



QAD Enterprise Applications
Enterprise Edition

Installation Guide QAD Sales and Use Tax Interface

Introduction to SUTI
Installing SUTI for Quantum 5.0

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Contents

Sales and Use Tax Interface Install Guide Change Summary	v
Chapter 1 Introduction to SUTI	1
Other Documentation	2
Chapter 2 Installing SUTI for Quantum 5.0	3
Installing SUTI on Windows Systems	4
Copy Required Files	4
Tailor the INI File	5
Installing SUTI on UNIX Systems	6
Copy Required Files from CD-ROM	6
Tailor the INI File	8
Set Shared Library Environment Variables	9
Installing SUTI for Use with Desktop	10
Installation Troubleshooting	10
Product Information Resources	13

Sales and Use Tax Interface Install Guide Change Summary

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

Date/Version	Description	Reference
March 2015/5.0	Updated release information for Vertex 5.0	
March 2014/4.1	Updated release and platform compatibility table to contain only Vertex 4.1 information.	page 2
	Added new chapter on installation for SUTI 4.1 and removed chapters for previous versions.	page 3

Introduction to SUTI

This section introduces the Sales and Use Tax Interface for Vertex's Quantum, and specifies the QAD product versions to which each Quantum version applies.

Overview 2

Summarizes the relationships between QAD releases, Quantum releases, and platforms.

Other Documentation 2

List other relevant QAD documents.

Overview

The Sales and Use Tax Interface (SUTI), in conjunction with Global Tax Management (GTM), enables users to take advantage of enhanced tax functionality and improved tax reporting accuracy by using Vertex’s Quantum for Sales and Use Tax to calculate taxes in QAD’s ERP application.

Note Currently, Quantum for Sales and Use Tax supports tax calculation and compliance requirements for the United States and Canada only.

This guide covers the installation of SUTI for the releases and platforms in Table 1.1.

See *QAD Sales and Use Tax Interface User Guide* for information on the use of SUTI.

Table 1.1
Release and Platform Compatibility

QAD Release	Quantum Release	UNIX Platforms	Windows Platforms	Installation Instructions
QAD 2013.1 EE QAD 2014 EE QAD 2015 EE	5.0	<ul style="list-style-type: none"> • Red Hat 5 64 bit (2.6.18) • Red Hat 6 64 bit (2.6.32) • HP Unix 11 i v3 64 bit • Solaris 11 64 bit • SuSE Linux Ent Srv 11 64 bit 	<ul style="list-style-type: none"> • Windows 2012 64 bit • Windows 2008 64 bit 	See Chapter 2, “Installing SUTI for Quantum 5.0,” on page 3.

Other Documentation

- For QAD installation instructions, refer to the appropriate installation guide for your system.
- For instructions on navigating the Network User Interface (.NET UI) and Desktop environments, see *Introduction to QAD Enterprise Applications User Guide*.
- For information on using the software, see *QAD Sales and Use Tax Interface User Guide*.
- For details on Global Tax Management (GTM), see *QAD Global Tax Management User Guide*.

Installing SUTI for Quantum 5.0

This chapter outlines the steps for installing the Sales and Use Tax Interface for Vertex's Quantum version 5.0.

Installation Overview **4**

Introduces installation and configuration tasks for the SUTI API for Vertex Quantum 5.0.

Installing SUTI on Windows Systems **4**

Outlines the steps for installing SUTI in a Windows environment.

Installing SUTI on UNIX Systems **6**

Outlines the steps for installing SUTI in a UNIX environment.

Installation Troubleshooting **10**

Lists common installation errors and how to solve them.

Installation Overview

This chapter describes how to install and configure the SUTI API for Vertex Quantum 5.0. Instructions are included for Windows and UNIX systems. Refer to the steps appropriate to your operating system environment.

The SUTI API installation consists of two principal steps:

- 1 Copy required files from the installation CD-ROM. A dynamic link library (DLL) is supplied for Windows systems. A compiled C program is used on UNIX systems. The DLL and C programs are specific to each operating-system platform.
- 2 Configure an initialization file used by QAD to locate the API program, log files (UNIX only), and the SUTI databases.

On UNIX systems, you must also set shared library variables.

Installing SUTI on Windows Systems

This section outlines steps for installing SUTI in a Windows environment.

System Requirements

The installation in this section is for QAD 2013.1 EE, 2014 EE, or 2015 EE interfacing with Vertex's Quantum for Sales and Use Tax release 5.0. Consult the Vertex installation documentation for Quantum system requirements.

Important We recommend that Quantum for Sales and Use Tax be installed prior to installing the Sales and Use Tax Interface.

The system requirements for SUTI on QAD .NET UI are as follows:

- Intel Pentium 800 MHz or faster processor
- Platforms and operating systems:
 - Windows Server 2008 64 bit
 - Windows Server 2012 64 bit
- One of these versions of QAD Enterprise Edition:
 - QAD 2013.1 Enterprise Edition with Progress Open Edge 10 or 11; see the installation guide for your ERP application for specific requirements.
 - QAD 2014 or 2015 Enterprise Edition with Progress Open Edge 11; see the installation guide for your ERP application for specific requirements.
- Vertex's Quantum for Sales and Use Tax, release 5.0, using an ISAM database

Copy Required Files

- 1 Create a new directory below the QAD EE root directory named SUTI50. You will install the components of the API into this directory. For example, if you installed QAD EE in `C:\QADInstallDir`, create the following directory:

```
C:\QADInstallDir\SUTI50
```

- 2 Insert the distribution CD-ROM in your drive.
- 3 Locate the directory appropriate for your system on the CD-ROM. The directory structure looks like the following example:

```
win32
  vqapi.ini
  isam
    vqapi.dll
```

- 4 Copy the `vqapi.ini` file below the appropriate directory to `SUTI50`, the directory created in step 1.
- 5 Copy the appropriate DLL into `SUTI50`. For example, on a Windows system, copy from:

```
CDRomDrive:\win32\isam\vqapi.dll
```

To:

```
C:\QADInstallDir\SUTI50
```

- 6 Ensure that the `vqapi.ini` file is in each user's `PROPATH`. You can do this two ways:
 - a Move `vqapi.ini` into the QAD EE root directory. This directory should already be in the `PROPATH`.
 - b Add the path to the new `SUTI50` directory to the `PROPATH`.
- 7 Make sure that `vqapi.dll` is included in the user's `PATH`.

Tailor the INI File

QAD EE uses the `vqapi.ini` file to locate the API program and the Quantum databases. To complete the installation, you must specify values for your environment in this `.ini` file.

- 1 Locate the `.ini` file in the QAD EE root directory.
- 2 Open the `.ini` file in any text editor such as Notepad.
- 3 Enter values for the settings listed in Table 2.1. You do not need to change the value of `db_type`.

Table 2.1
vqapi Settings

INI Setting	Description
<code>vqapi_dir</code>	Fully qualified name of the <code>SUTI50</code> directory where the API program for Windows is located. Do not include the name of the DLL. The QAD ERP application automatically appends <code>vqapi.dll</code> to the end of this path; for example: <code>vqapi_dir=C:\QADInstallDir\SUTI50</code>
<code>db_type</code>	The Quantum database type, either ISAM or RDBMS (Oracle). This is preset to ISAM since Oracle is not currently supported.
<code>loc_source</code>	Directory containing the Quantum Location database.
<code>rate_source</code>	Directory containing the Quantum Rate database.

6 QAD Sales and Use Tax Interface Installation Guide

INI Setting	Description
tdm_source	Directory containing the Quantum Tax Decision Maker database.
reg_source	Directory containing the Quantum Registration database.

4 Save your changes and close the text editor.

Note Before starting SUTI, include both the directory path containing the SUTI 5.0 API (`vqapi.dll`) and Quantum's `utils` directory in your Windows system environment path.

QAD Sales and Use Tax Interface User Guide includes information on errors, including a list of errors generated if the `.ini` file is not set up properly. Some installation issues are also discussed in "Installation Troubleshooting" on page 10.

Installing SUTI on UNIX Systems

This section outlines steps for installing SUTI in a UNIX environment.

System Requirements

The installation in this section is for QAD 2013.1 EE, 2014 EE, or 2015 EE interfacing with Vertex's Quantum for Sales and Use Tax release 5.0. Consult the Vertex installation documentation for Quantum system requirements.

Important It is recommended that you install Quantum for Sales and Use Tax prior to installing the Sales and Use Tax Interface.

The system requirements for SUTI on UNIX are as follows:

- Platforms and operating systems:
 - Red Hat 5 64 bit (2.6.18)
 - Red Hat 6 64 bit (2.6.32)
 - HP Unix 11 i v3 64 bit
 - Solaris 11 64 bit
 - SuSE Linux Ent Srv 11 64 bit
- One of these versions of QAD Enterprise Edition:
 - QAD 2013.1 Enterprise Edition with Progress Open Edge 10 or 11; see the installation guide for your ERP application for specific requirements.
 - QAD 2014 or 2015 Enterprise Edition with Progress Open Edge 11; see the installation guide for your ERP application for specific requirements.
- Vertex's Quantum for Sales and Use Tax, release 5.0, using an ISAM database

The following section outlines steps for installing SUTI on a UNIX server.

Copy Required Files from CD-ROM

- 1 Log on as the `root` user ID.
- 2 If necessary, create a `cdrom` directory: `mkdir /cdrom`.

- 3 Insert the distribution CD-ROM into your drive.
- 4 Mount the CD-ROM in the `cdrom` directory.

The mount command differs from system to system. Listed below are sample commands for mounting the SUTI CD-ROM on common systems:

Table 2.2
Mount Commands

Platform	Command
HP-UX	<code>mount -F cdfs -r -o cdcase <device-name> <mount-point></code>
Linux	<code>mount -t <type> <device-name> <mount- point></code>

For others, refer to your hardware system documentation or vendor for requirements to mount a CD-ROM in ISO-9660 format. You may be able to type `man mount` to determine the correct command.

- 5 Change to the `cdrom` directory: `cd /cdrom`.
- 6 Locate the `unix` directory on the CD-ROM. The directory structure looks like the following example:

```
unix
  vqapi.ini
  isam
hpux11iav2_32
  vqapi
hpux11iav2_64
  vqapi
hpux11iav3_32
  vqapi
hpux11iav3_64
  vqapi
  linux40_32
    vqapi
    vqapi.o
  linux40_64
    vqapi
    vqapi.o
  linux50_32
    vqapi
    vqapi.o
  linux50_64
    vqapi
    vqapi.o
```

- 7 Create a new directory below the QAD EE root directory named `SUTI50`.
- 8 Copy the `vqapi.ini` file located below the `unix` directory to the directory created in the previous step.

```
cp /cdrom/unix/vqapi.ini /dr01/QADInstallDir/SUTI50
```

Note If you copy `vqapi.ini` into a directory other than the QAD EE root directory, be sure to include the path to `vqapi.ini` in your `PROPATH`.

8 QAD Sales and Use Tax Interface Installation Guide

- 9 Copy all the UNIX API programs into the new directory, preserving the operating system-specific directory names and structure; for example:

```
cp -r /cdrom/unix/isam/* /dr01/QADInstallDir/SUTI50
```

On Linux systems, make sure you copy both programs. The SUTI API for Linux is named `vqapi.o`. The `vqapi` file is a shell script that exports `LD_LIBRARY_PATH` and executes `vqapi.o`.

Important Do not change any directory names. QAD EE expects the names and structure to match those on the CD-ROM. The API will fail if the corresponding directory is not found.

- 10 Ensure that the `vqapi.ini` file is in each user's `PROPATH`. You can do this in either of two ways:
 - a Move `vqapi.ini` into the QAD EE root directory. This directory should already be in the `PROPATH`.
 - b Add the path to the new `SUTI50` directory to the `PROPATH`.

Tailor the INI File

QAD EE uses the `vqapi.ini` file to locate the API program, the Quantum databases, and two log files. To complete the installation, you must specify values for your environment in this `.ini` file. Table 2.3 lists the settings to be modified.

- 1 Locate the `.ini` file in the QAD EE root directory.
- 2 Open the `.ini` file in any text editor, such as `vi`.
- 3 Enter values for the settings listed in Table 2.3. You do not need to change the value of `db_type`.

Table 2.3
vqapi Settings

INI Setting	Description
<code>vqapi_dir</code>	Fully qualified path of the <code>SUTI50</code> directory containing the operating-system specific directories and UNIX API programs. The QAD ERP application dynamically determines the specific operating-system version using the command <code>uname -rs</code> . It uses this value to look up the directory name in the OS Map Section of <code>vqapi.ini</code> and then appends the program name <code>vqapi</code> to construct the fully qualified path; for example: <code>vqapi_dir=/dr01/QADInstallDir/SUTI50</code>
<code>db_type</code>	The Quantum database type, either ISAM or RDBMS (Oracle). This is preset to ISAM since Oracle is not currently supported.
<code>loc_source</code>	Directory containing the Quantum Location database.
<code>rate_source</code>	Directory containing the Quantum Rate database.
<code>tdm_source</code>	Directory containing the Quantum Tax Decision Maker database.
<code>reg_source</code>	Directory containing the Quantum Registration database.

INI Setting	Description
log_file	Fully qualified name of the API log file. This is typically located in the same directory as <code>vqapi.ini</code> ; for example: log_file= /dr01/QADInstallDir/SUTI50/vqapi.log
quantum_logfile	Fully qualified name of the Quantum log file. This is typically located in the same directory as <code>vqapi.ini</code> ; for example: quantumlog_file= /dr01/QADInstallDir/SUTI50/vst.log

- 4 Save your changes and close the text editor.

Set Shared Library Environment Variables

On UNIX systems, you must set a shared library environment variable to point to the location where Quantum shared libraries are stored. This variable contains the path to the `lib` directory under the SUTI 5.0 root directory where Vertex's Quantum was installed.

To set this variable, you must use the variable appropriate for your operating system and the syntax of your command shell. For additional information, refer to the *Quantum for Sales and Use Tax Administrator's Guide*.

Table 2.4 lists the environment variables to use on supported UNIX platforms.

Table 2.4
Environment Variables

Platform	Environment Variable
HP-UX 11i v3	SHLIB_PATH
Linux 5.0/6.0	LD_LIBRARY_PATH

For example, if you installed Quantum 5.0 on a Linux system, you would enter the following shell commands:

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/dr01/vertex50/lib
export LD_LIBRARY_PATH
```

To ensure the variable is always set correctly, add these commands to your client startup script.

Set Up for Linux

On Linux systems, you must configure the `vqapi` script to export the library variable and execute `vqapi.o`. To do this, insert the `LD_LIBRARY_PATH` statement in the `vqapi` script located in:

```
SUTI50/unix/isam/linux50
```

or:

```
SUTI50/unix/isam/linux60
```

Both of these edits are shown in the example below:

```
LD_LIBRARY_PATH=/dr01/vertex50/lib export
LD_LIBRARY_PATH exec /dr01/QADInstallDir/SUTI50/unix/isam/linux50/vqapi.o
```

Set Permissions

For the API to execute correctly, all SUTI users need read and write permission to the Quantum database directory and the Quantum databases. In addition, confirm that users have read and write permission to the SUTI 5.0 API directory before starting the API.

Installing SUTI for Use with Desktop

SUTI for UNIX can be set up to operate in conjunction with Desktop clients. Desktop is installed as part of a QAD .NET UI implementation.

If Desktop has been deployed using a two-tiered approach, you should install Vertex on the platform where the telnet sessions for Desktop run.

Since SUTI uses platform-dependent libraries, you must set these variables as needed for your system in the telnet connection scripts. Make sure that you set the variable appropriately in:

- The connection script defined with the Connection Manager Configuration Update page, which is used for HTML programs
- The telnet scripts defined for the telnet character screens using User Option Telnet Maintenance (36.4.14)

Example QAD 2015 EE is installed on an HP-UX platform, and Tomcat and Desktop 2.10.5 are installed on Linux. Desktop starts a telnet session on the Linux computer to access the databases on the HP-UX computer. Since telnet sessions start on Linux, use the `LD_LIBRARY_PATH` (not the `SHLIB_PATH` for HP-UX systems) on Linux to point to the locally installed platform-dependent Vertex library files.

Note Starting (and shutting down) the API must occur from within a character session, since the start and stop functions are not available in Desktop.

Windows Client Setup

SUTI for UNIX can be set up to operate in conjunction with Windows clients. For more information, see “Installing SUTI on Windows Systems” on page 4.

Installation Troubleshooting

This section lists some of the common errors that can occur when a user attempts to log in to QAD EE and the Vertex library is not set or the initialization file is missing or incorrect.

QAD Sales and Use Tax Interface User Guide includes information on all error messages generated if the `.ini` file is not set up properly.

If the following error occurs, it means that Vertex is enabled in Tax Interface Control (29.12.24) but the Quantum Vertex software initialization file (`vqapi.ini`) cannot be found:

```
ERROR: Quantum status 311. ini file not found.
```

See Table 2.4 on page 9 for the appropriate variable to use on each platform.

- 1 If the following error occurs, it typically means a missing or incorrect `vqapi.ini` file.

```
ERROR: Quantum status 141. API not available.
```

- 2 If the following error occurs, it typically means that the Vertex initialization file does not contain sufficient information to allow Vertex to start. A typical cause might be an operating system change. Since operating system information (`uname -rs`) is used in the `vqapi.ini` file, the new OS needs to be correctly represented in the file.

```
ERROR: Non-Progress executable program not found.
```

- 3 If Vertex is enabled in Tax Interface Control (29.12.24) and an old version of `vqapi.ini` is being used, the cursor may hang in the bottom right hand corner of the QAD EE welcome screen, preventing users from logging in.
- 4 On UNIX systems, when the `LD_LIBRARY_PATH` is missing or incorrect, the following messages display to the user:

```
** Invalid character in numeric input 1. (76)  
** Pipe to subprocess has been broken. (140)  
Press space bar to continue.
```


Product Information Resources

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

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

Ask questions and share information with other members of the user community, including QAD experts.

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

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

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

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 \(learning.qad.com\)*](http://learning.qad.com)

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