



QAD Adaptive Applications
Enterprise Edition

Installation Guide **QAD Enterprise Edition**

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QAD Enterprise Edition 2021
September 2021

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Enterprise Edition Installation Change Summary

Product Name Change

Starting in September 2019, the new name for QAD’s complete portfolio of products is QAD Adaptive Applications. Additionally, QAD Adaptive ERP is the new name for QAD’s flagship ERP solution. QAD Adaptive ERP includes the functionality previously associated with QAD Cloud ERP and QAD Enterprise Applications - Enterprise Edition, plus the QAD Enterprise Platform and Adaptive UX which resulted from the Channel Islands program. Going forward, the terms QAD Enterprise Applications, QAD Cloud ERP, and Channel Islands will be deprecated but will remain in previous documentation and training materials. QAD’s intention is to—as soon as possible—eliminate the use of the deprecated terms going forward.

Change Summary

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

Date/Version	Description	Reference
September 2021/2021EE	Updated software requirements.	page 4
	Added information about hosting the QRF server on a Linux machine.	page 5 and page 15
	Updated the QAD .NET UI client installation steps.	page 22
	Removed the Reporting Service chapter to reflect the functionality’s removal from QAD Financials.	--
September 2020/2020EE	Updated software requirements.	page 3
September 2019/2019EE	Updated software prerequisites.	page 3
	Update installer prompts, adding new prompts for Namespace and Default App.	page 10
	Removed requirements for installing on a Windows server.	---
October 2018/2018EE	Updated installation steps to reflect occasional need to extract the Enterprise Edition zip file twice.	page 10
September 2018/2018EE	Updated the required version of OpenEdge to 11.7.3.	page 4
	Updated the required version of Java SE Development Toolkit to 8.	page 4
	Added information about updating Tomcat-specific parameters for Windows installations.	--
March 2018/2017EE-Rev 1	Updated Appendix B to remove Routrek Granados and clarify the default SSH settings.	page 37

Date/Version	Description	Reference
September 2017/2017EE	Updated software prerequisites.	page 3
	Added OpenSSL requirements.	page 4
	Combined Linux and Windows installations into one chapter.	page 9
	Combined the Reporting Service chapter with the Reporting Service scripts appendix.	--
	General editing throughout to clarify procedures.	---
August 2017/2016 EE-Rev5	Included information that YAB 1.5 is restricted to Windows-only installations.	--
April 2017/2016 EE-Rev 4	Added new requirements for installing on a Windows server.	page 5
	Added a new chapter detailing how to install Enterprise Edition on a Windows server.	page 17
	Updated the process for installing an add-on product.	page 27
September 2016/2016 EE-Rev3	Added Appendix C to explain how to customize database structure files.	page 39
July 2016/2016 EE-Rev2	Updated information on the operating system account.	page 5
	Added more detail to pre-installation configuration information.	page 6
	Added Appendix A about settings dependent on operating systems.	page 35
	Added Appendix B to describe SSH and Telnet Protocols.	page 37
	Added Chapter 5 and Appendix C to describe installation and use of the QAD Reporting Service.	--
May 2016/2016 EE-Rev1	Updated Planning and Sizing topic	page 3
March 2016/2016 EE	Changed the name of the book to <i>QAD Enterprise Edition Installation Guide</i> .	
	Introduced the Enterprise Edition installer for installing QAD Enterprise Edition and removed the QDT install instructions.	
	Updated the installation process for the QAD .NET UI.	---
	Added high-level instructions for add-on products that use YAB for installation.	page 28
September 2015/2015 EE-Rev2	Numerous editorial changes	---
	Revised the Korn Shell section	page 5
	Added the Red Hat Enterprise Linux 7 (64-bit) section	page 5
March 2015/2015 EE-Rev 1	Documented 2015 EE Progress OpenEdge 11.4 hotfix requirements	page 7
	Updated database server requirements	page 7
	Updated applications server requirements	page 8

Date/Version	Description	Reference
March 2015/2015 EE	Numerous editorial changes	---
	Documented Korn shell considerations	page 5
	Documented AIX maximum file size considerations	page 6
	Removed Red Hat 6 considerations section	page 5
	Documented that use of 2015 EE with Progress OpenEdge 11.4 requires HotFix 10 for OpenEdge 11.4	page 7
	Updated database server requirements	page 7
	Documented a functionality change that affects the selection of components for installation	page 21
	Revised the procedure for enabling AIA compression	page 36
	Revised the QXtend Configuration section	page 36
	Added text to Next Steps section to back up environment installation and configuration settings	page 39
	Removed references to Windows Vista	page 52, 55
September 2014/2014 EE-Rev 1	Numerous editorial changes	---
	Revised Installing QDT	page 12
	Revised Configure Telnet Connection Settings	page 48
	Revised Setting Up the Reporting Service to mention setting up multiple Reporting Service instances	page 55
	Revised the procedure in create-instance.bat Script to better describe how to set up multiple Reporting Service instances	page 71
March 2014/2014 EE	Numerous editorial changes	---
	Added information on starting QDT in AIX environments	page 6, page 24
	Updated OpenEdge requirements	page 7
	Updated supported Java versions	page 7
	Updated the Tomcat Web server information	page 8
	Editing Database Locations section added	page 33
	Revised Bulk Data Load procedure	page 35
	Revised Set Up the Reporting Service	page 55
September 2013/2013.1 EE	Numerous editorial changes	---
	Revised Figure 1.1	page 2
	Added section for Supported Installation	page 3
	Updated Database Server and Application Server OpenEdge requirements	page 7 page 8
	Documented Data Bulk Load feature	page 35
	Added section for Adding Custom Databases	page 36 page 70
	Added section for Citrix Configuration	page 54

Date/Version	Description	Reference
March 2013/2013 EE	Documented that QAD UI Process Maps are deployed as a separate WebApp and the related QDT Process Navigation field in System Default Settings GUI	page 16 page 29
	Described the Connection Method field in the Update UI Configuration screen	page 24
	Documented configuration required to use QXtend with Tomcat 6.0.30 and later and Tomcat 7	page 36
	Revised the Set Up SSH section	page 50
January 2013/2012.1 EE	Revised Web Server Tomcat requirements	page 8
September 2012/2012.1 EE	Documented Database Type pull-down menu	page 21
	Reorganized Environment Configuration chapter	page 23
	Documented RAM Disk support	page 30
	Revised QXtend installation and configuration section	page 36
March 2012/2012 EE	Described ability to specify <qadhome> and <qadu.i> WebApp names	page 16
	Documented Thai language support	page 70
	New customization scripts documented	page 70
September 2011/2011.1 EE	Documented Red Hat 6 installation considerations	page 6 page 14
	Documented a consideration for configuring Enterprise Edition installation on Windows	page 24
	Documented the Advanced Database Configuration screens	page 33
	Documented considerations for cloning an Enterprise Edition Windows installation	page 29
	Documented a new requirement to enter port values when installing QXtend in Windows environments	page 37

Installation Summary and Requirements

This chapter describes the QAD Enterprise Edition installation process, system requirements, and software prerequisites.

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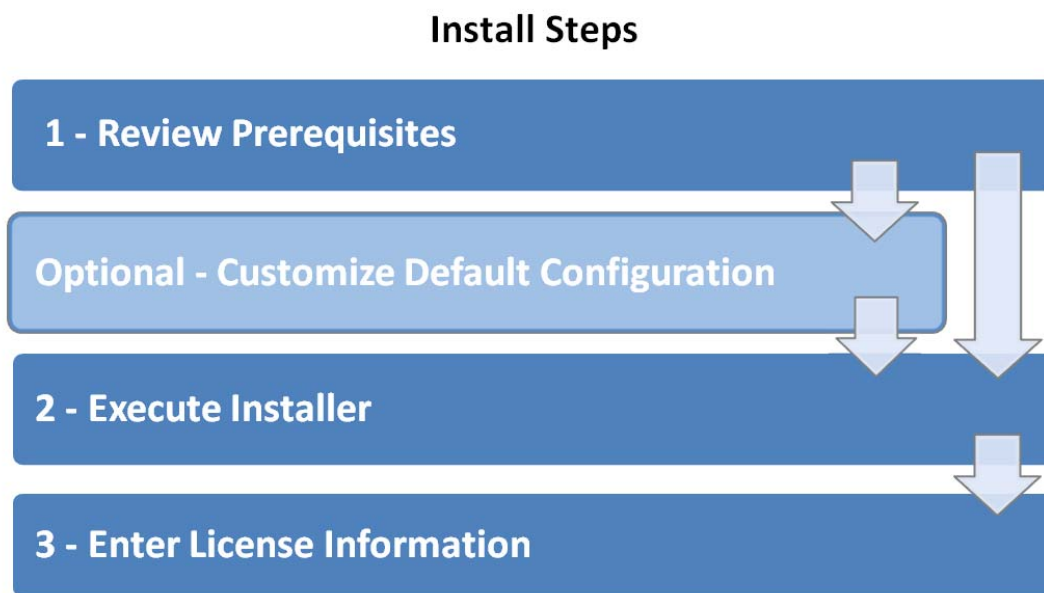
Overview

The following sections describe the QAD Enterprise Edition installation prerequisites and configuration considerations.

Installation Summary

This installation guide describes the installation process in a standard Linux environment. Configuration settings can vary across different operating systems and configurations. Appendix A, “Operating System-Dependent Settings,” on page 35 outlines some of these settings and explains how to define them.

Fig. 1.1
QAD Enterprise Edition Installation Process



YAB

QAD Enterprise Edition is installed using the QAD Enterprise Edition installer and is managed using the QAD YAB console. YAB is the deployment and management toolset that covers all products installed into an Enterprise Edition environment. It is updated independently of QAD Enterprise Edition. When you install QAD Enterprise Edition, the YAB client is installed into the `build/client` directory and the Enterprise Edition installer creates a shell script named `yab` in the installation directory to run the client. You do not need to take any steps to install the YAB client. For detailed information, see [QAD Enterprise Edition Configuration and Administration Guide](#).

System Components

A QAD Enterprise Edition system consists of server components installed on a UNIX host and the QAD .NET UI client installed on Windows hosts.



Supported Installations

YAB supports installing all server components on a single host. It currently does not support a distributed solution.

Sizing and Capacity Planning

The server contains QAD Enterprise Edition and Progress server software, as well as your production data. Before you begin an installation, estimate the eventual size of your production database and the demands expected of the different database components.

QAD Enterprise Edition needs a minimum of 4 GB system memory and 20 GB of disk space for installation testing and training. Production environments require more hardware capacity. For assistance with hardware sizing and capacity planning, contact QAD Services.

General Prerequisites

Before installing QAD Enterprise Edition, you should have:

- The QAD Enterprise Edition media or product download
- A valid QAD product license key for each module you have purchased
- A Progress database administrator who can manage Progress client processes
- A UNIX administrator for UNIX/Linux installs
- A 100 Mbps or faster network
- Easy access to this guide

Software and Hardware Prerequisites

The following sections describe the software and hardware prerequisites for installing QAD Enterprise Edition.

Refer to the Product Compatibility Guide in the QAD Store for up-to-date requirements and compatibility information:

<https://store.qad.com/content/compatibility-guide>

Operating System

QAD Enterprise Edition requires one of the following operating systems.

- Red Hat Linux version 7, with version 7.4 or higher recommended
- CentOS Linux version 7, with version 7.4 or higher recommended

Consult with your operating system vendor if updates are required.

OpenEdge 11.7.9

QAD Enterprise Edition requires OpenEdge 11.7.9. Consult the Progress documentation for the complete requirements for Progress components. When you install Progress components, always select a Complete installation, not a Typical or Custom installation.

Note It is recommended that you disable OpenEdge Fathom to avoid conflicts if multiple instances of an EE environment are installed on the same host. In the directory where Progress is installed, open the `fathom.init.params` file and change the value of the “fathomEnabled” property to false:

```
fathomEnabled=false
```

Java SE Development Kit 8

QAD Enterprise Edition requires either Oracle JDK 1.8.0.261 or OpenJDK 8u265 or higher. Install Java using the documentation provided by your Java vendor.

Note QAD Enterprise Edition installations require a JDK and cannot run with a JRE.

Python 2.7

QAD Enterprise Edition supports Python 2.7. Install Python using documentation provided by your operating system vendor or download the software from <https://www.python.org>.

OpenSSL Libraries

For enhanced security, QAD Enterprise Edition generates an access token during login. The token is signed using the OpenSSL library to verify its authenticity.

Note The Enterprise Edition installer validates your system’s OpenSSL library during installation. If you do not have the appropriate OpenSSL library, the install will fail and you will be directed to this section of the installation guide. You can choose to validate your OpenSSL library prior to launching the Enterprise Edition installer by following the steps for your OS outlined in this section, or you can return here if the installer identifies OpenSSL as the reason your install failed.

Follow the steps for your OS to install or update OpenSSL.

Linux/UNIX

1 Check if OpenSSL is installed. Enter:

```
openssl version
```

a If OpenSSL is installed, you will see something similar to:

```
OpenSSL 1.0.1h5 Jun 2014
```

You must have at least the following minimum version installed:

```
OpenSSL 0.9.8e
```

b If OpenSSL is not installed, download and install it. See your OS vendor for the most up-to-date version.



Note Ensure that you download the appropriate OpenSSL version for your OpenEdge installation. If you have 32-bit OpenEdge, you must install 32-bit OpenSSL, and if you have 64-bit OpenEdge, you must install 64-bit OpenSSL.

- 2 Once OpenSSL is installed, find the `libcrypto.so` file. It is recommended that you begin your search in `/usr/lib` or `/usr/lib64`, depending on your OpenEdge installation. The file name may be a variation of `libcrypto.so`, with, for example, the version number added to the file name: `libcrypto.so.0.9.3e`.

Note You may have to extract `libcrypto.so` from the `libcrypto.a` archive.

- 3 Create a symbolic link, using the location you determined in step 2.

a Go to `$DLC/lib`

b Enter:

```
ln -s /FileLocation/libcrypto.so libcrypto.so
```

For example, for 32-bit OpenEdge: `ln -s /usr/lib/libcrypto.so libcrypto.so`

Or for 64-bit OpenEdge: `ln -s /usr/lib64/libcrypto.so libcrypto.so`

Note The file you create in `$DLC/lib` must be called `libcrypto.so`, regardless of the file's name in its original directory.

Operating System Account

An operating system account is required to install, administer, and start the environment. It is also required by certain application components that start terminal sessions. You can use the same operating system account in both cases or you can choose to use a separate account for each. It is recommended that the account should not be the root account (for security reasons) and that it should be created specifically to support the environment. All administrative YAB processes (`yab update`, `yab start`, `yab stop`, and so on) should be run as the user who executed the installation.

If you assign a separate account for the application components, that account must be granted read, write, and execute permissions on the following directories:

- `build/work/connmgr`
- `build/work/telnet`
- `build/work/qxtend`
- `build/work/qxtend/qgen`
- `build/work/client-chui`
- `build/work/client-aim`
- `build/logs/client`

QAD Reporting Framework on Linux Components

Historically, the QAD Reporting Framework (QRF) was installed on a Windows server. However, during installation, you can choose to install the reporting framework on the Linux server that hosts Enterprise Edition. Installing on Linux enables YAB control of the QAD Reporting Framework, which starts and stops when the environment is started or stopped with `yab start` and `yab stop`. Application updates also automatically update the QAD Reporting Framework.

Wine and Virtual X Windows Server are required for systems running QRF on a Linux server and both must be installed prior to running the Enterprise Edition installer. If you do not plan to install QRF on Linux, you can skip these two requirements.

Wine (32-bit)

Wine is a compatibility layer that can run Windows applications on Linux and which translates Windows API calls into POSIX calls on-the-fly. For compatibility with the QAD Reporting Framework, you must install the 32-bit version of Wine.

Consult [Wine documentation](#), including the [WineHQ FAQ](#), for complete requirements and installation recommendations. The following installation information is given as guidance and is not intended to cover every company's individual circumstances.

```
> wget https://raw.githubusercontent.com/zma/usefulscripts/master/script/install-wine-5.0-centos7.sh
> chmod a+x install-wine-5.0-centos7.sh
> sudo ./install-wine-5.0-centos7.sh
```

Note The entire install can take around 30 minutes. At times the installation may seem unresponsive and at other times it may be verbose. Do not submit a premature Ctrl-C.

Virtual X Windows Server

The Virtual X Windows Server, Xvfb, is a display server that performs all graphical operations in virtual memory without showing any screen output. Install Xvfb with the following command:

```
> sudo yum install Xvfb -y
```

Pre-Installation Configuration Considerations

Before you begin your installation, you can choose to define certain configuration settings found in the `install.conf` file. You can find this file on your QAD physical media or as one of the files you extracted from the zip file from QAD Fulfillment. This file contains the default settings for your installation and the prompts you will see as you progress through the installation. If you decide to make changes to the file, you have two options:

- You can edit the file directly, if you have write access, and your settings will automatically load when you run the installer.
- You can copy the file, edit the copy, and then point the installer to your edited version.

```
./install.py -install-conf:FILE|URL
```

This choice preserves the original file while allowing customized configurations for different instances of Enterprise Edition.

You should consider the following settings before you begin your installation:

- Log file location. The installation writes log messages to a file in the temporary directory by default. The default location is `/tmp/install.[USER].log`. To configure a different log file, set the `INSTALL_LOG_FILE` environment variable. To configure a different location, enter `export INSTALL_LOG_FILE=[FILE]`.
- Operating system-dependent settings. See Appendix A, “Operating System-Dependent Settings,” on page 35.
- Secure Shell (SSH) and Telnet protocols. See Appendix B, “SSH and Telnet Protocols,” on page 37.



- Customized database structure files. See Appendix C, “Customized Database Structure Files,” on page 39.

Delayed Installation

A delayed installation provides an opportunity to review and adjust your system configuration using YAB before creating Enterprise Edition. You include the argument `-install-update:false` when executing the `install` script to initialize the environment but postpone the creation of Enterprise Edition.

```
> ./install.py -install-update:false
```

After you review and adjust your system configuration, complete the Enterprise Edition creation by entering:

```
yab update
```

Upgrading QAD Enterprise Edition

For information on upgrading from a previous Enterprise Edition release, see *QAD Enterprise Edition Conversion Guide*.



Installing QAD Enterprise Edition

This chapter describes how to install QAD Enterprise Edition.

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Overview

QAD Enterprise Edition is installed using the Enterprise Edition installer.

Prepare the Installation Environment

- 1 Shut down any anti-virus programs running on your system. A virus scanner could severely degrade performance.
- 2 Unset the environment variables. These environment variables can cause problems with web services and conflicts with Progress utilities. Enter:

```
unset DLC
unset PROMSGS
unset PROTERMCAP
```

You also should remove any references to Progress from the PATH.

- 3 Add the Java you installed for QAD Enterprise Edition to the PATH. Enter:

```
export PATH=[PATH TO JAVA]:$PATH
```

Enterprise Edition Installation

Determine if you are downloading the installation zip file or mounting the install image from DVD and follow the appropriate steps to install a new instance of Enterprise Edition.

Installing with a Downloaded Zip File

- 1 Download the zip file from QAD Fulfillment.
- 2 Unzip the file into a subdirectory.

```
unzip qad-ee-VERSION.zip -d directory
```
- 3 If the extracted zip file contains a `data.zip` file, extract that second zip file. If there is not a `data.zip` file in the subdirectory, continue with step 4.
- 4 Change to the directory where the zip file was extracted.
- 5 Continue with “Start the Enterprise Edition Installer.”

Installing from DVD

- 1 Create the directory where the image will be mounted.

```
mkdir directory
```
- 2 Mount the DVD.

```
mount qad-ee-VERSION.zip directory
```
- 3 Change to the directory where the image was mounted.



- 4 If the new directory contains a `data.zip` file, mount that second zip file. If there is not a `data.zip` file in the directory, take no action and continue with “Start the Enterprise Edition Installer.”

Start the Enterprise Edition Installer

You can run the Enterprise Edition installer in silent mode (without prompts) or interactive mode (with prompts). The installer defaults to interactive mode.

To show the help for the installer, enter:

```
./install.py --help
```

The following procedure describes installation using interactive mode.

- 1 Start the installer:

```
./install.py
```

Note If you customized the installation file as described in “Pre-Installation Configuration Considerations” on page 6, enter:

```
./install.py -install-conf:FILE|URL
```

- 2 The Enterprise Edition installer starts. Press Enter to proceed with the installation.

Note The installer has a command mode that allows you to go back to previous questions, proceed to the next question, quit the installation, or return to interactive mode. You can move to command mode at any prompt by entering an exclamation point, `!`.

Fig. 2.1

Installer Welcome

This installer will guide you through the process of installing QAD 2021 Enterprise Edition.

The installation is being recorded in the file:
/tmp/install.mfg.log

At the prompt the ENTER key submits a response and moves to the next question.
'!' will enter command mode to navigate through the questions.

Hit ENTER to continue
>

- 3 Read and accept the software license agreement to proceed. If you do not accept the license agreement, the installation stops.

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Fig. 2.2

License Agreement

[License Agreement]

IMPORTANT - Please read carefully BEFORE you install, copy or otherwise use the software products in this package.

The license to the software you are currently installing is granted under the terms and conditions of a license agreement between a QAD company or a QAD partner, on the one hand, and you or your direct or indirect parent company, on the other hand. If no license agreement as indicated in the first sentence exists or if you have obtained the software through another channel (i.e. it was not shipped to you by a QAD company or a QAD partner), you are not permitted to install the software. By installing the software without a license agreement, you are infringing on the intellectual property rights of QAD and are committing a criminal offense. Please notify QAD if you encounter illegal copies of any QAD software.

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Do you accept all the terms of the License Agreement?
If you choose no, the installation will stop.

n - No
y - Yes

4 Enter the Enterprise Edition install location.

Fig. 2.3

Enterprise Edition Install Location

[QAD 2021 Enterprise Edition]

Enter the location where QAD Enterprise Edition should be installed.
>

5 Specify the Progress OpenEdge location.

Fig. 2.4

Progress OpenEdge Location

[Progress OpenEdge 11.7.9]

Enter the location of Progress OpenEdge:
>

6 Specify the Java location.



Fig. 2.5

Java Location

[Java 1.8]

Enter the location of Java:

> █

- 7 Enter the Python interpreter location.

Fig. 2.6

Python

[Python >= 2.7]

Enter the location of Python interpreter:

>

- 8 Specify the OS account that should be used by application components that start terminal sessions. For more information, see “Operating System Account” on page 5.

Fig. 2.7

OS Account

[OS Account Password]

Enter the password of the OS account that should be used to execute internal application functions.

>

- 9 Enter the password for the OS account.

Fig. 2.8

OS Account Password

[OS Account Password]

Enter the password of the OS account that should be used to execute internal application functions.

> ***** █

- 10 Enter the list of languages for your installation. You must enter at least one language before you can continue. English is “us.”

Table 2.1

Available Languages in Enterprise Edition

Language	Option
Chinese (simplified)	ch
Chinese (traditional)	tw
Czech	cz
Dutch	du
English	us
French	fr
German	ge
Italian	it
Japanese	jp
Korean	ko
Polish	pl
Portuguese	po
Spanish (Castilian)	cs
Spanish (Latin)	ls

Fig. 2.9

Optional Languages to Install

[Languages]

```
Enter a (comma-delimited) list of languages to install. Available: us,ch,cs,cz,du,fr
,ge,it,jp,ko,ls,pl,po,tw
> █
```

- 11 Enter the Namespace of the environment into which you are installing. This Namespace is used to distinguish between QAD data and customized data. Use the same Namespace when installing into multiple environments (for example Dev, Test, and Production).

Fig. 2.10

Namespace

[Environment Namespace]

Enter the namespace to associate with this environment:

The namespace identifies the organization using "Reverse Domain Notation" and is used to identify customized data.

Ex. com.[ORGANIZATION]

>

- 12 Enter the default app to create. This app is used for future platform development.

Fig. 2.11

Default App

[Default App]

Enter the default app:

Configures the app that will be used by default for future platform extension development.

Ex. [ORGANIZATION]App

>



- 13** Select the features to install. An X next to a feature indicates that it will be included in the installation. To add or remove an X, type the number that corresponds to the feature and press Enter. Enterprise Edition is always part of the installation and its selection cannot be removed. Demo data is sample data you can install for use in a test environment. An installation with demo data takes considerably longer than an installation without the additional data.

Important Do not install demo data into an environment that is to be used for a conversion. If you have already installed demo data, you must remove it. See the “Using Demo Data” section of the *QAD Administration and Configuration Guide* for YAB 1.13 on the QAD Document Library.

The QAD Reporting Framework (QRF) is installed on a Windows server by default. You can choose to install it on the Linux server by selecting the QRF on Linux option.

Note For the QRF on Linux option, you must have Wine and Virtual X Windows Server installed prior to Enterprise Edition installation, as explained in Software and Hardware Prerequisites on page 5. If you do not have Wine installed, the Enterprise Edition install will fail. For detailed instructions on setting up and working with the QAD Reporting Framework Service, see the *QAD Reporting Framework User Guide* on the [QAD Document Library](#).

Fig. 2.12

Features

[Feature Selection]

Choose the features to install:

```
[X] 1 - Enterprise Edition
[X] 2 - QXtend
[ ] 3 - Demo Data
[ ] 4 - QRF for Linux
```

Hit ENTER to move to the next question.

>

- 14** The installer prompts you to start Enterprise Edition installation. Enter y to begin the install.

Fig. 2.13

Start Enterprise Edition Installation?

[Start Installation]

Start installing QAD 2021 Enterprise Edition?

```
n - No
y - Yes
```

>

- 15** The installation begins. Status messages appear that show the progress of the installation.

Note Some install actions take several minutes to complete.

- 16** Wait for the install to finish.

Note The installation could take more than 60 minutes. You can follow the installation’s progress on your screen or review the installation log file. See “Log File” on page 33 for more information.

- 17** The installation ends with either INSTALL SUCCESSFUL or INSTALL FAILED. If your install fails, see “Install Failed” on page 34 for details.

Fig. 2.14
Enterprise Edition Installation Successful

```

344/359 report-update          OK (39.766 s)
345/359 metadata-qracore-update OK (17.360 s)
346/359 metadata-customizations-update SKIPPED (0.008 s)
347/359 metadata-fincore-app-update  OK (0.356 s)
348/359 metadata-fincore-translations-update OK (0.107 s)
349/359 metadata-fincore-update      OK (0.208 s)
350/359 metadata-mfgcoreplus-app-update OK (0.128 s)
351/359 metadata-mfgcoreplus-translations-update OK (0.102 s)
352/359 metadata-mfgcoreplus-update  OK (0.345 s)
353/359 metadata-qracore-app-update  OK (0.435 s)
354/359 metadata-qracore-translations-update OK (0.253 s)
355/359 qra-sync                SKIPPED (0.001 s)
356/359 ldapinstance-opendj-create   OK (0.226 s)
357/359 qxtend-application-id-update OK (0.044 s)
358/359 help-update               OK (3.962 s)
359/359 search-index-restart        OK (0.102 s)
-----
BUILD SUCCESSFUL (49:51 m)
Cleaning up                          OK

INSTALL SUCCESSFUL

```

Verify Your Installation

Use the status command to validate that all servers started correctly. Change into the directory where you installed Enterprise Edition and enter:

```
yab status
```

Fig. 2.15
Services Started

```

                                     status (30 tasks)
-----
1/30 adminserver-status              STARTED (0.795 s)
2/30 nameserver-status               STARTED (0.416 s)
3/30 database-qadadm-status          STOPPED (0.040 s)
4/30 database-qaddb-status           STOPPED (0.014 s)
5/30 database-qadhlp-status          STOPPED (0.014 s)
6/30 database-qxevents-status       STOPPED (0.012 s)
7/30 database-qxodb-status           STOPPED (0.022 s)
8/30 appserver-fin-status            STARTED (0.419 s)
9/30 appserver-mfg-status            STARTED (0.411 s)
10/30 appserver-qra-status           STARTED (0.410 s)
11/30 appserver-qxosi-status         STARTED (0.410 s)
12/30 appserver-qxoui-status         STARTED (0.360 s)
13/30 appserver-qxtnative-status     STARTED (0.408 s)
14/30 webspool-default-status        STARTED (0.416 s)
15/30 tomcat-default-status          STARTED (0.051 s)
16/30 tomcat-qxtend-status           STARTED (0.008 s)
17/30 aia-default-status             STARTED (0.329 s)
18/30 daemon-xmldaemon-status        STOPPED (0.605 s)
19/30 daemon-balancedaemon-status    STOPPED (0.561 s)
20/30 daemon-budgetdaemon-status     STOPPED (0.561 s)
21/30 daemon-crosscompanydaemon-status STOPPED (0.717 s)
22/30 daemon-eventdaemon-status      STOPPED (0.548 s)
23/30 daemon-historydaemon-status    STOPPED (0.528 s)
24/30 daemon-replicationdaemon-status STOPPED (0.532 s)
25/30 daemon-scandaemon-status       STOPPED (0.685 s)
26/30 daemon-timeoutdaemon-status    STOPPED (0.582 s)
27/30 daemon-cubedaemon-status       STOPPED (0.593 s)
28/30 daemon-reportdaemon-status     STOPPED (0.701 s)
29/30 daemon-status                  OK (1.592 s)
30/30 qxo-services-status            STOPPED (0.025 s)
-----
BUILD SUCCESSFUL (14.500 s)
[img@plli07 client]$ █

```



Review the status list to ensure that required services display STARTED. Daemon processes read STOPPED after initial installation, as illustrated in Figure 2.15, and will remain stopped until they are configured. Daemon setup is described in the *QAD System Administration Guide*, available on the [QAD Document Library](#). If other services are stopped or for more information, see “Troubleshooting” on page 31.

Add YAB Client to the PATH Variable

For convenience, you can add the YAB client to the PATH variable, which will allow you to execute YAB commands without returning to the installation directory. Enter:

```
> export PATH=/dr01/qadapps/qa/build/client:$PATH
```

Install the Latest Version of YAB

YAB is used to administer Enterprise Edition and is updated separately from Enterprise Edition. To ensure that your system has the most up-to-date functionality, install the latest YAB update available from QAD.

```
yab install yab-ee-image-VERSION.zip
```

Registering QAD Enterprise Edition

You must register your QAD Enterprise Edition license the first time you log in. These steps require that you have the license code sheet included with your release media.

Note If you chose to install demo data, the installer automatically included evaluation licenses. You can skip this section and go directly to Chapter 3, “Installing the QAD .NET UI,” on page 21.

To register QAD Enterprise Edition, do the following:

- 1 Change to the directory where you installed Enterprise Edition.

```
cd directory
```

- 2 Launch the character client by executing:

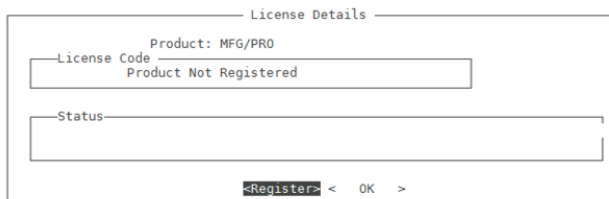
```
scripts/client-lang
```

where *lang* is the language for your system. For example,

```
scripts/client-us
```

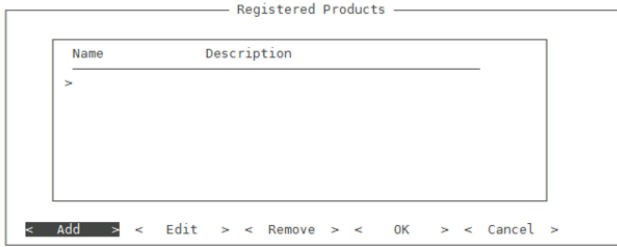
- 3 At the Login screen, enter mfg and press Enter. Leave the password field blank.
- 4 In the License Details screen, select Register.

Fig. 2.16
License Details screen



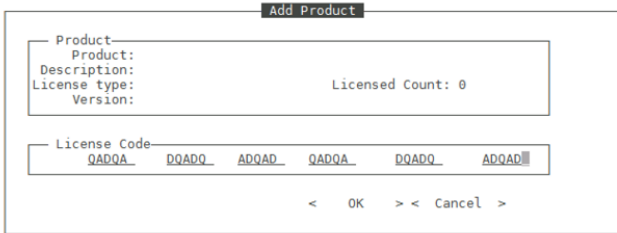
5 In the Registered Products screen, highlight Add and press enter.

Fig. 2.17
Registered Products



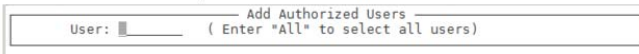
6 In the Add Product screen, complete the License Code fields by entering the codes from the license code sheet included with your release media. Select OK.

Fig. 2.18
Add Product



7 In the Add Authorized Users screen, enter All for User and press enter.

Fig. 2.19
Add Authorized Users



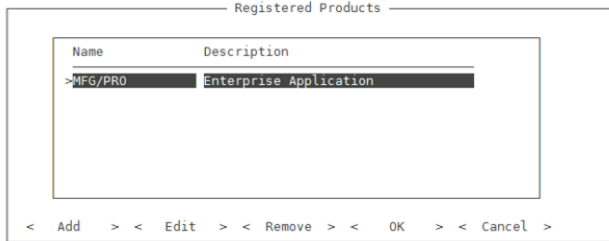
8 In the User Selector screen, press the <F1> key. At the “Is all information correct” prompt, enter y for yes and press enter.

Fig. 2.20
User Selector



9 The Registered Products screen reappears with a list of the license codes you have added.

Fig. 2.21
Registered Products



- 10 Repeat step 5 through step 9 for additional license codes. Select OK when all codes have been entered.
- 11 Reload the character client as described in step 2 to verify that license setup was successful.



Installing the QAD .NET UI

This chapter describes how to install the QAD .NET UI client for Enterprise Edition.

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QAD .NET UI Installation 22

Overview

Once you have installed Enterprise Edition on a UNIX machine, you can install the QAD .NET UI on multiple Windows computers.

QAD .NET UI Installation

Follow these steps to install the QAD .NET UI.

Find the Windows URL

Use the following steps to find the location of the windows URL:

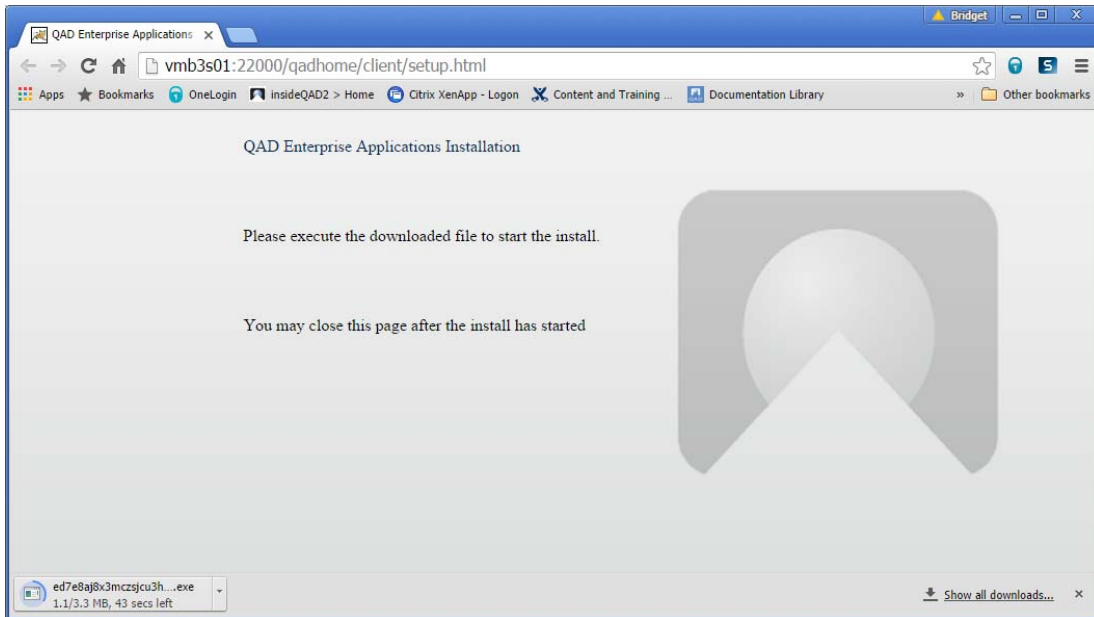
- 1 Go to the Enterprise Edition install directory.
- 2 Enter the following command:
`yab env-info`
- 3 Under USER INTERFACES, find the Windows listing and copy or note the URL.

```
USER INTERFACES
  Web          <URL>
  Windows      <URL>
  Character    scripts/client-[LANG]
```

Run the QAD .NET UI Executable

- 1 Open your web browser.
- 2 Paste or enter the Windows URL into the browser's address bar and press Enter.
- 3 The QAD Enterprise Applications Installation page appears and the executable file automatically downloads to your machine.

Fig. 3.1
QAD Enterprise Application Client Download



- 4 The .exe file may launch automatically after the download is complete or you may need to click the downloaded file.

Install the QAD Enterprise Edition QAD .NET UI

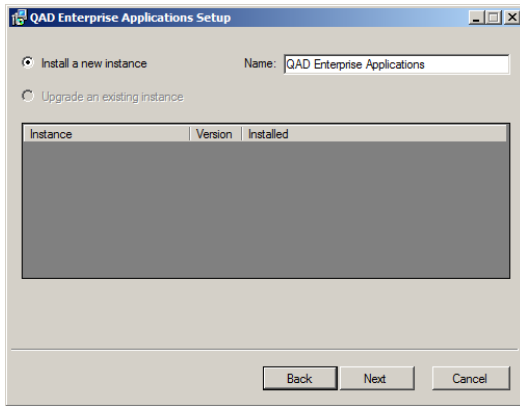
- 1 The QAD Enterprise Applications Setup Wizard appears. Click Next to begin the QAD .NET UI client installation.

Fig. 3.2
Setup Wizard



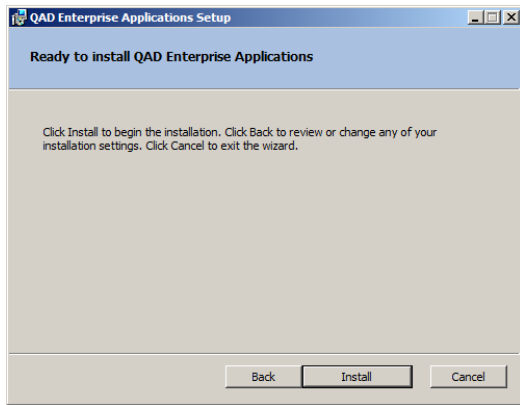
- 2 Choose whether to install a new instance of the QAD .NET UI or upgrade an existing instance. Click Next.

Fig. 3.3
Install an Instance



- 3 You are now ready to install an instance of the QAD .NET UI. Click Install.

Fig. 3.4
Ready to Install



- 4 The setup wizard displays the installation progress, and then the Setup Wizard Complete screen appears. Click Finish.
- 5 The QAD Enterprise Applications shortcut appears on your desktop and is ready to launch.

Start the QAD .NET UI

- 1 Double-click the QAD Enterprise Applications icon on your desktop. The login window appears.

Fig. 3.5
QAD Enterprise Applications Login Window



Make the following entries:

- User: mfg
- Password: leave blank

- 2 Click OK.
- 3 The QAD .NET UI appears, indicating that the install was successful.



Installing QAD Add-ons and Updates

This chapter describes how to install QAD add-on products into Enterprise Edition and how to update Enterprise Edition and YAB.

Overview 28

Installing a QAD Add-on Product 28

Installing an Enterprise Edition Update 28

Installing a YAB Update 29

Overview

Enterprise Edition supports multiple add-on products to expand and enhance your ERP environment. For additional information on which add-on products are compatible with this release of Enterprise Edition, refer to the Product Compatibility Guide in the QAD Store and to the individual add-on installation guides.

For detailed pre-installation requirements, see the installation guide for your specific add-on product. Ensure that those requirements are met before proceeding with the installation.

Installing a QAD Add-on Product

Follow these general steps to install additional QAD add-on products.

- 1 Download the add-on file from the QAD Store or from QAD Release Fulfillment.
- 2 Move the file to the root directory of your Enterprise Edition installation.
- 3 Change to the directory where Enterprise Edition is installed.

```
cd directory
```

- 4 Enter:

```
yab install zip file
```

For example:

```
yab install i19-br-bundle-installer-4.0.0.14.zip
```

- 5 For post-installation requirements and configuration information, see the installation guide for your specific add-on product.

Installing an Enterprise Edition Update

Follow these steps to install an update to Enterprise Edition.

- 1 Download the update from the QAD Store or from QAD Release Fulfillment.
- 2 Move the file to the root directory of your Enterprise Edition installation.
- 3 Change to the directory where Enterprise Edition is installed.

```
cd directory
```

- 4 Enter:

```
yab install zip file
```

where *zip file* is the name of the file you received from QAD. For example:

```
yab install financials-app-2021.1.0.0.zip
```

- 5 The update installs.



Installing a YAB Update

Follow these steps to install an update to YAB.

- 1 Download the latest YAB version from the QAD Store or from QAD Release Fulfillment.
- 2 Move the file to the root directory of your Enterprise Edition installation.
- 3 Enter:

```
yab install yab-ee-image-VERSION.zip
```



Troubleshooting

This chapter addresses troubleshooting topics.

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General 32

Installation 33

Overview

This chapter introduces troubleshooting techniques to use during Enterprise Edition installation. The information is divided into two sections.

- General – Information you can use during both installation and administration.
- Installation – Information specific to installation.

General

The troubleshooting techniques detailed in this section can apply to both installation and administration questions.

Diagnosis

Log Threshold

The default log threshold is DEBUG, which records detailed information in the install and administration log files. You can change the logging level to TRACE using the `-log-level` option, which will print more verbose information to help diagnose a problem.

```
-log-level: [OFF | FATAL | ERROR | INFO | DEBUG | TRACE]
```

Temporary Files

Temporary files are files that are created while servicing a request and deleted after the request is serviced. In some cases, the key to diagnosing a problem is to be in a position to view these files.

To retain temporary files created in subsequent requests, define the following environment variable:

```
> export KEEP_TEMP_FILES=true
```

To resume cleaning up the files, unset the variable:

```
> unset KEEP_TEMP_FILES
```

By default temporary files are written into the `/tmp` directory. YAB can be configured to write temporary files into a different directory by configuring the `YAB_JAVA_OPTS` environment variable:

```
> export YAB_JAVA_OPTS=-Djava.io.tmpdir=PATH
```

Errors

Java Command Not Found

If you do not have a Java Runtime configured you will see the following error when you execute the installer:

```
> ./install.py  
  
/qad/sandbox/user/qadee/image/packages/yab-client/1/11/0/22/yab: line 38:  
java: command not found
```



Unsupported Class Version

If you have an incorrect version of the Java Runtime configured, you will see the following error when you execute the installer:

```
> ./install.py
Exception in thread "main" java.lang.UnsupportedClassVersionError: Bad version
number in .class file
```

Enterprise Edition requires Java 1.8, which is also supported by the YAB administration tool and the installer.

The following command prints the version of the Java Runtime resolved from the PATH.

```
> java -version
java version "1.8.0_202"
Java(TM) SE Runtime Environment (build 1.8.0_202-b08)
Java HotSpot(TM) 64-Bit Server VM (build 25.202-b08, mixed mode)
```

If the JAVA_HOME environment variable is set, it will take precedence over the Java Runtime located by the PATH environment. You can check the setting of the JAVA_HOME environment variable and unset it if necessary.

```
> echo $JAVA_HOME
/usr/java/jdk1.5
> unset JAVA_HOME
> echo $JAVA_HOME
```

Installation

The troubleshooting techniques detailed in this section are specific to the installation process.

Diagnosis

Log File

The Enterprise Edition installer records detailed information in the log file. The default log file location is:

```
/tmp/install.[USER].log
```

If an error occurs while installing the product, you should review the log file. It may contain information that was not displayed on the console.

If the installation fails before the update command has started (Starting update... in the following code text), the install should be executed again after the problem has been resolved.

```
Validating OK
Initializing instance OK
Reconfiguring instance OK
Resolving and copying packages OK
Starting update...
                                update (282 tasks)
-----
1/282  qad-rd-permissions-mkdirs      OK (0.032 s)
2/282  qxtend-stage                      OK (54.844 s)
3/282  adminserver-script              OK (0.023 s)
4/282  nameserver-script              OK (0.017 s)
...

```

If the installation fails during the update command, it will be more efficient to diagnose the problem using the techniques outlined in the [QAD Enterprise Edition Configuration and Administration Guide](#) and to execute the update command directly when the problem is resolved.

```
> yab update
```

Install Failed

If the install fails, it displays INSTALL FAILED, with limited information on the cause of the failure. Review the log files and contact QAD Support if further guidance is required.

Operating System-Dependent Settings

This appendix addresses operating system-dependent settings.

Dependent Settings 36

Configuring Server Prompt 36

Configuring Login and Password Prompts 36

Dependent Settings

The following settings can differ depending on the operating system:

```
netui.connmgr.loginprompt
netui.connmgr.passwordprompt
netui.connmgr.serverprompt
```

These settings can be defined in the `install.conf` file before installing QAD Enterprise Edition or by editing the `configuration.properties` file in an existing environment.

The following example outlines how to define the server prompt setting. This process also can be followed to define the login and password prompts.

Configuring Server Prompt

The default prompt displayed for the server depends on the default shell and can vary based on user configuration and operating system. By default, the server prompt used for the `netui.connmgr.user` is set to `$`.

This example changes the server prompt from the default `$` to `>`.

Install.conf File

To set the server prompt before installing, add the following to the `install.conf` file:

```
netui.connmgr.serverprompt=>
```

Configuration.properties File

To determine the server prompt used in an existing environment, use `yab config`:

```
> yab config netui.connmgr.serverprompt
netui.connmgr.serverprompt=$
```

Define the setting in `configuration.properties`

```
netui.connmgr.serverprompt=>
```

To apply the configuration change execute:

```
> yab reconfigure
```

Configuring Login and Password Prompts

The login and password prompt settings can also vary depending on the user profile and operating system defaults.

In a standard Linux operating system, the default settings are:

```
netui.connmgr.loginprompt=login:
netui.connmgr.passwordprompt=Password:
```

Depending on the default shell, these settings also may need to be changed.



SSH and Telnet Protocols

This appendix addresses configuration settings for Secure Shell (SSH) and telnet protocols.

SSH 38

Telnet 38

SSH

By default, a QAD Enterprise Edition environment is configured to use SSH protocol for Connection Manager and terminal sessions. The default settings in `configuration.properties` are:

```
netui.connmgr.protocol=ssh
netui.telnet.protocol=ssh
netui.connmgr.port=22
netui.telnet.port=22
```

Telnet

The environment can be switched to use the Telnet protocol by configuring the following settings in `configuration.properties`:

```
netui.connmgr.protocol=telnet
netui.telnet.protocol=telnet
netui.connmgr.port=23
netui.telnet.port=23
```

To apply the change, execute:

```
> yab reconfigure restart
```

Customized Database Structure Files

This appendix describes how to install QAD Enterprise Edition using database structure files that are different than the standard structure files used by the installer.

Generate Standard Structure Files 40

Customize Standard Structure Files 40

Configure Customized Structure Files 41

Resume Enterprise Edition Creation 41

Generate Standard Structure Files

To access the QAD standard structure files before creating the Enterprise Edition databases, you must perform a delayed installation as described in “Delayed Installation” on page 7.

Run the following command to generate the standard structure files for all databases into `build/work/st-files`.

```
> yab qxtend-stage database-structure-file-update
```

This creates structure files for eight databases.

```
> ll build/work/st-files/
total 32
-rw-rw-r--. 1 mfg mfg 420 May 20 10:24 admdb.st
-rw-rw-r--. 1 mfg mfg 827 May 20 10:24 cpldb.st
-rw-rw-r--. 1 mfg mfg 301 May 20 10:24 hlpdb.st
-rw-rw-r--. 1 mfg mfg 833 May 20 10:24 mfgdb.st
-rw-rw-r--. 1 mfg mfg 316 May 20 10:24 module-partial.st
-rw-rw-r--. 1 mfg mfg 75 May 20 10:24 qxevents.st
-rw-rw-r--. 1 mfg mfg 414 May 20 10:24 qxodb.st
-rw-rw-r--. 1 mfg mfg 91 May 20 10:24 rcddb.st
```

Note One database, `arcddb`, is not associated with a database structure file.

Customize Standard Structure Files

Create a new directory to hold the customized structure files. This directory can be located anywhere.

```
> mkdir -p customizations/st-files
```

Copy the standard structure files into the new directory and create files for the database that is not associated with a database structure file.

```
> cp build/work/st-files/*.st customizations/st-files
> cp customizations/st-files/rcddb.st customizations/st-files/arcddb.st
```

Customize the structure files.

```
> vi customizations/st-files/*.st
```

Note The names of the data areas in the structure files, such as `MFG` and `MFG_IDX`, are important because they correspond to the schema files that you will load into the databases when you create the environment.

Configure Customized Structure Files

Edit the `build/config/configuration.properties` file and add the following settings. You must set the `st.dir` setting to locate your customized structure files if you chose an alternate location:

```
st.dir=${customizations.dir}/st-files
db.qadadm.structurefile=${st.dir}/admdb.st
db.qadcpl.structurefile=${st.dir}/cpldb.st
db.qaddb.structurefile=${st.dir}/mfgdb.st,${st.dir}/module-partial.st
db.qadhlp.structurefile=${st.dir}/hlpdb.st
db.qadrcode.structurefile=${st.dir}/rcddb.st
db.qxevents.structurefile=${st.dir}/qxedb.st
db.qadarc.structurefile=${st.dir}/arcdb.st
db.qxodb.structurefile=${st.dir}/qxodb.st
```

Resume Enterprise Edition Creation

Execute the update command:

```
> yab update
```



Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

[QAD Forums \(community.qad.com\)](https://community.qad.com)

Ask questions and share information with other members of the user community, including QAD experts. The YAB Installations forum can be found under the Technology heading in the Forum menu.

[QAD Knowledgebase \(knowledgebase.qad.com\)*](https://knowledgebase.qad.com)

Search for answers, tips, or solutions related to any QAD product or topic.

[QAD Document Library \(documentlibrary.qad.com\)](https://documentlibrary.qad.com)

Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

[QAD Learning Center \(learning.qad.com\)*](https://learning.qad.com)

Visit QAD's one-stop destination for all courses and training materials.

*Log-in required

