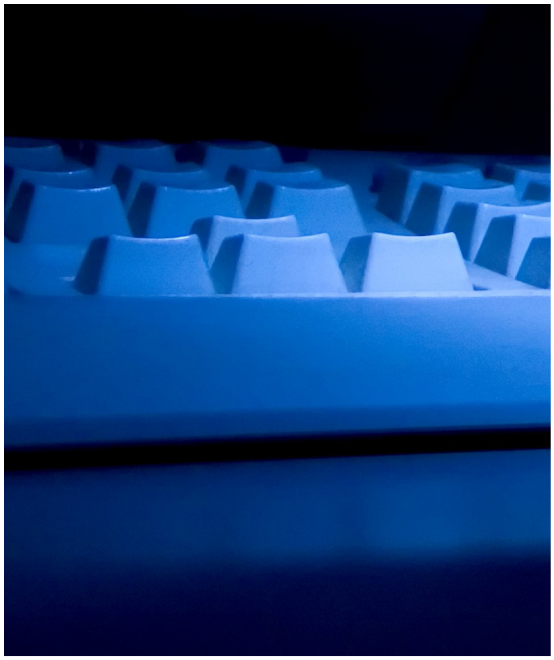
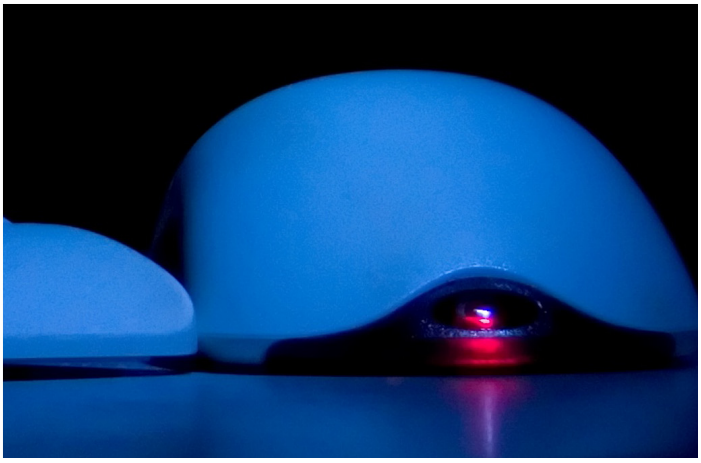


ASPEN

Full Installation Guide



Information in this procedures guide is subject to change without notice.

All brand or product names are trade names, service marks, trademarks, or registered trademarks of their respective companies or organizations.

Systems Environment

Application Development: Microsoft Visual C++ and C# 2008 (9.0), .NET 3.51 SP1, .NET 4.6.1 or later (ASE-Q only)

Desktop Database (ASE-Q only): SQL Anywhere 11

CMS-supported operating systems and MS Internet Explorer versions are posted on the QTSO Website https://qtso.cms.gov under the Minimum System Requirements section.

Oracle Database 12c Enterprise Edition Release 12.1.0.2.0

Oracle Client 12.2.0.1.0 - 32 bit

Optional System Environments

MAPI Compliant E-mail client to support e-mail transfer of survey information

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Note: This document can be viewed online or printed in a duplex (two-sided) format. Blank pages have been automatically inserted as needed for correct pagination in the printed copy.

Contents

Introduction **5**
About this Procedures Guide **5**
View this Document Online 5
View a Printed Copy of this Document 6
Conventions 7
Accessibility Features **7**
Quick Reference **9**
Preliminary Setup before beginning **9**
Identify a new folder location for your ASPEN files **9**
Install ACO/ACTS shared files on the network 9
Install ACO/ACTS client files on workstations 10
Install standalone ASE-Q on a laptop 10
Install ACO, ACTS, and/or ASE-Q on a new workstation 10
Installation Steps **11**
Preliminary Setup **11**
Choose your Installation Options **12**
ASE-Q 12
ACO Shared/ACTS Shared 12
ACO Client/ACTS Client 12
Install the Software **13**
Installing ACO and ACTS Shared Files on a Network 13
Prerequisite Installs 14
Installing ACO and ACTS Client Files on a Workstation 15
Prerequisite Installs 16
Installing ASPEN Survey Explorer–Quality (ASE-Q) 18
Installation Instructions 18
Finalize ASE-Q Installation **21**
Export User Account Files from ACO **21**
Open ASE-Q on a Laptop for the First Time **22**
Enter a Temporary Access Code **24**
Requirements for wired and wireless ASE-Q to ASE-Q transfers **25**
Requirements for LTCSP **25**

How to Shut Down/Restart the Sybase Database 25
Special Considerations for Imaged-Based Installation 26

Introduction

The ASPEN suite of software typically can be upgraded when new versions are released. Occasionally, it is necessary to perform a full installation of all software. This guide provides the steps you need to perform a complete installation of the ASPEN suite of software.

About this Procedures Guide

The *ASPEN Full Installation Guide* gives you the information you need to:

- Prepare the system for installation
- Select the appropriate installation option
- Install the software
- Prepare software for use

Note: This guide assumes that you are familiar with basic Microsoft Windows operations.

View this Document Online

You must have Adobe Reader installed to view this document online. You can download the latest version from https://get.adobe.com/reader/.

On any page, you can click the Increase (+) or Decrease (-) button in the toolbar to adjust the page magnification to your comfort level. Use the bookmarks in the left pane of Adobe Reader to locate and go (click the bookmark) to relevant information in this procedures guide.

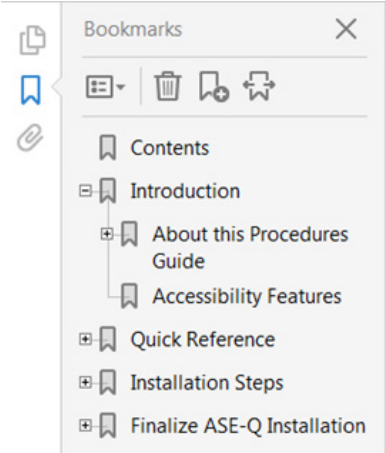

Figure 1: Bookmarks

You can also click the Contents bookmark and then click links in the table of contents to go to relevant topics.

TIP: For best viewing quality in the Adobe Reader, go to Edit | Preferences | Page Display (path may vary somewhat depending on version). Select the applicable Smooth Text option.

View a Printed Copy of this Document

While it is designed to be used easily online, you can print this document if you prefer. If you print this document, use the Table of Contents to locate the information you need. Links (cross-references) to additional material in this document include page numbers; simply go to the indicated page.

Conventions

This guide uses the following conventions:

Bold In procedures: names of screens, screen sections, windows you open; and buttons, menu options, keys you press.

web Generic reference to the World Wide Web.

More ... Introduces a list of "see also" cross-references.

Note: Notes give you important information that may affect how you use a function.

TIP: Tips give you useful hints, suggestions, or alternative approaches.

CAUTION! Caution statements alert you to very important information to help perform the steps successfully.

Accessibility Features

This procedures guide incorporates the following 508-compliant accessibility features:

- Alternate text (alt text), which screen readers can read, is defined for all graphics. In the Screens chapter, there are links (cross-references) to the field/column descriptions for the indicated screen or section of screen.
- All graphics have captions.
- Information is not conveyed by means of color alone.
- Tables are not used for formatting, so all text is accessible to screen readers.
- Windows keyboard shortcuts are included in the Supporting Materials chapter for easy reference.
- Reading order is optimized, so content is read correctly by screen readers.

Quick Reference

The following briefly covers the basic steps necessary for most ASPEN software installations.

CAUTION! Always close all other programs before installing new software. You must have administrative privileges to perform the install.

Preliminary Setup before beginning

- Copy the ASPEN Install CD contents to a central location.
- Add copies of your working TNSNAMES.ORA and SQLNET.ORA files to the folder.

See the instructions for this in “Preliminary Setup” on page 11.

Identify a new folder location for your ASPEN files

- New ASPEN files should not be installed to the same folder as earlier versions of ASPEN.
- We recommend you accept the default location, C:\ASPEN.

Install ACO/ACTS shared files on the network

- Browse to the folder you created in the preliminary setup and click **Setup.exe** to launch ASPEN setup.
- In the Select Features window select **ACO Shared** and **ACTS Shared**.
- Click **Next** and follow the on-screen instructions through the remainder of the install process.

This installation is fully described in the Preliminary Setup beginning in “Preliminary Setup” on page 11.

Install ACO/ACTS client files on workstations

- From each workstation any user with administrative privileges can browse to the folder created in the preliminary setup and launch **Setup.exe**.
- In the Select Features window, select **ACO Client** and **ACTS Client.**

Note: If appropriate, you can choose to install ASE-Q and the Sybase database at the same time.

- Click **Next** and follow the on-screen instructions through the remainder of the install process.

This installation is fully described in "Installing ACO and ACTS Client Files on a Workstation" on page 15.

Install standalone ASE-Q on a laptop

- Insert the ASPEN Install DVD or USB Drive.
- Select **Start** | **Run**, browse to and select **Setup.exe**, then click **OK**.
- In the Select Features window select **ASEq**. All ASE-Q installs are full installs.
- Click **Next** and follow the on-screen instructions through the remainder of the install process.

This installation is described in "Installing ASPEN Survey Explorer–Quality (ASE-Q)" on page 18.

Install ACO, ACTS, and/or ASE-Q on a new workstation

- The procedure to install ASPEN on a new workstation is the same as the installs on existing workstations. See "Installing ACO and ACTS Client Files on a Workstation" on page 15.

CAUTION! Anytime you use the ASPEN Installer, select *ALL* the components that you want installed on the current machine. Any component that is not selected will be uninstalled.

For example, if you have already installed the latest version of ACO Shared and now need to add the latest version of ACTS Shared, select BOTH ACO Shared and ACTS Shared, or ACO will be uninstalled.

Installation Steps

CAUTION! Always close all other programs before installing new software. You must have administrative privileges to perform the install.

Preliminary Setup

To take full advantage of the Automated Silent Oracle Install, first copy the ASPEN DVD to a central location, and then update the Installer with a working copy of your TNSNAMES.ORA and SQLNET.ORA files. This enables the Installer to install the proper versions of these files when installing Oracle to individual workstations.

1. Create a new folder such as ASPEN_INSTALL in a location that is accessible by all workstations to be upgraded. This location should be a mapped drive for clients not a Universal Naming Convention (UNC) path such as `\\servername\sharename`.
2. Copy the ASPEN Install DVD contents into the ASPEN_INSTALL folder: select all the contents of the ASPEN Install DVD, press Ctrl-C to copy, then navigate to the ASPEN_INSTALL folder and press Ctrl-V to paste the DVD contents to that folder.
3. Locate current, working copies of your TNSNAMES.ORA and SQLNET.ORA files and copy them into the ASPEN_INSTALL folder. The DVD ships with placeholder copies of these files, so you will see a message asking if you want to overwrite the existing files. Say **Yes**.
4. To install the Oracle client software onto any computer, open the "ASPEN_INSTALL\ASPEN Full Install\Oracle 12 Client" folder, right-click the silent.bat file, and select "Run as administrator". This will install the Oracle 12 Client software without the need for user interaction. It will use the TNSNAMES.ORA and SQLNET.ORA files from step 3 and install the client to the C:\Oracle12 folder.
5. ASPEN is a 32-bit application and requires the 32-bit version of the Oracle client. The Oracle installer provided on the ASPEN DVD is the 32-bit version of Oracle 12.2.0.1.0. If you need a different version or a 64-bit version of the Oracle client for non-ASPEN related uses, you may need to explore Oracle's ability use multiple Oracle Homes.

Choose your Installation Options

The first action you take each time you install ASPEN is to select your install options in the **Select Features** window. Select from the following options:

- ASE-Q
- ACO
  - ACO Client
  - ACO Shared
- ACTS
  - ACTS Client
  - ACTS Shared

CAUTION! When installing, always select *ALL* ASPEN software you are currently operating on this machine. If you install ACO then later want to install ACTS, select both ACO and ACTS during the second install. You can install ASE-Q with ACO/ACTS client files.

ASE-Q

Select this box when you are installing ASE-Q. You can choose it in addition to the ACO/ACTS installs.

ASPEN allows a single type of ASE-Q install. The default location puts the files in the C:\ASPEN\ASEQ folder.

If you plan to use the direct-connect method between ASE-Q and your state database, you may need to separately install the Oracle Client as well. If Oracle is already on the machine, it does NOT need to be installed again to support the latest version.

ACO Shared/ACTS Shared

These options install ASPEN shared files to a network location.

ACO Client/ACTS Client

This option installs the workstation client files for ACO and/or ACTS. The install default location is the C:\ASPEN folder. The process takes only a few minutes, and the need for user input is minimal. This installation is described in detail “Installing ACO and ACTS Shared Files on a Network” on page 13.

Install the Software

ASPEN requires a full install, with ACO/ACTS shared files on the network and client files on each workstation.

Some installation considerations:

Due to its size, the ASPEN full installer is distributed on DVD. If some of your machines do not have a DVD drive, you can copy the install files to any 2GB USB drive, and perform the install from there.

Note: Installing ASPEN from a network drive is not recommended. However, you can map a drive to install over a network. Do not install to a drive that has been mapped using SUBST or NET USE. The ASE-Q Sybase database cannot connect to these mapped drives.

The default installation places the latest ASPEN files into a new ASPEN folder on your hard drive (C:\ASPEN) that may co-exist with the obsolete ASPEN files on the same machine. If you have an existing C:\ASPEN folder, you may want to re-name it so you can accept the default location during the install procedure.

Once you have selected the type of installation, the on-screen instructions guide you through the process. This document covers a typical installation for each of the three options:

- Installing ASPEN Shared Files on a Network
- Installing ASPEN Client Files on Workstations
- Installing ASE-Q standalone

CAUTION! Always close all other programs before installing new software.

Installing ACO and ACTS Shared Files on a Network

This procedure describes installing the shared components of ACO and ACTS on a network.

1. On the desktop, click **Start** | **Run**, and navigate to the folder containing your ASPEN install files. Setup.exe is in the root directory.
2. Double-click **Setup.exe** to launch the ASPEN Installer.

Prerequisite Installs

The ASPEN Installer first checks your system for prerequisite programs. It searches for the Windows Installer, .NET and the Microsoft Report Viewer. If any of these programs are not present, you will need to install before continuing. Follow the on-screen prompts for any necessary installations.

- Click **Install** for each program the installer prompts you to install.

  Depending on the programs that are installed, you may be asked to reboot your system to continue. The install automatically continues after reboot.

3. On the Welcome screen, click **Next**.
4. On the Select Features screen, click the plus sign (+) next to both **ACO** and **ACTS** to expand the tree.
5. Then select **ACO Shared** and **ACTS Shared**; click **Next**.

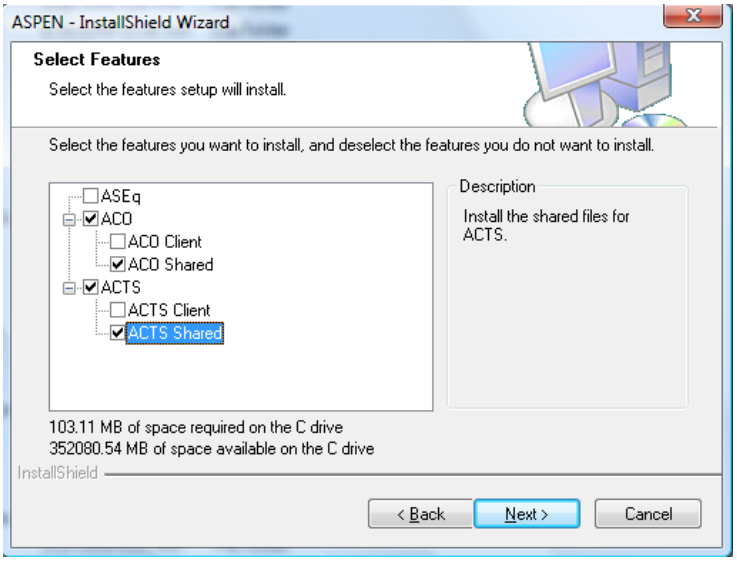

Figure 2: Selections expanded in Select Features screen

CAUTION! Anytime you use the ASPEN Installer, select *ALL* the components that you want installed on the current machine. Any component that is not selected will be uninstalled.

For example, if you have already installed the latest version of ACO Shared and now need to add the same version of ACTS Shared, select *BOTH* ACO Shared and ACTS Shared, or ACO will be uninstalled.

6 Click **Next** to install ACO to the default location, C:\ASPEN\ACO (recommended), or browse to and select a different location, then click **Next**.

Note: Installation to the C:\Program Files\ folder is not recommended. Microsoft Windows enforces security that prevents modification of files in the C:\Program Files folder that may interfere with ASPEN updates. If you install under Program Files you need to change folder properties to allow updates to the ASPEN folder and any of its sub-folders.

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7 On the InstallShield Wizard Complete screen select **Yes** to have the installer restart your computer, then click **Finish**.

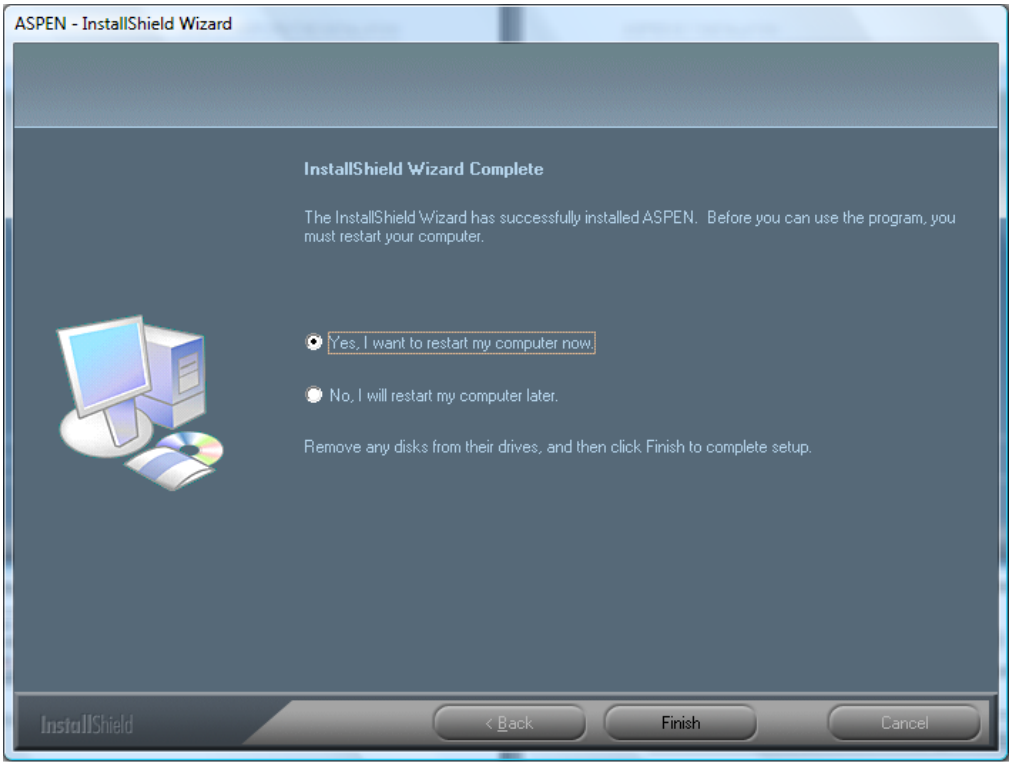

Figure 3: Installation complete screen

This completes the ACO/ACTS network installation.

Installing ACO and ACTS Client Files on a Workstation

This procedure describes installing ACO and ACTS on a workstation.

1 On the desktop, click **Start** | **Run**, and navigate to the folder containing your ASPEN install files. Setup.exe is in the root directory.

2 Double-click **Setup.exe** to launch the ASPEN Installer.

Prerequisite Installs

The ASPEN Installer first checks your system for prerequisite programs. It searches for the Windows Installer, .NET and the Microsoft Report Viewer. If any of these programs are not present, you will need to install before continuing. Follow the on-screen prompts for any necessary installations.

- Click **Install** for each program the installer prompts you to install.

  Depending on the programs that are installed, you may need to reboot your system to continue. The install automatically continues after reboot.

3 On the Welcome screen, click **Next**.

4 On the Select Features screen click the plus sign (+) next to both **ACO** and **ACTS** to expand the tree.

5 Then select **ACO Client** and **ACTS Client**; click **Next**.

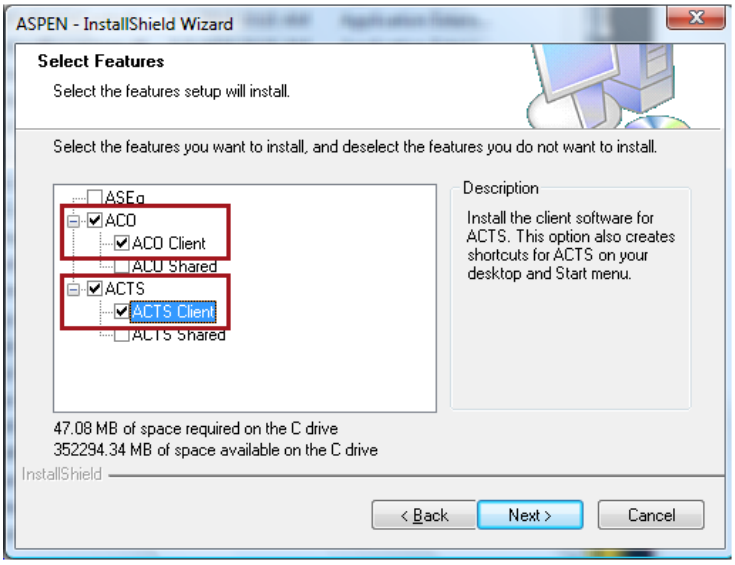

Figure 4: Selections expanded in Select Features screen

CAUTION! Anytime you use the ASPEN Installer, select *ALL* the components that you want installed on the current machine. Any component that is not selected will be uninstalled.

For example, if you have already installed the latest version of ACO Client and now need to add the same version of ACTS Client, select *BOTH* ACO Client and ACTS Client, or ACO will be uninstalled.

6 Click **Next** to install ACO to the default location, C:\ASPEN\ACO (recommended), or browse to and select a different location, then click **Next**.

Note: Installation to the C:\Program Files\ folder is not recommended. Microsoft Windows enforces security that prevents modification of files in the C:\Program Files folder that may interfere with ASPEN updates. If you install under Program Files you need to change folder properties to allow updates to the ASPEN folder and any of its sub-folders.

---

7 Click **Next** to install ACTS to the default location (recommended), or browse to and select a different location, then click **Next**.

8 On the InstallShield Wizard Complete screen select **Yes** to have the installer restart your computer, then click **Finish**.

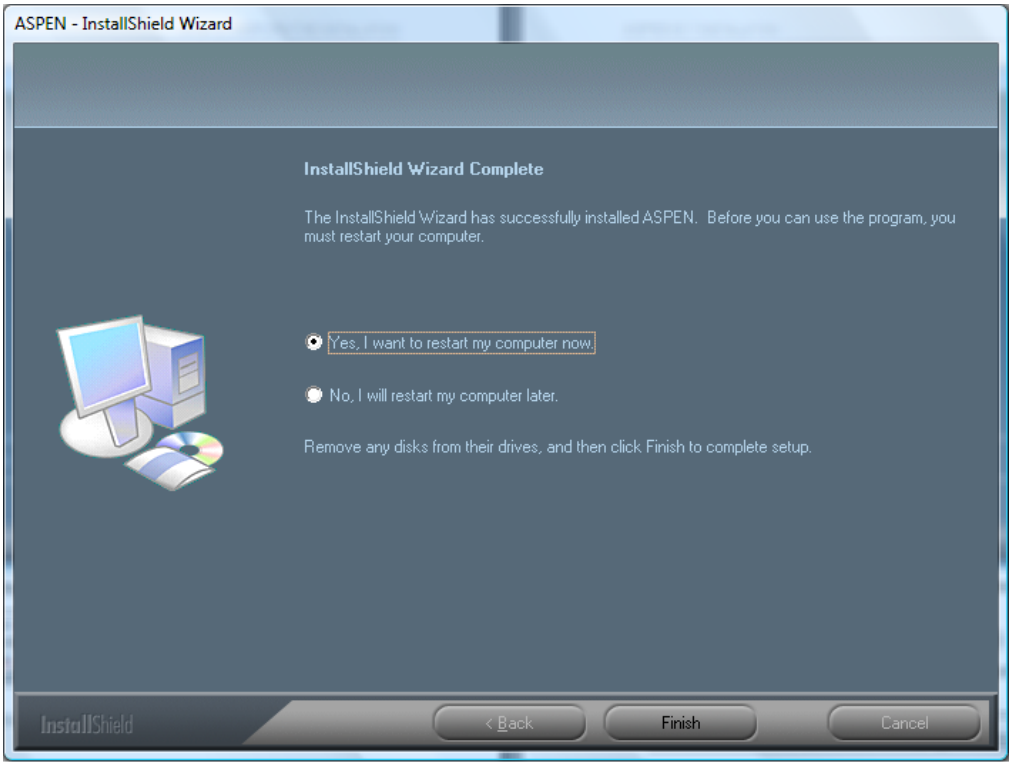

Figure 5: Installation complete screen

This completes the ACO/ACTS client installation.

For your convenience, the installer adds ACO and ACTS shortcuts to your desktop.

Installing ASPEN Survey Explorer–Quality (ASE-Q)

This procedure describes installing ASE-Q as a standalone install on a workstation. Some installation considerations:

- We recommend that if you have a current version of ASE-Q installed leave it untouched.
- You can change the location of the new ASPEN folder, but do not install to a drive that has been mapped using SUBST or NET USE. The Sybase database cannot connect to these mapped drives.

TIP: We do not recommend installing ASE-Q from a network drive.

Installation Instructions

1. On the Windows desktop, click **Start** | **Run**, and navigate to the folder containing your ASPEN install files. Setup.exe is in the root directory.
2. Double-click **Setup.exe** to launch the ASPEN Installer.

Prerequisite Installs

The ASPEN Installer first checks your system for prerequisite programs. It searches for the Windows Installer, .NET and the Microsoft Report Viewer. If any of these programs are not present, you will need to install before continuing. Follow the on-screen prompts for any necessary installations.

- Click **Install** for each program the installer prompts you to install.

  Depending on the programs that are installed, you may be asked to reboot your system to continue. The install automatically continues after reboot.

3. On the Welcome screen, click **Next**.

4 In the Select Features window, select **ASEq**; click **Next**.

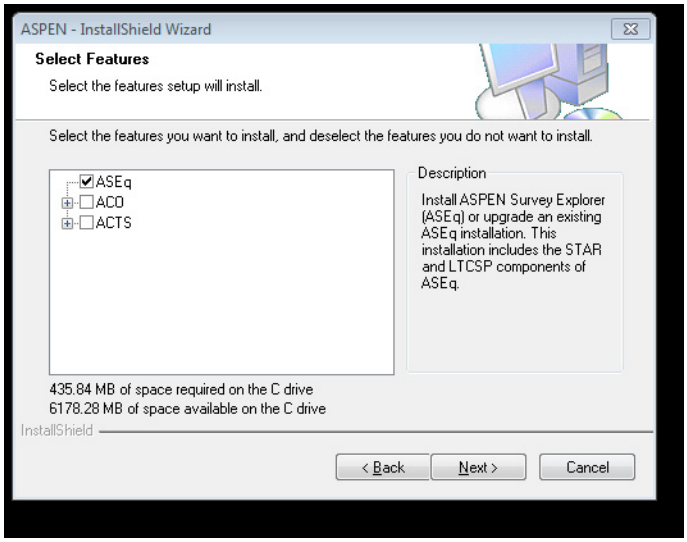

Figure 6: ASE-Q selected in Select Features screen

CAUTION! Anytime you use the ASPEN Installer, select *ALL* the components that you want installed on the current machine. Any component that is not selected will be uninstalled.

For example, if you have already installed the latest version of ACO Client and now need to add the same version of ACTS Client, select *BOTH* ACO Client and ACTS Client, or ACO will be uninstalled.

5 Click **Next** to install ASE-Q to the default location, C:\ASPEN\ASEQ (recommended), or browse to and select a different location, then click **Next**.

Note: Installation to the C:\Program Files\ folder is not recommended. Microsoft Windows enforces security that prevents modification of files in the C:\Program Files folder that may interfere with ASPEN updates. If you install under Program Files you need to change folder properties to allow updates to the ASPEN folder and any of its sub-folders.

The following window appears when Sybase is successfully installed.

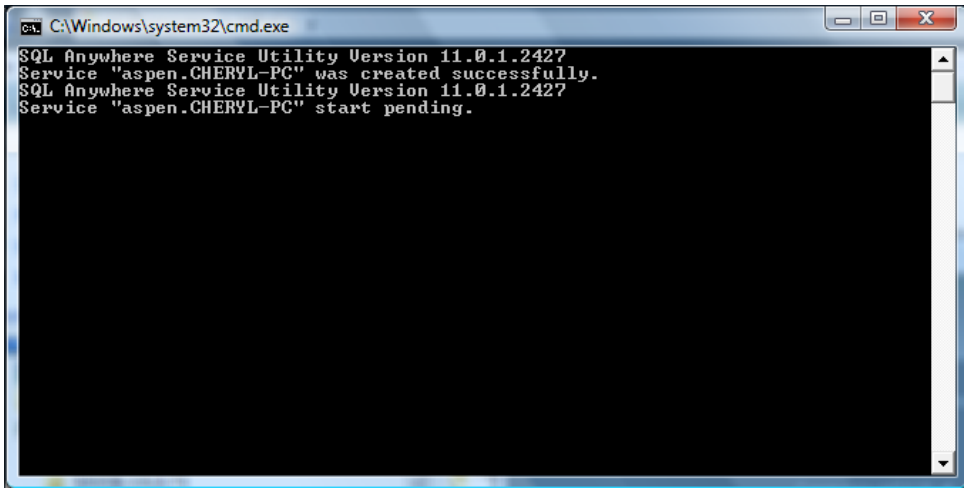

Figure 7: SQL Anywhere Installation completed screen

6 On the InstallShield Wizard Complete screen select **Yes** to have the installer restart your computer, then click **Finish**.

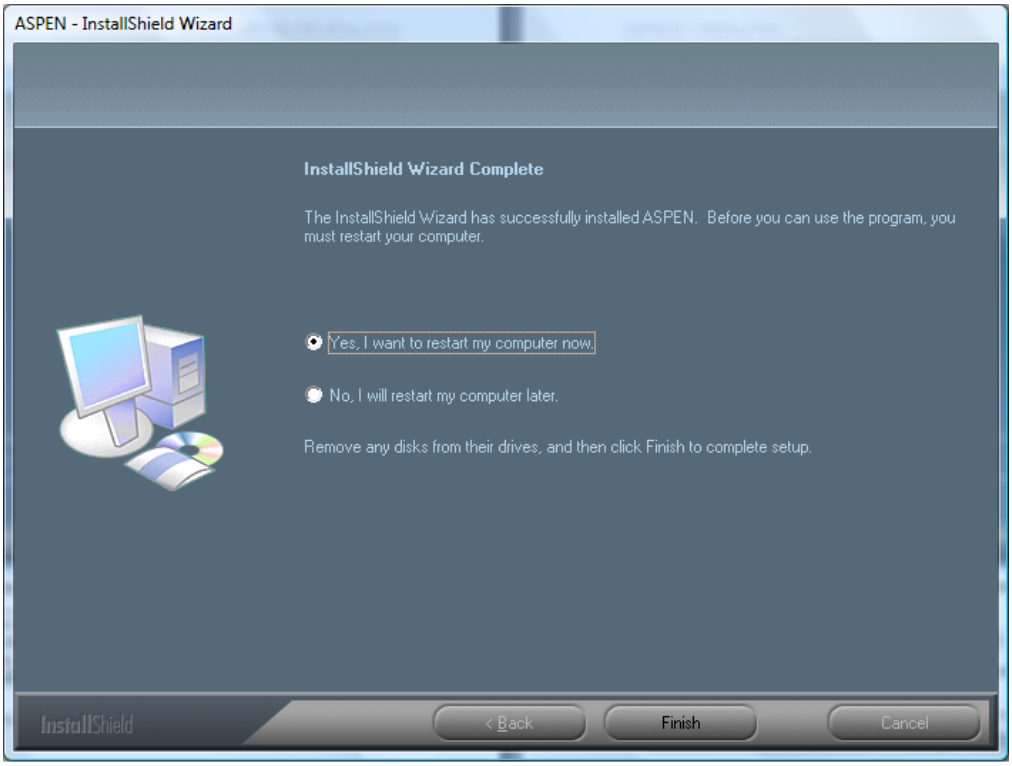

Figure 8: Installation complete screen

This completes the ASE-Q installation.

For your convenience, the installer adds an ASE-Q shortcut to your desktop.

Finalize ASE-Q Installation

CAUTION! You must have administrative privileges to perform the install.

Once ASE-Q has been installed you may need to do a few more things to ready the software for use. This chapter tells you how to

- Export user accounts from ACO
- Open ASE-Q on a laptop for the first time
- Create a temporary password
- Transfer files using wired or wireless methods from ASE-Q to ASE-Q
- Shut down and restart the Sybase database

Export User Account Files from ACO

You can export user account files from ACO into ASE-Q. You will use this primarily to transfer user accounts to surveyor laptops for those who need to open ASE-Q for the first time. You can use this option to export data for one or multiple surveyors.

1. In ACO, select **System**, **Specialty Info Transfer**, **Export ASE Users**.

The ASE User Export window defaults to a view of Users with ASE Accounts. You can also choose to view Users without ASE Accounts, or All Users.

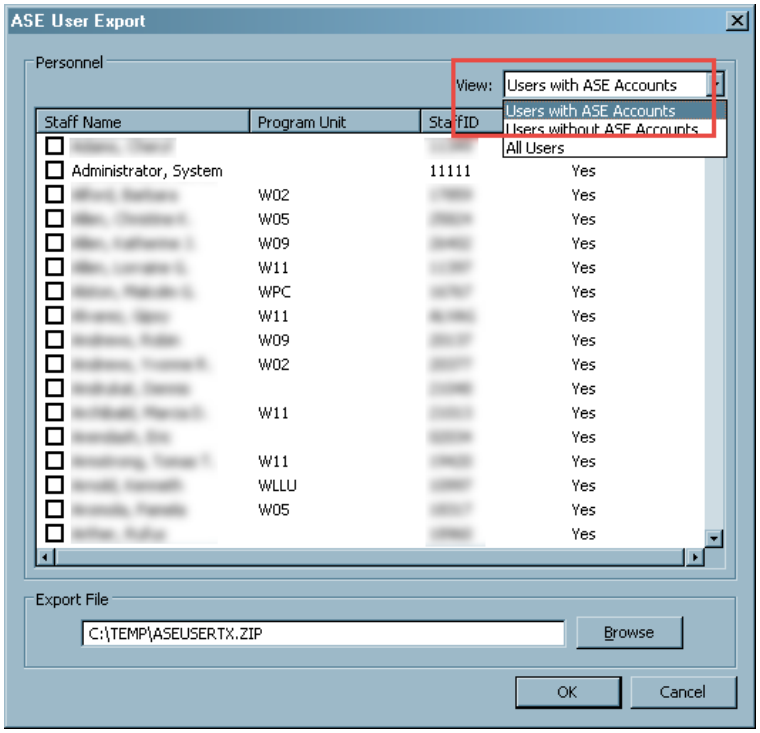

Figure 9: ASE-Q User Export window

2 Select the surveyors whose user account information you want to export.

3 Browse to or type in the location of the export file that you created in "Export User Account Files from ACO" on page 21.

The default filename for user account files is ASEUSERTX.ZIP. You can change the name when you need to create different personnel files for use on different laptops. On import, ASE-Q will check the file to confirm it contains personnel tables, then import the tables.

4 Click **OK** to transfer the user information.

Open ASE-Q on a Laptop for the First Time

The first time you use ASE-Q on a laptop, you will have to do some preliminary configuration.

1 Double-click the ASE-Q icon on your desktop.

2 When prompted, enter your **User Name** and **Password**.

At this point, Microsoft Windows validates the login information you provide against user information listed by the computer for its current domain. If Windows recognizes your login, ASE-Q checks to see if your user account info also exists in the ASE-Q database.

If the new Sybase database has never been opened before (and therefore contains no user accounts), you will see:

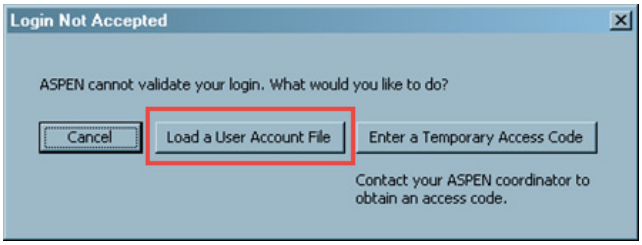

Figure 10: Unvalidated login message

3. Select **Load User Account File**. **Cancel** aborts opening the application.
4. The Select For Import window opens. Navigate to and select the **ASEUserTx.ZIP** file. If you have changed the name of the user information file, you will need to change Files of type to see All Files (*.*).
5. Click **Open** to initiate the transfer.
6. In the Finalize Transfer dialog, click **Apply** to complete the transfer and open ASE-Q.

Note: If none of the personnel records you import have an ASE-Q login equal to the Windows login of the computer you are using, ASE-Q will not open, and you will return to the Login Not Accepted screen.

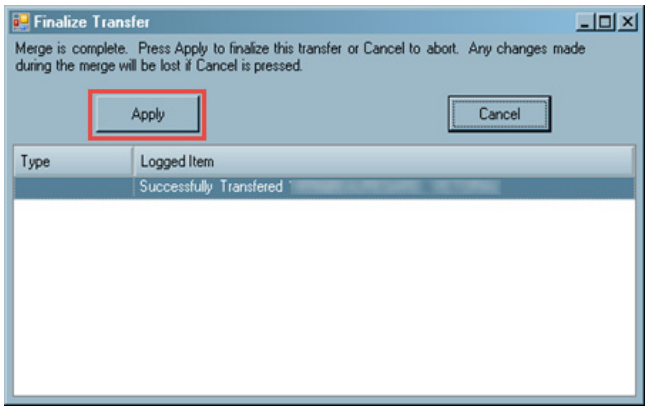

Figure 11: Finalize user record transfer

Enter a Temporary Access Code

In some instances you may need to provide access to a survey for a surveyor who has a Windows login for a machine but does not have an ASE-Q login. For temporary access to the survey, the surveyor must request a temporary access code from the ASPEN Help Desk, 888-477-7876.

To be granted a temporary access code

- You must request the temporary access code from the ASPEN Help Desk.
- The request must come from a trusted source, e.g., an ASPEN Administrator with a known callback number.
- The request must include the Event ID of the survey.

The temporary access code provides full access to the specified survey event only; no other surveys will be available to the temporary user. The survey must already be contained in the ASE-Q database. The access code is valid until two weeks after the exit date of the survey.

1. Open ASE-Q. In the Login window, enter a valid Windows **User Name** and **Password**. Click **Log In.** This user name will not be recognized by ASE-Q and the Login Not Accepted window opens.

   Select **Enter a Temporary Access Code**.

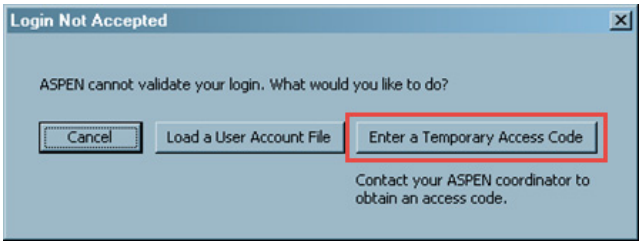

Figure 12: Enter a temporary access code

2. Enter the Event ID for the survey for which you need access.

   Enter the temporary access code provided by the ASPEN Help Desk. Click **OK**.

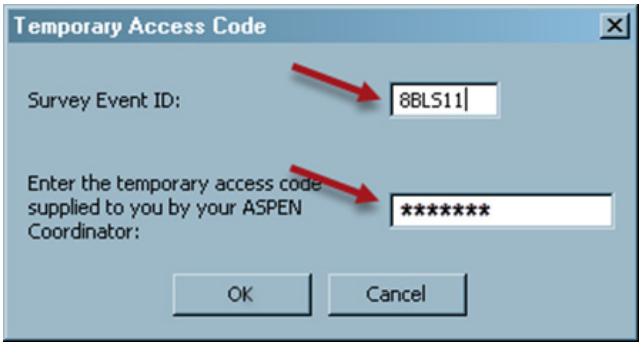

Figure 13: Enter a temporary access code

3. In the Welcome to ASPEN window, select **New**.
4. In the Enter New Staff Information window, enter the required information.
   - Federal and State IDs, Last Name, and Title Code are required.
   - Federal Surveyor ID cannot be changed after you save the record.
5. Click **OK** to save the record.

Requirements for wired and wireless ASE-Q to ASE-Q transfers

To allow ASPEN to transfer data using other methods besides USB, all states and regions must have two ports opened in all software firewalls, including the Microsoft built-in firewall, installed on each computer. The required port numbers that must be permitted are **901** for UDP, and **2638** for TCP. These ports are used for the application to discover ASE-Q databases on the same network, and to transfer data. If they are blocked, ASE-Q will not be able to transfer data over a network.

Another requirement to allow non-USB data transfers is that all computers involved in the transfer must be on the same subnet, or use dynamic IP addresses obtained from a DHCP server. If the computers are using static IP addresses on separate networks, or the computers are a mix of static and dynamic addresses, transfers will not be able to be performed over a network.

These rules apply to direct wired transfer and wireless transfers—but not to transfer files on USB drives.

Requirements for LTCSP

ASE-Q uses a background server component for supporting LTCSP. The server runs on port 8443 by default, and this port must be opened in all software firewalls. If the port is already in use by other software running on the computer you can configure ASE-Q to use a different port.

From the Systems menu in ASE-Q, select the LTCSP Management option. The LTCSP Server Port is configurable on the LTCSP Management screen.

How to Shut Down/Restart the Sybase Database

Sybase SQL Anywhere is a robust database engine, with increased capability, scalability, and stability. SQL Anywhere also applies algorithms from the Federal Information Processing Standard (FIPS) Publication 140-2, securing both data-sensitive tables and data transfer.

The Sybase database runs as an automatic service wherever ASE-Q is installed. The load is minimal, but you should know that Sybase is “always on”. Some troubleshooting and backup procedures may require closing Sybase temporarily. If you close Sybase, you will need to restart Sybase manually (or reboot the computer) to be able to open ASE-Q.

If you need to temporarily shut down the Sybase SQL Anywhere database:

1. Select **Start** | **Run**.
2. In the Run window, type **services.msc**.
3. In the right pane of the Services window, right-click **SQL Anywhere** and select **Stop**.

Alternatively, you can right-click the Sybase icon in the notification area of the Windows taskbar (next to the clock), and select **Shut down**.

You can restart the SQL Anywhere database by rebooting the computer, or

1. Select **Start** | **Run**.
2. In the Run window, type **services.msc**.
3. In the Services window, right-click **SQL Anywhere** and select **Start**.

Special Considerations for Imaged-Based Installation

Many states use an imaging process for setup of new machines—a copy of the entire hard drive from a fully configured PC is transferred to the hard drive of a new machine. For ASE-Q, with its Sybase database, a unique ASPEN database instance is needed on each ASE-Q PC. ASE-Q computers with imaged installs may share the same instance name as the source PC.

To support state imaging procedures, a database instance rename utility is available to ensure each client has a unique ASE-Q database name. This utility can be run in manual or silent (automatic) mode. Silent mode supports integration with automated imaging procedures. The rename utility must run from a user or process with privileges that allow changes to Windows services. The Administrator account typically has such privileges.

To obtain this Sybase database rename utility, please contact the ASPEN Help Desk, 888-477-7876.