```
DLC=ProgressInstallDir; export DLC
$DLC/bin/wtbman -i brokerName -start
```

- stop

```
DLC=ProgressInstallDir; export DLC
$DLC/bin/wtbman -i brokerName -stop
```

- status

```
DLC=ProgressInstallDir; export DLC
$DLC/bin/wtbman -i brokerName -query
```

For more information on testing a WebSpeed configuration, see Chapter 8.13, “Testing Your Configuration,” in the *Progress WebSpeed Installation and Configuration Guide*.

For more information on proadsv or wtbman, see Chapter 8.2.3, “WebSpeed Command-Line Utilities,” in the *Progress WebSpeed Installation and Configuration Guide*.

## Setting Up Web Server Virtual Directories

Each Web server may have different requirements. This section includes some steps for configuring the Apache Tomcat server and Microsoft’s Internet Information Server (IIS).

In a multi-tier deployment, the `/images`, `/scripts`, and `/styles` directories located in `CSSInstallDir/qadcss` are moved to a directory on the Web server. You need to create an alias for this directory.

**Important** In a production environment, do not alias the full `CSSInstallDir` directory because this could create a serious security risk by making the entire source code freely available on the Web.

## Set Up a Virtual Directory for Apache

Follow these steps to allow the system to access QAD CSS using an Apache Web server:

- 1 Locate the `httpd` file in the `WebServerDir/conf` directory.
- 2 Locate the following section in this file:

```
Alias /icons/ "WebServerDir/icons"

<Directory "WebServerDir/icons">
    Options Indexes MultiViews
    AllowOverride None
    Order allow,deny
    Allow from all
</Directory>
```

- 3 Add the following lines after the code section displayed in the previous step:

```
Alias /qadcsc/ "CSSWebDir/"

<Directory "CSSWebDir">
    Options Indexes MultiViews
    AllowOverride None
    Order allow,deny
    Allow from all
</Directory>
```

**Note** In this example, `CSSWebDir` is a directory containing just the images, scripts, and styles.

## Set Up a Virtual Directory for IIS

Follow these steps to allow the system to access QAD CSS using Microsoft's Internet Information Server (IIS):

- 1 From the Windows Start menu, select Settings|Control Panel.
- 2 Select Administrative Tools and then Internet Services Manager.
- 3 Right-click Default Web Site and choose New Virtual Directory.
- 4 Enter an alias name to access this Web virtual directory. Use the same naming conventions as for naming a directory; for example, `qadcsc`.
- 5 Enter the path to the directory that contains the `/images`, `/scripts`, and `/styles` subdirectories.

## Compiling QAD CSS Source Code

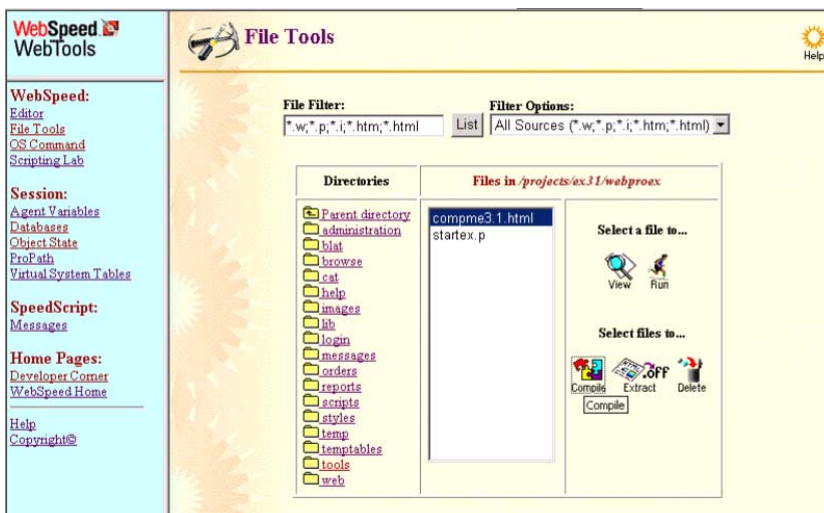
Follow these steps to compile the QAD CSS source code from the WebSpeed Workshop:

- 1 Using a Web browser, go to the WebSpeed Workshop by entering the following URL:

`http://webServer/webServerScriptsDirectory/wspd CGI.sh/  
WService=brokerName/workshop`

**Note** In Windows environments, `CGIIP.exe` is typically specified rather than `wspd CGI.sh`.

- 2 Select File Tools from the menu on the left.
- 3 Compile `compme3.1.html` in the WebSpeed Workshop.



4 Run `compme3.1.html` from the post-compilation dialog.5 In Filter, enter `.html`. Highlight all files to be recompiled and click Compile.

**Note** Typically, you compile the `.html` files only. When you are ready to move to a production environment, you can also compile the program files (`.p`). However, since these are loaded persistently, compiling them does not improve performance significantly.

**Note** The compilation process may take a few minutes.

6 Compile the two `.w` files in `CSSInstallDir/qadcss/css/cl/`. In Filter, enter `.w`. Highlight all files to be recompiled and click Compile.

## Completing Installation Setup

This section describes other tasks required to complete the installation and setup of QAD CSS. Use these instructions to:

- Set up directory paths to support a number of administrative functions.
- Set up system and order control maintenance features.

## Set Up Directory Paths

Before you can access the QAD CSS database, you must update some system variables. Later, these variables can be changed from administrative functions on the QAD CSS menu.

To set up paths for several images, scripts, and styles directories, run `exsetup.html` using the following steps:

- 1 Access WebSpeed Workshop.
- 2 Choose File Tools. Then navigate to `CSSInstallDir/qadcsc/css/tools/` and select `exsetup.html`.
- 3 Click Compile.
- 4 Click Run.
- 5 Modify the text fields as shown in Table 2.2.

**Important** Trailing slash (/) is required; do not omit it from the path values.

Field	Value
<code>wpro_control.image_path</code>	<code>http://machinename/qadcsc/images/</code>
<code>wpro_control.script_path</code>	<code>http://machinename/qadcsc/scripts/</code>
<code>wpro_control.style_path</code>	<code>http://machinename/qadcsc/styles/</code>
<code>wpro_control.user_directory</code>	<code>MFGPROInstallDir/us/</code>
<code>wpro_control.temp_directory</code>	<code>CSSInstallDir/qadcsc/temp/</code>

**Table 2.2**  
Settings to Update

**Important** Be sure that the Web server aliases the `/images`, `/scripts`, and `/styles` directories.

In a production environment, do not alias the full `CSSInstallDir` directory because this could create a serious security risk by making the entire source code freely available on the Web.

- 6 Stop and restart the agents.

## Configure Settings in QAD CSS

Use this section to configure a number of settings within the QAD CSS application.

- 1 Restart the WebSpeed agents.
- 2 Using a Web browser, enter the following URL to connect to the log-in page of QAD CSS:  

```
http://webServer/webServerScriptsDirectory/wspd_cgi.sh/  
WService=brokerName/lg/_login.html
```

**Note** In Windows environments, `cgiiip.exe` is typically specified rather than `wspd_cgi.sh`.
- 3 To log in, specify the default user ID and password, `demo` and `demoex`, respectively.

## Update System Control Settings

- 1 From the menu, select Administration|System Control|System Control.
- 2 Review the options to determine which should be changed to optimally configure the QAD CSS application. Initially, you can accept all defaults. However, note the following fields:
  - Temp Directory should reflect the appropriate path to the `/temp` directory that will be used by the application.
  - Extend to ERP should not be selected until MFG/PRO setup is complete.

## Update Registry Settings

Use System Registry Maintenance to specify a user ID and password that let QAD CSS access MFG/PRO.

- 1 From the menu, select Administration|System Registry Maintenance.

- 2 Update two registry values used when logging in to MFG/PRO:
  - QADUser, by default mfg
  - QADUPasswd, by default blank
  - a Enter QADUser in the Search for field and click Search.
  - b Click the QADUser key to display the Detail Registry Editor.
  - c By default, this field is set to mfg. If this is not a valid user in the MFG/PRO system you will be accessing, change it now.
  - d Repeat these steps for QADUPasswd to secure this user with a password.

**Important** You must also set up the same user ID with the same password in MFG/PRO User Maintenance (36.3.18).

The system registry also includes numerous other settings that control how you use QAD CSS.

▶ See  
*Administration  
Guide: QAD CSS.*

- 3 Update the value for the directory where JavaScript messages are stored.
  - a Enter js in the Search for field and click Search.
  - b Click the jsmsgDir key to display the Detail Registry Editor.
  - c Change the Key Value to `CSSInstallDir/qadcss/scripts`.
  - d Click Save, then click Home.

### Generate Messages

- 1 From the menu, choose Administration|Messages|Error Message Maintenance.
- 2 Click the Generate button on the left side. This will compile a JavaScript file containing messages required by the system.
 

**Note** During use of the application, you need to do this whenever you add a new message of type JS or support for a new language.
- 3 Click Home to return to the main menu.

### Register Your Serial Number

- 1 Choose Administration|System Control|QAD CSS Clearance Code.
- 2 Enter the customer name as it appears on the license page included in your product package.
- 3 Enter the Serial Number as it appears on the license page.
- 4 Click submit. You are redirected to a secure server URL for registering your product. Depending on how your browser is configured, you may see several messages about security.
- 5 Click Yes to accept the terms of the license agreement.
- 6 The QAD CSS Clearance Code screen redisplay with information about your license, including the number of WebSpeed agents and the QAD CSS modules. Click Update to accept this information.
- 7 Leave QAD CSS running; you will return to the menu in the next procedure.

## Connecting to MFG/PRO

Use the procedures in this section to set up QAD CSS to work with MFG/PRO. In the following tasks, you:

- Update MFG/PRO parameter and startup settings.
- Connect to the MFG/PRO databases through QAD CSS.

You must modify the `qadcsc.ini` file to point to the correct MFG/PRO databases and source code. The easiest way to do this is to locate the `.pf` file currently being used to log in to MFG/PRO and copy the database connection statements from it to the `qadcsc.ini` file.

- 1 Modify the database connections in the `qadcsc.ini` file:

**Note** Be sure that the first database listed is the `qadddb` database, and use the logical database names shown below.

```

Database Connections # Do not edit or remove this line.
#All database connection entries should be after this line.

-db /projects/qaddb/eb2qad.db -ld qaddb
-db /projects/qaddb/eb2adm.db -ld qadadm
-db /projects/qaddb/eb2help.db -ld qadhelp
-db /CSSDbDir/qadcsc -ld qadcsc

```

- 1 Modify the PROPATH in the `qadcsc.ini` file for the version of MFG/PRO you are using. This sample is for MFG/PRO eB2:

```

# Allow Muti Propath Entry
# All Propath entries should be after this line.
Propath # Do not edit or remove this line.

./
/CSS/QAD/QAD.eB2
/CSS
/MfgProInstallDir/
/MfgProInstallDir/char
/MfgProInstallDir/char/us
/MfgProInstallDir/char/triggers
/MfgProInstallDir/char/xrc
/MfgProInstallDir/char/src
/MfgProInstallDir/bbi

```

- 2 Return to QAD CSS and from the menu select Administration, then choose System Control Maintenance. Select Extend to ERP to enable communication with the MFG/PRO database.
- 3 Restart the QAD CSS service (in this document, `qadcsc`) by running the stop script then the start script on UNIX systems or using Progress Explorer in Windows.

**Note** View the `BrokerName.server.log` file in the `/CSSInstallDir/qadcsc/logs` directory. Notice if any errors were logged and whether the following message displays:

```
lib/lib_sys_adapter1.p
```

- 4 Check the `CSSInstallDir/qadcsc/temp` directory to see if any files were generated. If so, review the most recent files with extensions `.log` and `.log.erp` to verify that log-in was successful.

## Final Steps

After you have successfully completed the installation and verified the setup, you should complete these final steps in your production environment:

In Progress Explorer, update the agent properties for the QAD CSS broker:

- 1 Click Advanced Features under the Agent section. Set the debug mode to disabled and click OK.
- 2 Click Pool Range under the Agent section. Set the value based on the licensed number of agents you have registered and click OK.

# Configuration Options

This chapter summarizes options you should consider in determining how to configure QAD CSS.

<i>Overview</i>	<b>52</b>
<i>General Options</i>	<b>52</b>
<i>System Options</i>	<b>53</b>
<i>Order Processing Options</i>	<b>54</b>

## Overview

QAD CSS includes a variety of configuration options. Most are set to the defaults that are most commonly used; others require you to make a choice during installation and initial configuration. You can change your choices later as needed.

These options are grouped here as follows:

- General options
- System options
- Order processing options

**Note** Only a high-level summary of key fields is provided here. Full details about configuration options can be found in *Administrative Guide: QAD CSS*.

## General Options

Some general options to consider when setting up QAD CSS include how to obtain information about the items you sell, how you want your Web site to look, and what kind of automated messages you want to provide.

Some of these options are defined in menu options on the Administration menu. Others are defined in the registry, accessible from System Registry Maintenance on the Administration menu.

## Logic to Populate Product Catalog

Populating the item data in the QAD CSS database is a key step in implementing QAD CSS. The replication logic lets QAD CSS read the MFG/PRO item table and extract information about the items you sell. Also, you need to determine categories associated with each item. The easiest method may be to obtain a spreadsheet listing the items from the MFG/PRO system administrator.

Consider whether you want to include images of your items on the storefront when you set up this data.

## Various User Interface Considerations

Use functions on the Administration|Messages menu to set up text that users see on the interface:

- Determine what to display (graphic, text, and so on) in the middle section of the order page.
- Determine the header message for display when a user selects the Customer Care option, and what people and information to display.
- Determine the message to display when the user selects Contact Information.

## E-Mail Notification

Determine which events you want to trigger automatic e-mails, and who should receive e-mail. Configure e-mail messages in Email Master Maintenance. Define e-mail events in Email Event Maintenance.

## Security and Menu Access

For security reasons, determine how many different classes of users to have. Define security groups (Security Group Maintenance) and associate them with Users (User Maintenance). Then determine which menu functions each group can execute (Menu Maintenance).

Use the minPasswordLength registry setting to determine the minimum password length for passwords associated with users.

## System Options

Many system-wide settings are defined in System Control Maintenance on the Administration|System Control menu. Table 3.1 summarizes some key options and points to consider when determining how to configure settings.

**Table 3.1**  
System Options

Option	Comments
Debug	When selected, processing files are stored for debug information. This should be used during implementation, but turned off after successful test.
Keep Transaction Log	When selected, all mouse clicks (submissions to the server) are recorded in a log file. If you use this feature, you must purge the log file occasionally.
Password Expiration	Determine the number of days a password will be valid. Once the number of days has passed, the user will be required to change the password.
Session Limit	Specify the number of users allowed to log in to the application using the same user ID and password. Unless many people log in under the same ID, the recommended setting is between 5 and 10.
Session Timeout Limit	This value (in minutes) is the length of time that the application will allow a user to remain logged on without any response to the server. This is not recommended in a production environment.

## Order Processing Options

Order Control Maintenance on the Administration|System Control menu includes fields that let you configure the order process based on your business requirements. Table 3.2 summarizes these options and notes points to consider when determining how to configure them.

**Table 3.2**  
Order Processing  
Options

Option	Comments
Order Prefix	Specify a prefix for the sales order number. By using a different prefix than the one specified in MFG/PRO's Sales Order Control (7.1.24), you can easily identify orders that were placed using QAD CSS.
Recover Orders	When this is Yes, QAD CSS saves the order and all line items as they are entered, line by line. If the user exits an order by mistake or loses a network connection while entering the order, the system prompts them at the next log-in to resume where they were interrupted, or begin a new order session.
Archive Orders	When this is Yes, the system keeps a copy of every order in a side table within QAD CSS after it is communicated to MFG/PRO.

Option	Comments
Archive Incomplete Orders	When this is Yes, the system archives even those orders that were not completed. By default, none of these orders will be in MFG/PRO.
Notify at Startup Notify on Enter Notify on Submit	The system can notify a customer with a message that they are on credit hold according to MFG/PRO. You need to specify the text that displays for this message. This notification can occur at any combination of three times: <ul style="list-style-type: none"> <li>• Immediately after logging in as a customer</li> <li>• When the customer chooses the Order Entry option</li> <li>• When they submit the order</li> </ul>
Post Order When on Credit Hold	Determines if the order is posted to MFG/PRO even when the account is on credit hold.
Add, Update, Browse Ship-to	Determines if buyers can add, update, or browse ship-to addresses during order entry.
Post to ERP?	Determines if orders are posted to MFG/PRO immediately after they are entered by the buyer in QAD CSS or reviewed by an internal resource first. The recommended setting is Yes.
Submit Confirmed	Determines if the order is posted to MFG/PRO as confirmed or unconfirmed.

Use registry options to fine-tune ordering options. You can use options such as the following:

*addItemOnce*. Determine if the user can enter the same item more than once on one order.

*showLegendBar*. If you associate icons with items in the product catalog, this setting determines if a legend bar should display at the top of the catalog to explain the significance of the icons.

*showReqDate*. Determine if the user can enter a required date on the order header. If dates can be entered, choose a validation logic; for example, if a user enters yesterday's date, should a warning display?

*showLineReqDate*. Determine if the user can enter a required date for each line of the order. If dates can be entered, choose a validation logic; for example, if a user enters yesterday's date, should a warning display?

*showHeaderComment.* Determine if the user can enter comments on the order header.

*showLineComment.* Determine if the user can enter comments for each line of the order.



Chapter 4

# Installation Test

This chapter includes a series of steps for validating that information is communicated correctly between QAD CSS and MFG/PRO.

*Preliminary Steps*    **58**

*Testing the Installation*    **58**

## Preliminary Steps

Before you can start the testing process, obtain the following information from your MFG/PRO system administrator:

- Five or more MFG/PRO customer address codes defined in Customer Maintenance (2.1.1)
- Billing and shipping addresses for these customers
- AR Aging by Due Date Report (27.16) for each customer
- Whether PO Required is Yes or No in the customer address record
- Five or more items that are in both MFG/PRO and QAD CSS  
**Note** When choosing items, make sure that if you price by customer, the items you select illustrate the pricing. Also, if you are displaying item images in the catalog, include some items with images.
- Items with a quantity price break
- Categories for all the items that you are testing
- A list of five or more product groups created during the replication process and the number of items in each group  
**Note** Ensure that the items you are testing represent a random sample of the five product groups.
- Pricing What-If Inquiry (1.10.1.13) for each item

## Testing the Installation

To check that QAD CSS has been installed and configured properly, follow the steps described for the following tasks:

- 1 Verify Data in MFG/PRO
- 2 Create a User
- 3 Enter an Order
- 4 Verify Addresses
- 5 Verify Order Submission
- 6 Create Order from Order Template
- 7 Test Comments Functions

- 8 Verify Product Groups
- 9 Generate Summary Reports

## Verify Data in MFG/PRO

**Important** You may have more than one MFG/PRO environment. Ensure that you are using data from the environment that QAD CSS is connected to.

- 1 Log in to an MFG/PRO session running the same database you connected QAD CSS to.
- 2 Run Customer Ship-To Address Report (2.1.15) for the test customer addresses.
- 3 Check this report against the report you were given. If any data does not match, stop and consult your MFG/PRO system administrator.
- 4 Run AR Aging by Due Date Report (27.16) for the test customer addresses.
- 5 Check this report against the report you were given. If any data does not match, stop and consult your MFG/PRO system administrator.
- 6 Run Pricing What-If Inquiry (1.10.1.13).
- 7 Check this report against the report you were given. If any data does not match, stop and consult your MFG/PRO system administrator.

Once you have verified that all of your data matches, you can proceed. Do not continue if there is even a minor variation in the data. Without perfect data you cannot accurately test the success of the installation.

## Create a User

Follow these steps to associate QAD CSS users with customer addresses you were provided from MFG/PRO.

- 1 Log in from the QAD CSS home page using the following information:
  - Login: demo
  - Password: demoex

- 2 Select Administration Menu, then choose User Maintenance.
- 3 Create a new user with the following information:  
    User name: `installQA`  
    Password: `installQA`
- 4 Associate the customers you were given to the new user you just created.
- 5 Log out.
- 6 Log in as the new user you just created.

## Enter an Order

When you implement QAD CSS, you configure one or more custom ordering methods: Order Entry 1 (OE1), Order Entry 2 (OE2), or Order Entry 3 (OE3). Before you begin this procedure, make sure you understand how the order entry process has been implemented.

- 1 From the order menu, choose the ordering method that was implemented.
- 2 Find an item by category.
- 3 Verify that the price listed is the correct price for this customer.
- 4 Add this item to your shopping cart.
- 5 Update the order quantity to the custom price break quantity for this customer.
- 6 Click Continue Ordering. The previous screen displays with the search criteria you entered.
- 7 Enter an item on your list in the search box.
- 8 Change the quantity of the item.
- 9 Add the item to the shopping cart.
- 10 Save this order as an order template. Call it `InstallTestQA`.
- 11 Return to the shopping cart.

- 12 Check out.
- 13 Verify that all the item data is still accurate.

Repeat these steps for all of the order entry methods that you implemented.

## Verify Addresses

Follow these steps to verify that QAD CSS has replicated the correct bill-to and ship-to addresses for the test customers:

- 1 On the checkout screen, validate that the bill-to address is correct.
- 2 Validate that the ship-to address is correct.
- 3 Browse the ship-to addresses and validate that all are correct.
- 4 Select a different ship-to address.
- 5 Verify that the Order Confirmation screen has been updated with the new address.
- 6 Verify the shipping methods available.  
**Note** Shipping methods vary depending on your implementation. They may represent Ship Via codes in MFG/PRO or freight codes.
- 7 Click Continue Shopping.
- 8 Click Check Out.
- 9 Verify that the same billing, shipping, and item information displays.
- 10 Click Submit Order.
- 11 Verify that the order trailer information is correct.

**Note** Record test order numbers below for later reference.

Order Number: \_\_\_\_\_

Order Number: \_\_\_\_\_

Order Number: \_\_\_\_\_

Order Number: \_\_\_\_\_

Order Number: \_\_\_\_\_

## Verify Order Submission

At this point, all the data replication for this customer has been verified. Now verify that the order just created in QAD CSS was committed to MFG/PRO.

You now need a terminal that can access the MFG/PRO environment that QAD CSS is connected to.

- 1 In MFG/PRO, run Sales Order Maintenance (7.1.1).
- 2 Enter an order number created in QAD CSS.
- 3 Verify that the order information is correct.

**Important** To confirm that the order entry process is working correctly, enter an order, check the ship-to and bill-to addresses, and verify that sales orders were generated in MFG/PRO for each customer on the test list.

## Create Order from Order Template

In step 10 on page 60, you saved the order you were processing as an order template. In this task, verify that you can place another order using that template.

- 1 From the Order Menu, choose the ordering method that was implemented.
- 2 Click Order Templates.
- 3 Select the order template you saved (InstallTestQA).
- 4 Click Check Out.
- 5 Click Submit Order.
- 6 Verify that the order trailer information is correct.
- 7 Follow the steps under “Verify Order Submission” to confirm that the order created from a template was submitted correctly in MFG/PRO.

## Test Comments Functions

Follow these steps to test the header and line comments functions. Before starting, verify that header and line comment features are enabled in QAD CSS System Registry Maintenance.

### Header Comments

- 1 From the Order Menu, choose the ordering method that was implemented.
- 2 Click on Order Templates.
- 3 Select the order template you saved (InstallTestQA).
- 4 Click Check Out.
- 5 Enter an order comment.
- 6 Click Submit Order.
- 7 Verify that the comment displays on the trailer page.
- 8 Repeat this process, but do not enter an order comment in step 5.
- 9 Verify that no comments display on the trailer page.

### Line Comments

To test line comments, use the same process as header comments, with one exception. Before clicking Check Out, click the Comment link for the line. Then enter a comment and click Check Out.

### Multiple Comments

On a multiple-line order, you can optionally enter comments by line. To test this function:

- 1 Follow steps 1 through 3 above.
- 2 Click the Comment link on the order line.
- 3 Enter a comment.

- 4 Click Continue Ordering.
- 5 Add another item to your cart.
- 6 Click Continue Ordering.
- 7 Add another item to your cart.
- 8 Click the Comment link.
- 9 Enter a comment.
- 10 Click Submit Order.
- 11 Verify that comments display on the trailer page only for items on which you entered them.

### Verify Product Groups

▶ See “Preliminary Steps” on page 58.

Use this procedure to verify that the MFG/PRO product groups replicated to QAD CSS correctly. Refer to the list of product groups you were provided.

- 1 From the Order Menu, choose the ordering method that was implemented.
- 2 Select one of the product groups from your list.
- 3 In the bottom left corner of the result table, verify the total number returned with the total number on your list.
- 4 Select the next product group on your list.
- 5 Repeat these steps for the other groups on your list.

## Generate Summary Reports

As a final test to make sure that QAD CSS and MFG/PRO are communicating correctly, follow these steps to create two QAD CSS reports, as well as one from MFG/PRO. Then compare the output.

- 1** Create Customer Credit Report.
  - a** On the QAD CSS menu bar, click Account Info.
  - b** Run the Customer Credit Report.
  - c** Enter all the information requested.
- 2** Create Order Summary Report.
  - a** On the QAD CSS menu bar, click Account Info.
  - b** Run the Order Summary Report.
  - c** Enter all the information requested.
- 3** From an MFG/PRO session, print out an AR Aging by Due Date Report (27.16) for the test customer bill-to addresses.
- 4** Compare the three reports to verify that all the data matches.

