SCIEX OS Software 3.4

Software Installation Guide

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Introduction 1

This guide supplies information about, and procedures for, the installation of the SCIEX OS software 3.4, the integrated vertical applications, and the Central Administrator Console (CAC) software. The guide also includes information about supported devices and firmware and tips for troubleshooting the installation.

For information about new software features, enhancements, and known issues, refer to the document: *Release Notes*, which is included with the software package.

Important Information to Know Before Installation

Read this guide before installation or upgrade of the SCIEX OS software.

Note: Back up the data folders for the SCIEX OS software to a safe location before an upgrade. For more information, refer to the section: Back up the Data Folders to a Safe Location. These folders contain the device configurations, security data, methods, and batches.

To make sure that the software installation is successful, read the following points carefully before the start of any of the procedures in this guide:

- The SCIEX OS software uses electronic licensing. For license activation, refer to the section: Electronic Licensing.

- All versions of the SCIEX OS software require a valid software license. These licenses are provided with new instrument purchases and can also be purchased separately from SCIEX. For information about the validity of the current license or about purchasing additional licenses, contact a SCIEX sales representative or Technical Support through sciex.com/request-support.

  Note: In addition to a license for the SCIEX OS software, licenses for optional modules and features might be required.

- Data files acquired with the SCIEX OS software 3.4 cannot be opened in earlier versions of the SCIEX OS software. However, data acquired in earlier versions of the SCIEX OS software can be opened in the SCIEX OS software 3.4.

- Results Tables created in the SCIEX OS software 3.4 cannot be opened in earlier versions of the SCIEX OS software. However, Results Tables created in earlier versions of the SCIEX OS software can be opened in the SCIEX OS software 3.4.

- All devices supported in earlier versions of the SCIEX OS software continue to be supported in the SCIEX OS software 3.4. Some devices might require firmware upgrades. Refer to the section: Devices and Firmware.

- The SCIEX OS software 3.4 is available as a web download package. If a DVD is required, then contact a local sales representative.

- If the SCIEX OS software will be installed on a computer with the Analyst or Analyst TF software, then deactivate the hardware profile and close the Analyst or Analyst TF software before the start of the installation.

- For more information about the compatibility of the SCIEX OS software with other software applications, refer to the section: Compatible Software.

Functionality Included

The SCIEX OS 3.4 software contains the functionality in the previous release of the software.

Requirements 2

Computer Requirements

Acquisition Computer with the SCIEX OS Software

- **Recommended Computer:**

  - SCIEX Workstation or Workstation+, with:

    - An Intel Xeon W-2245 processor (8 core, 16.5 MB cache, 3.9 GHz, 4.7 GHz Turbo HT 16.5 MB, 155W DDR4-2933, with NVIDIA P400 or T400)

    - 32 GB (2 × 16 GB) DDR4 3200 MHz RDIMM ECC

    - SCIEX Workstation: 2 × 1 TB SSD (RAID1)

    - SCIEX Workstation+: 2 × 2 TB SSD (RAID1)

- **Supported Computers:**

  - SCIEX Alpha Workstation 2020, with:

    - An Intel Core I5-8500 processor (6 core, 9 MB cache, 3.0 GHz, 4.1 GHz Turbo, with HD Graphics 630)

    - 32 GB (2 × 16 GB) DDR4 2666 MHz UDIMM Non-ECC

    - 2 × 2 TB HDD (RAID1)

  - Dell OptiPlex XE2 computer, with:

    - An Intel Core I5-4570S processor (Quad core, 2.90 GHz, 6 MB with HD Graphics 4600)

    - 32 GB DDR3 1600 MHz SDRAM

    - 2 × 2 TB HDD (RAID1)

- **Operating System:** Windows 10 (64-bit), version 1809 LTSC. English operating system only.

- **Ethernet:** At least two Ethernet port connections.

Note: Newer computer models might become available. Consult the local sales representative for the latest information.

Requirements

Processing Computer with the SCIEX OS Software

For the processing computer, we recommend the use of the computers shown in the section: Acquisition Computer with the SCIEX OS Software. However, a different computer can be used, if it meets the requirements in the following table.

Table 2-1 Requirements for the Processing Computer

Specification	Requirements
Operating system	Windows 10 (64 bit), version 1809 LTSC, 20H2, 21H2, or 22H2. English, French, German, and Italian operating systems are supported.
Processor	Intel Xeon W3-2435, 22.5 MB, 8 cores, 3.1 GHz to 4.5 GHz
RAM	32 GB DDR5, 4800 MHz
Data storage	Nominal mass systems: 2 × 1 TB Raid 1, NVMe SSD, Class 40 Accurate mass systems: 2 × 2 TB Raid 1, NVMe SSD, Class 40

CAC Software

Note: The Central Administrator Console (CAC) software cannot be installed on the same computer as the SCIEX OS software.

For the server for the CAC software, we recommend the use of the computers shown in the section: Acquisition Computer with the SCIEX OS Software. However, a different computer can be used, if it meets the requirements in the following table.

Table 2-2 Requirements for the Server for the CAC Software

Specification	Requirements
Operating system	Windows 10 (64 bit), version 1809 LTSC, 20H2, or 21H2; Windows Server 2019 and later. English operating system only.
Processor	Multicore processor (with 64-bit support), 3 GHz
RAM	8 GB, 32 GB recommended
Data storage	1 TB SSD minimum

Windows Requirements

- Language settings: English

- Region settings: English, French, or German

- (Recommended) System Restore: Disabled

- Windows Updates: Notify only

Note: The SCIEX OS software cannot be installed or used on a computer with Federal Information Processing Standards (FIPS) enabled (**System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing**).

Note: Every SCIEX computer is configured with a local Administrator-level account, **abservice**. This account is used by SCIEX service and technical support to install, service, and support the system. Do not remove or deactivate this account. If the account must be removed or deactivated, then prepare an alternate plan for SCIEX access, and communicate it to the local FSE.

Note: If the computer is not supplied by SCIEX, then make sure that the .NET Framework 4.x is installed on the computer. If the .NET Framework is not installed, then before installation of the SCIEX OS software, open the `Install/NDP472-KB4054530-x86-x64-AllOS-ENU.exe` file, found in the installation package.

Network Requirements

Note: For information about the network security requirements for network acquisition, refer to the document: *Laboratory Director Guide*. This document is in the `Install\ProductSpecificDocumentation` folder in the installation package for the SCIEX OS software.

Software Updates Feature

The Software Updates feature has the following additional requirements:

- Outbound connectivity that uses the HTTPS protocol on port 443 is enabled.
- The firewall lets outbound communications be sent from the SCIEX OS software to Amazon Web Services (AWS), including: https://sciexos.com.
- Transport Layer Security (TLS) 1.2, or later, is installed.

Contact the local network administrator to make sure that these requirements are obeyed.

The Software Updates feature in this version of the SCIEX OS software does not support communication to the Internet through a corporate proxy server. If a proxy server is used, then an error is shown when the user clicks **Check for updates** on the Software Updates page.

CAC Software

- The Central Administrator Console (CAC) software uses TCP ports 63333 and 44144 for communication with the SCIEX OS software.

- The CAC server is open for inbound traffic on port 63333, and it is open for outbound traffic on ports 44144 and 63333.

- The computer with the SCIEX OS software is open for inbound traffic on ports 63333 and 44144, and it is open for outbound traffic on port 63333.

- If the queue monitoring feature is in use, then ports 5000 and 5001 must also be open for inbound traffic on the CAC server.

- If the queue monitoring feature is being used with multiple domains, then configure a trust relationship between all of the domains.

To configure the Windows firewall for use with the CAC software, refer to the section: Configure Windows Firewall.

Software Requirements

- Microsoft Office 2013, 2016, or 2021, 32 bit or 64 bit, is required to create, open, and edit the report templates that are used in the Analytics workspace.

  Note: These report template functions are not supported in Microsoft Office 365.

  Note: The SCIEX OS software can be installed on a computer with Microsoft Office 365. If the SCIEX OS software and Microsoft Office 365 are installed on the same computer, then the user can use Microsoft Office 365 to generate and open reports in the SCIEX OS software.

  Note: Acquisition and processing computers, such as the Alpha and SCIEX workstations, with the Windows 10 LTSB/LTSC operating systems are not compatible with Microsoft Office 365.

- The Chrome and Edge browsers are recommended for use with the central monitoring feature.

Licensing Requirements

The SCIEX OS software 3.4 requires activation with a valid SCIEX OS software `3.4` license file. The license file controls the features and applications that are available, such as acquisition or processing. Additional license files might be required for optional features, such as CFR, Scout triggered MRM (stMRM) acquisition, and the Molecule Profiler software.

For the SCIEX OS software, both node-locked and server-based licenses are available. For the Central Administrator Console (CAC) software, only node-locked licenses are available.

Compatible Systems

The following sytems are compatible with the SCIEX OS software 3.4.

Table 2-3 Supported Mass Spectrometers and Ion Sources

Mass Spectrometer	Supported Ion Sources
X500R QTOF or X500B QTOF system	Turbo V ion source
ZenoTOF 7600 system	Turbo V ion source OptiFlow Turbo V ion source
ZenoTOF 7600+ system	Turbo V ion source OptiFlow Turbo V ion source
Echo® MS+ system with ZenoTOF 7600 system	Turbo V ion source OptiFlow Turbo V ion source
SCIEX 4500 system	Turbo V ion source
SCIEX 5500 system	Turbo V ion source OptiFlow Turbo V ion source (Micro probe)
SCIEX 5500+ system	Turbo V ion source OptiFlow Turbo V ion source (Micro probe)
SCIEX 6500 system	IonDrive Turbo V ion source OptiFlow Turbo V ion source Turbo V ion source
SCIEX 6500+ system	IonDrive Turbo V ion source OptiFlow Turbo V ion source Turbo V ion source
Echo® MS system with SCIEX Triple Quad 6500+ system	IonDrive Turbo V ion source OptiFlow Turbo V ion source Turbo V ion source
Echo® MS+ system with SCIEX Triple Quad 6500+ system	IonDrive Turbo V ion source OptiFlow Turbo V ion source Turbo V ion source

Table 2-3 Supported Mass Spectrometers and Ion Sources (continued)

Mass Spectrometer	Supported Ion Sources
SCIEX 7500 system	OptiFlow Pro ion source
SCIEX 7500+ system	OptiFlow Pro ion source

Compatible Software

The following applications are compatible with the SCIEX OS software 3.4 on Windows 10 operating systems.

Table 2-4 Compatible Software

Software Name	Additional Information
Biologics Explorer software 1.0, 1.1, 2.0, 3.0, 3.1, and 4.0	Use the tile on the Home page in the SCIEX OS software to get access to Biologics Explorer software 3.0, 3.1, and 4.0.
CloudConnect 1.8	The PeakView software 2.2 or later is required.
LibraryView software 1.6	The SCIEX OS software cannot be installed on the same computer as the LibraryView software 1.0.x or 1.1 to 1.4.
Molecule Profiler software 1.3.1.	The Molecule Profiler software is a part of the installation package. For installation instructions, refer to the section: Install the SCIEX OS Software.
MarkerView software 1.4	The MarkerView software is a part of the installation package. For installation instructions, refer to the section: Install the SCIEX OS Software.
OneOmics suite 3.4	The PeakView software 2.2 or later is required.
ProMassProcessor 1.0	—
StatusScope remote monitoring service 2.2, 2.2.1, 2.2.2, and 2.3	—

Note: The SCIEX OS software can also be installed for data processing on the same computer as the Analyst software 1.6.3 or later and the Analyst TF software 1.7.1 or later.

Note: The SCIEX OS software is compatible with the data files that are acquired with the Analyst software 1.6.2, 1.6.3, and 1.7 or later, and the Analyst TF software 1.7.1 or later.

Note: The SCIEX OS software cannot be installed on the same computer as the Analyst Device Driver (ADD), Cliquid, MasterView, or MPX software.

Installation Instructions 3

Note: Internet access is required to download the software. We recommend that all of the required software and materials be downloaded before the scheduled installation to decrease the time required for the installation.

Back up the Data Folders to a Safe Location

Before upgrading the SCIEX OS software, back up these folders to a safe location, such as a network drive or DVD:

- **`SCIEX OS Data`:** This folder contains all methods, batches, and data. By default, this folder is installed in `D:\SCIEX OS Data`.

- **`ProgramData\SCIEX`:** This folder contains all security and device configuration data.

  Note: This is a hidden folder. If it is not visible, then configure File Explorer to show hidden items.

If the backup software encounters locked files, then skip them.

Note: The backups are required to go back to the previous version of the SCIEX OS software. If the backups are not available, and the previous version of the SCIEX OS software is reinstalled, then it will be necessary to recreate all methods and reconfigure security.

Do not rename the existing `ProgramData\SCIEX` folder. We recommend that the same `SCIEX OS Data` folder be used for the new version of the SCIEX OS software, to provide access to existing data, such as methods, batches, data, and Results Tables.

Install the SCIEX OS Software

Prerequisites
• Echo® MS and Echo® MS+ systems: Make sure that the correct firmware version is installed on the Echo® MS or Echo® MS+ system. Refer to the section, Devices and Firmware. To upgrade the firmware version, contact SCIEX support. • Make sure that a SCIEX OS software `3.4` license key is available. The license key might be distributed on a printed activation certificate, or in an e-mail from SCIEX Now. If the license key is missing, then contact a SCIEX sales representative. • If a Windows Update is in operation, then wait until the update is completed. • If a restart is required after a Windows Update, then restart the computer before the start of the installation. • ExionLC 2.0 systems: If the SCIEX OS software will be used for acquisition on a computer that will also have the Analyst software 1.7.3, or the Analyst software 1.7.3 with HotFix 1 or 2 installed, then install the Analyst software and HotFixes, if applicable, before the SCIEX OS software. Analyst 1.7.3 HotFix 3 can be installed before or after the SCIEX OS software.

Note: The VC++2008 SP1 MFC Security Redistributable package is also required. If this package is not installed, then the installation program will install it. Do not remove the package. If the package is removed, then the SCIEX OS software will not operate correctly when an ExionLC 2.0 system is used.

Use this procedure to install the SCIEX OS software and the optional integrated applications, the MarkerView and Molecule Profiler software.

During the installation, the user selects the type of installation and the applications and features to be installed.

To install the CAC software, refer to the section: Install the CAC Software.

Note: The CAC software is a part of the SCIEX OS installation package. However, the CAC software and the SCIEX OS software cannot be installed on the same computer.

Note: The installation program disables the System Restore task.

Note: To make changes to the installation after the installation completes, deactivate the devices in the SCIEX OS software before the use of the **Modify** option. Refer to the section: Installation Troubleshooting Tips.

1. Log on to the computer as a Windows user with Administrator privileges.

2. Make sure that all applications are closed.

3. To install the software from a DVD, put the DVD in the DVD drive.

4. To install the software from a downloaded file, do these steps:

    a. Download the required `zip` file from sciex.com/software-downloads.

        Tip! To prevent installation issues, save the file to the local computer, in a location other than the computer desktop. Then, before the start of the installation, disconnect any external USB storage devices.

    b. After the download is complete, right-click the downloaded file and then click **Extract All** to extract the installation package.

5. Acquisition computers for X500 QTOF and ZenoTOF 7600/7600+ systems: Install the driver:

    • X500 QTOF systems: Browse to the `Drivers` folder of the DVD or installation package and then double-click the `xTDC4_driver_v1.1.1.exe` file to install version 1.1.1.

    • ZenoTOF 7600/7600+ systems: Browse to the `Drivers` folder of the DVD or installation package and then double-click the `Ndigo_driver_v1.5.4.exe` file to install version 1.5.4.

6. In the `Install` folder on the DVD or in the installation package, double-click the `Setup.exe` file.

7. Obey the on-screen instructions.

    During the installation, prompts to select the type of installation and the modules to be installed are shown.

    • **Acquisition + Processing**

    • **Processing**

    • **Administration**

Figure 3-1 Choose Modules for Installation Dialog
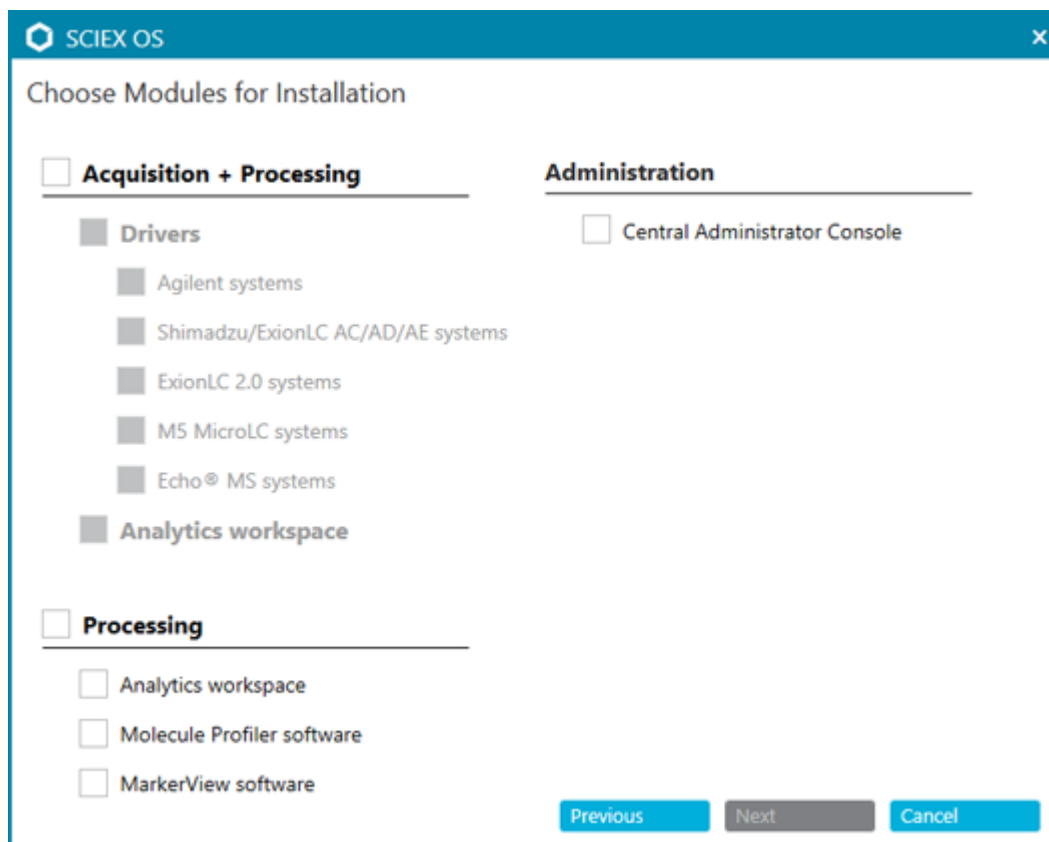
Note: ExionLC 2.0 systems: If the SCIEX OS software will be installed on a computer on which the Analyst software is used for acquisition, then do not install the drivers for the ExionLC 2.0 system during the installation of the SCIEX OS software.

Note: Make sure that the type of license is correct for the modules selected for installation. Licenses might be required for optional features and integrated applications.

Note: To prevent installation issues, install the software on a local drive. Do not install the software on a network or removable drive.

Note: To prevent installation issues, make sure that the path to the installation folder is 118 characters or less. If the path is longer than 118 characters, then installation will not continue.

> **Tip!** If an upgrade to the .NET Framework is required, then a prompt for a computer restart is shown during the installation. Users have the option to continue with the restart immediately or to postpone the restart until later. However, installation does not continue until after the restart.

If the installation does not complete successfully, then use the SCIEX OS Installation Repair Tool to identify the issue. Refer to the section: SCIEX OS Installation Repair Tool.

8. Restart the computer.

9. (Optional) Use the SCIEX OS Installation Confirmation Tool to make sure that the software was installed correctly:

   a. From the Windows Start menu, select **SCIEX OS** > **Installation Confirmation Tool**.

   b. In the SCIEX OS Installation Confirmation Tool, click **Start verifying installed files**.

   c. After the analysis is complete, click **Print Report**, select a printer, and then click **Print**.

10. If the CAC software is used, then configure the Windows firewall on the computer. Refer to the section: Configure Windows Firewall.

    Use TCP ports 63333 and 44144 for communication with the CAC software. The computer must permit inbound traffic on ports 63333 and 44144 and outbound traffic on port 63333.

11. Open the software.

12. Use the license key to activate the software, including optional features and integrated applications. Refer to the section: Electronic Licensing.

    > **Note:** Supported accurate and nominal mass systems: If the SCIEX OS software 3.4 license includes licensing for the LibraryView software, then the LibraryView software must be installed separately.

    > **Note:** In addition to the SCIEX OS software license, licenses might be required for optional features and integrated applications. Make sure to get and activate the licenses before trying to use these features.

13. (If required) For acquisition computers, run the MS FW Updater to update the MS firmware and instrument configuration tables. Refer to the sections: MS FW Updater Utility and Mass Spectrometer Firmware Versions.

    > **Note:** To give users access to the SCIEX OS software, add them to the security database. Refer to the document: *Laboratory Director Guide* or *Help*.

Install the CAC Software

Prerequisites
• Make sure that a license key for the CAC software is available. The license key might be distributed on a printed activation certificate, or in an e-mail from SCIEX Now. If the license key is missing, then contact a SCIEX sales representative.
• If a Windows Update is in progress, then wait until the update is finished.
• If a reboot is required after a Windows Update, then reboot the computer before beginning the installation.
• To use the queue monitoring feature, install a TLS certificate. To get a certificate, contact the customer IT department. The certificate name must be `CACServerCertificate`. The certificate must be installed in the `Local Computer/Trusted Root Certification Authorities` store. **Note:** To use a different certificate name, edit the `IssuedTo` property in the `C:\Program Files\SCIEX\SCIEX OS\appsettings.json` file.

When installing the software from a DVD, always install it from the official SCIEX DVD and confirm after the installation that the correct version is installed.

Note: The installation program disables the System Restore task.

Note: To make changes in the installation, deactivate the devices in the SCIEX OS software before using the **Modify** option. Refer to the section: Installation Troubleshooting Tips.

1. Log on to the computer as a Windows user with Administrator privileges.

2. Make sure that all applications are closed.

3. To install the software from a DVD, load the DVD in the DVD drive.

4. To install the software from a downloaded file, do these steps:

   a. Download the required zip file from the SCIEX website.

   > **Tip!** To prevent installation issues, save the file to the local computer, in a location other than the computer desktop. Then, before the start of the installation, disconnect any external USB storage devices.

   b. After the download is complete, right-click the downloaded file and then click **Extract All** to extract the installation package.

5. Double-click `Setup.exe` in the `Install` folder on the DVD or in the installation package.

6. Obey the on-screen instructions. On the Choose Modules for Installation dialog, select **Central Administrator Console**.

Figure 3-2 Choose Modules for Installation
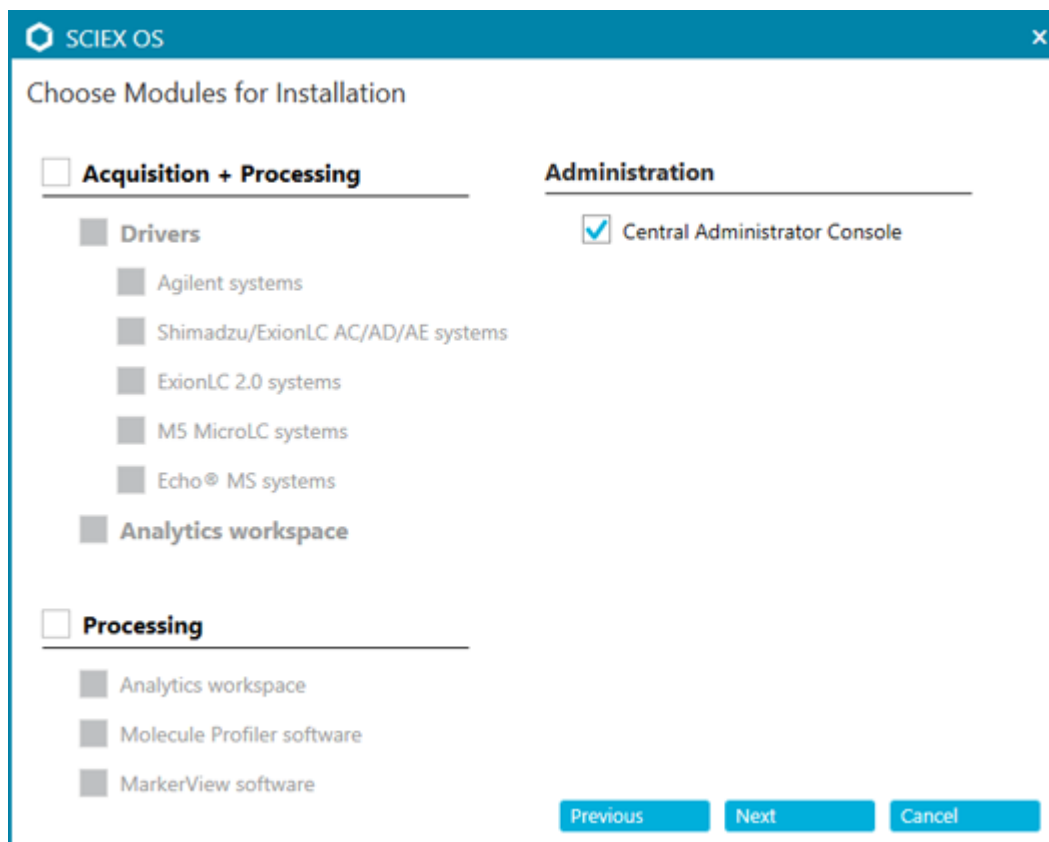
Note: To avoid installation issues, install the software on a local drive. Do not install on a network or removable drive.

Note: To avoid installation issues, make sure that the path to the installation folder is 118 characters or less. If it is longer, then installation will not proceed.

Tip! If an upgrade to .NET is required, then a prompt for a computer restart is shown during the installation. Users have the option to continue with the restart immediately or select the option to postpone the restart until later. However, installation does not continue until after the restart.

If the installation does not complete successfully, then use the SCIEX OS Installation Repair Tool to identify the issue. Refer to the section: SCIEX OS Installation Repair Tool.

7. If prompted, then restart the computer after the software is installed.

> **Note:** A restart is recommended after the software is installed for the first time, even if no prompt is given. A restart is not required after reinstallation of the software.

8. (Optional) Use the SCIEX OS Installation Confirmation Tool to make sure that the software was installed correctly:

   a. From the Windows Start menu, select **SCIEX OS** > **Installation Confirmation Tool**.

   b. In the SCIEX OS Installation Confirmation Tool, click **Start verifying installed files**.

   c. After the analysis is complete, click **Print Report**, select a printer, and then click **Print**.

9. Configure the Windows firewall on the CAC server. Refer to the section: Configure Windows Firewall.

   TCP ports 63333 and 44144 are used for communication with theSCIEX OS software. Open port 63333 for inbound traffic, and open ports 44144 and 63333 for outbound traffic.

   To use the queue monitoring feature, open ports 5000 and 5001 for inbound traffic on the CAC server.

10. Configure the Windows firewall on the computers with the SCIEX OS software. Refer to the section: Configure Windows Firewall.

    TCP ports 63333 and 44144 are used for communication with the CAC server. Open ports 63333 and 44144 for inbound traffic and port 63333 for outbound traffic.

11. Open the software.

12. Activate the software using the license key. Refer to the section: Electronic Licensing.

13. Configure the CAC software. Refer to the document: *CAC Help*.

> **Note:** The administration mode can be changed in the CAC or SCIEX OS software. For instructions for configuring the administration mode in the SCIEX OS software, refer to the *SCIEX OS Software Help System*.

Upgrade the Software

A new software license is required to upgrade from versions of SCIEX OS earlier than version 3.4.

Upgrade SCIEX OS Software to Version 3.4 from Versions 1.4 Through to 3.3.x

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Prerequisites

- Make sure that a license key for the SCIEX OS software is available. Eligible customers can also get an upgrade license key by clicking the **Upgrade Software** button on the Registered Software page in SCIEX Now.

- If any Results Tables contain custom columns with the name **IF**, then change the column name.

- Make sure that the versions of all vertical applications installed on the computer are supported. For supported versions, refer to the section: Compatible Software. If required, update the vertical applications before upgrading the SCIEX OS software. Refer to the section: Install Optional Vertical Applications.

- If a Windows Update is in progress, then wait until the update is finished.

- If a restart is required after a Windows Update, then restart the computer before beginning the upgrade.

- ExionLC 2.0 systems: If the SCIEX OS software will be used for acquisition on a computer that will also have the Analyst software 1.7.3, or the Analyst software 1.7.3 with HotFix 1 or 2 installed, then upgrade the Analyst software and install the HotFixes, if applicable, before the upgrade of the SCIEX OS software. Analyst 1.7.3 HotFix 3 can be installed before or after the upgrade of the SCIEX OS software.

The installation program silently removes the patches that are integrated in this version.

While installing the SCIEX OS software, the user selects the modules to be installed, such as **Molecule Profiler** or **Analytics**.

Note: The CAC software is a part of the installation package for the SCIEX OS software. However, the CAC and SCIEX OS software cannot be installed on the same computer.

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1. Deactivate all devices and then close the SCIEX OS software.

2. Make sure that all other applications are closed.

3. Back up the `C:\ProgramData\SCIEX` folder. Refer to the section: Back up the Data Folders to a Safe Location.

4. For upgrades from SCIEX OS software 1.4: If the Audit Trail feature is being used, then do these steps to save the Workstation audit data:

   a. Browse to the folder, `C:\ProgramData\SCIEX`, and then create a folder named `Audit Data`. Give System, Users, and Administrators read and write access to the new folder.

    b.   Browse to the folder, `SCIEX OS Data\common-project-area\Audit Data`, and then copy the following files:

- `WorkstationAuditMap.atms`

- `WorkstationAuditMapTemplates.atms`

- `WorkstationAuditTrailData.atds`

> **Note:** By default, `SCIEX OS Data` is installed on `D:\`.

    c.   Paste the files in the folder, `C:\ProgramData\SCIEX\Audit Data`.

5. Log on to the computer as a Windows user with Administrator privileges.

6. Acquisition computers: Do these steps:

    a.   Open the currently installed SCIEX OS software.

    b.   Open the MS Tune workspace.

    c.   Click **Positive MS Tuning**.

    d.   Click **Save Tuning Settings** in the left panel and then click **Save settings**.

7. Back up the `SCIEX OS Data` folder. Refer to the section: Back up the Data Folders to a Safe Location.

8. Do one of the following:

- If the software is being installed from a DVD, then insert the DVD in the DVD drive and continue with step 12.

- If the software is being installed from a downloaded file, then continue with step 9.

9. Download the required zip file from the SCIEX website.

> **Tip!** To prevent installation issues, save the file to the local computer, in a location other than the computer desktop. Then, before the start of the installation, disconnect any external USB storage devices.

10. After the download is complete, right-click the downloaded file and then click **Extract All** to extract the installation package.

11. Acquisition computers: Upgrade the drivers.

- X500 QTOF systems: Browse to the `Drivers` folder of the DVD or installation package and then double-click `xTDC4_driver_v1.1.1.exe` to remove the earlier version of the TDC driver and install version 1.1.1

- ZenoTOF systems: Browse to the `Drivers` folder of the DVD or installation package and then double-click the `Ndigo_driver_v1.5.4.exe` file to remove the earlier version of the ADC driver and install version 1.5.4.

12. Double-click **Setup.exe** on the DVD or in the installation package.

13. Follow the on-screen instructions. When prompted, select the modules to be installed.

    Tip! If an upgrade to .NET is required, then a prompt for a computer restart is shown during the installation. Users have the option to continue with the restart immediately or select the option to postpone the restart until later. However, installation does not continue until after the restart.

    If the upgrade does not complete successfully, then use the SCIEX OS Installation Repair Tool to identify the issue. Refer to the section: SCIEX OS Installation Repair Tool.

14. (Optional) Use the SCIEX OS Installation Confirmation Tool to make sure that the software was installed correctly:

    a. From the Windows Start menu, select **SCIEX OS** > **Installation Confirmation Tool**.

    b. In the SCIEX OS Installation Confirmation Tool, click **Start verifying installed files**.

    c. After the analysis is complete, click **Print Report**, select a printer, and then click **Print**.

15. For acquisition computers, run the MS FW Updater utility to update the mass spectrometer firmware and configuration tables, if required. Refer to the section: MS FW Updater Utility.

    For a list of supported firmware versions, refer to the section: Mass Spectrometer Firmware Versions.

16. If required, install the ExionLC 2.0 system driver.

Upgrade from Earlier Versions of the SCIEX OS Software

To upgrade from versions of the SCIEX OS software earlier than version 1.4, remove the earlier version of the SCIEX OS software, and then install the new version.

1. Deactivate all devices and then close the SCIEX OS software.

2. Make sure that all other applications are closed.

3. Back up the `C:\ProgramData\SCIEX` folder. Refer to the section: Back up the Data Folders to a Safe Location.

4. In the Windows Apps & features control panel, remove the SCIEX OS software.

5. Install the SCIEX OS software 3.4. Refer to the section: Install the SCIEX OS Software.

6. Upgrade any vertical applications. Refer to the section: Install Optional Vertical Applications.

Migrate from the Analyst Software

Prerequisites
• Complete the *SCIEX OS eLearning*, available at SCIEX Now Learning Hub.
• Make sure that the acquisition computer meets the requirements for the SCIEX OS software.
• Purchase the license for the SCIEX OS software.

Customers who use the Analyst software to acquire data from SCIEX 4500, 5500, 5500+, 6500, and 6500+ systems can upgrade to the SCIEX OS software, the new mass spectrometry software available from SCIEX. An onsite upgrade service is available from SCIEX. For more information, contact a sales representative or field service employee (FSE).

Note: SCIEX does not support workflows that use both the Analyst and SCIEX OS software to acquire data from the same mass spectrometer.

1. Install the SCIEX OS software 3.4. Refer to the section: Install the SCIEX OS Software.

2. Use the Instrument Settings Converter to import the mass spectrometer settings from the Analyst software into the SCIEX OS software. Refer to the document: *Instrument Settings Converter Release Notes*.

   Tip! The release notes are in the `Instrument Settings Converter` folder in the installation package for the SCIEX OS software.

   Note: Use the version of the Instrument Settings Converter that is supplied in the installation package for the SCIEX OS software 3.4.

3. In the MS Method workspace in the SCIEX OS software, click **Open** > **Convert File**.

4. Import the MS methods that were made with the Analyst software and convert them to the format for the SCIEX OS software.

   Note: Only MS method information is converted. LC methods must be created manually in the SCIEX OS software.

5. Review the transferred settings in the SCIEX OS software to make sure that they are correct.

   Tip! Use the **Verify MS scans** option in the **MS Scan Tuning** procedure in the MS Tune workspace to review the settings. Expected results should be the same regardless of the control software that is installed.

Install Optional Vertical Applications

The integrated applications, the MarkerView and Molecule Profiler software, are installed with the SCIEX OS software. For instructions, refer to the section: Install the SCIEX OS Software.

Note: These applications are activated with a separate license file.

Install the following applications after installation of the SCIEX OS software:

* Biologics Explorer software

* LibraryView software

Note: For supported versions, refer to the section: Compatible Software.

Note: If newer versions of the applications are available, then contact sciex.com/request-support to verify software compatibility.

Prerequisite Procedures
•   Install the SCIEX OS Software

* Make sure that the SCIEX OS software is closed, and then install the optional applications.

  Note: For instructions, refer to the documentation for the optional application: *Biologics Explorer Software Release Notes* or *LibraryView Software Installation Guide*.

Downgrade to Earlier Versions of the SCIEX OS Software

Do this procedure to downgrade from the SCIEX OS software 3.4 to the SCIEX OS software 1.6.1 or later. To downgrade to earlier versions of the SCIEX OS software, contact sciex.com/request-support.

1. In the Windows Apps & features control panel, remove the SCIEX OS software 3.4.

2. Remove all Microsoft C++ Redistributable packages from 2014 to 2019.

3. Install the earlier version of the SCIEX OS software.

Note: If the installation fails, then do the cleanup procedure. Refer to the section: Installation Cleanup.

Remove the SCIEX OS Software

Prerequisites
• Remove any SCIEX OS HotFixes.

1. Log on to the computer as a user with Administrator privileges.

2. Click **Start** > **Control Panel** > **Programs and Features**.

   Tip! If the control panel components are shown by **Category**, then click **Start** > **Control Panel** > **Programs** > **Programs and Features** > **Uninstall a program**.

3. Select **SCIEX OS**, and then click **Uninstall**.

   The software is removed. User intervention is not required.

   Note: The license file is not removed and can be used if the SCIEX OS software is installed again.

MS FW Updater Utility 4

The SCIEX OS software requires that a supported firmware version be installed on the connected mass spectrometer. Use this utility to upgrade the firmware version on the mass spectrometer.

For a list of supported versions, refer to the section: Mass Spectrometer Firmware Versions.

Prerequisites
• The SCIEX OS software 3.4 or later is installed. • The mass spectrometer is active in the Devices workspace. • The computer is connected to the mass spectrometer. • The user is logged on as an Administrator in Windows as well as an Administrator in the User database for the SCIEX OS software.

1. Stop all acquisitions and then clear the queue.

   Make sure that there are no samples waiting in the queue.

2. Close the SCIEX OS software.

3. In the installation package for the SCIEX OS software, browse to the `\FirmwareUpdater\` folder, and then double-click the `MS FW Updater.exe` file.

Figure 4-1 MS FW Updater Utility
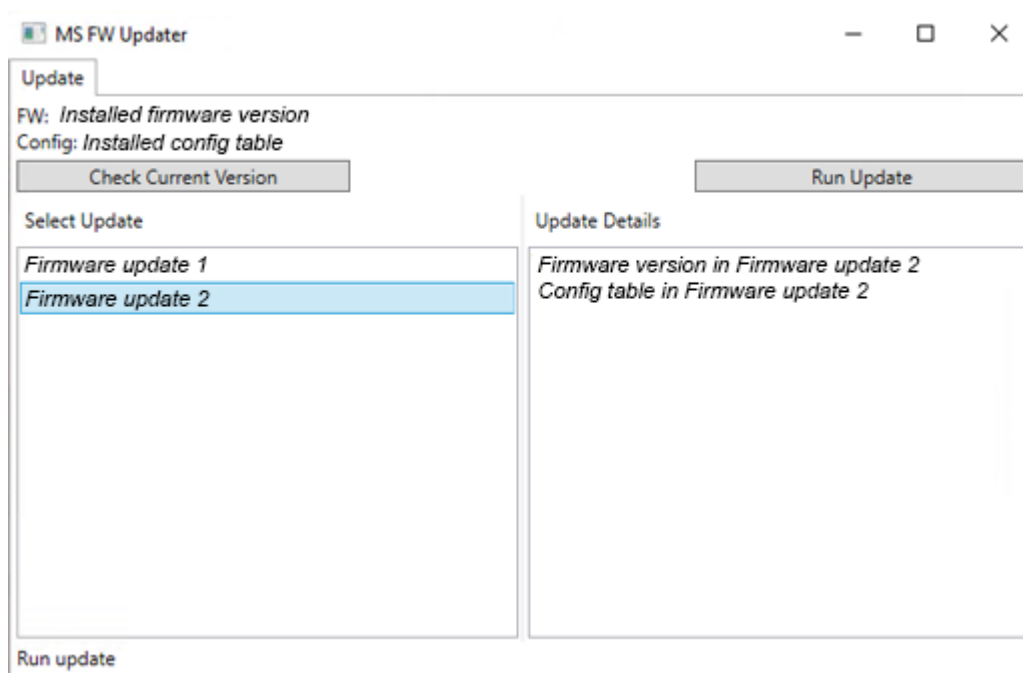
4. In the **Select Update** list, select the mass spectrometer and software version.

5. Click **Run Update** and then follow the on-screen instructions.

Figure 4-2 MS FW Updater Progress Bar
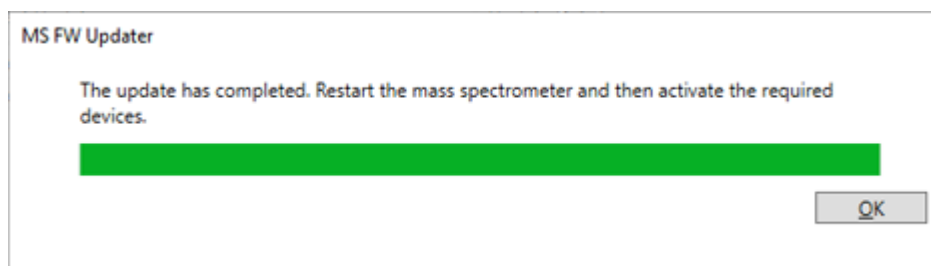
6. After the update completes, click **OK** on the progress bar, and then close the utility.

    Note: The event log in the SCIEX OS software shows that the firmware was updated successfully.

7. Wait 30 seconds and then restart the mass spectrometer. Refer to the document: *System User Guide*.

8. Open the SCIEX OS software and then open the Devices page in the Configuration workspace.
    The mass spectrometer device has been deleted from the list.

9. Add the mass spectrometer to the Device list and then activate the required devices.

    The MS FW Updater utility can be used to go back to a firmware version that is supported by an earlier version of the SCIEX OS software. Start the Firmware Updater utility again, select the required version, and then click **Run Update**.

    Note: X500 QTOF systems: The MS FW Updater cannot go back to firmware versions that are supported by SCIEX OS software versions earlier than version 1.2. To go back to earlier versions, contact sciex.com/request-support.

    Note: SCIEX 7500 systems: The MS FW Updater cannot go back to firmware versions that are supported by SCIEX OS software versions earlier than version 2.0. Earlier versions of the SCIEX OS software do not support the SCIEX 7500 system.

Electronic Licensing 5

The SCIEX OS software supports node-locked licensing for both acquisition and processing workstations. A node-locked license can only be used on one computer. Server-based licensing is only supported for processing workstations. Install the license files for the SCIEX OS software 3.4 and any optional features and applications in the `C:\Program Files\SCIEX\SCIEX OS` folder on the computer where the SCIEX OS software is installed.

Note: For the Central Administrator Console (CAC) software, only node-locked licensing is supported.

Note: If the computer date and time must be changed, then do so before activating the license. Otherwise, the software might not operate.

Note: If the license file is edited, then it becomes invalid and cannot be recovered.

Activate a Server-Based License

Note: This procedure is not applicable for the Central Administrator Console (CAC) software.

For a server-based license, contact the IT department to do the following tasks:

1. Set up a license server:

   a. Ask the IT department to download the `License-Server-Setup.zip` file. Go to sciex.com/software-downloads, and then click **Additional Downloads** > **License Server Setup** > **License Server Setup Software**.

   b. Follow the instructions in the *License Server Setup Guide* contained in the downloaded package.

2. Make a license file for the client computers.

3. Install the license file on each client computer where the SCIEX OS software is installed.

Activate a Node-Locked License

Prerequisites
• A license key is available.

1. On the desktop, double-click the SCIEX OS icon.

Figure 5-1 License Message

2. In step 1 of the SCIEX OS Activation dialog, type the license key.

    The license key might be supplied on a printed activation certificate or in an e-mail from SCIEX Now. If the license key is missing, then contact a SCIEX sales representative.

    Note: The license key starts with AID and is followed by 32 characters: 8 segments of 4-digit codes separated by hyphens.

    ---

3. In the SCIEX OS Activation dialog, click the link in step 3.
    The SCIEX Login web page opens.

4. To log on to a SCIEX account, click **Log In**, or click **Create an Account**.

    When account creation or log on is complete, the SCIEX software activation web page opens. The first name, last name, and e-mail address of the user are shown in the first three fields.

If a license will be activated for the SCIEX OS software on this computer, then the **License Key** field shows the correct information.

5. In the **Select Your Instrument** field, select and type the required information.

    Note: To activate a node-locked license for a processing workstation, use a serial number for any SCIEX instrument. Contact SCIEX Support at sciex.com/contact-us if an instrument serial number is not available.

6. If a license is being activated for the SCIEX OS software on a different computer, then type the computer ID, which is the MAC address of the network port used to connect the computer to the network, and the license key.

7. Click **Submit**.
    A message shows that an e-mail with the license file will be sent.

8. After the e-mail is received, save the attached license file in the `C:\Program Files\SCIEX\SCIEX OS` folder.

9. Use the SCIEX Now web page to get and activate licenses for optional features and applications, such as CFR, Scout triggered MRM (stMRM) acquisition, the Central Administrator Console (CAC) software, and the Molecule Profiler software. For more information, contact Technical Support at sciex.com/request-support.

Troubleshooting 6

SCIEX OS Installation Repair Tool

Prerequisites
• Repair the installation of the SCIEX OS software: Start the installation program (`Install/Setup.exe`), and then select the **Repair** option.

If the repair does not complete successfully, then do this procedure.

Note: The SCIEX OS Installation Repair Tool cannot be used for installations of the Central Administrator Console (CAC) software.

1. To view the status of the installation, in the installation package for the SCIEX OS software, browse to the `Installation Repair Tool` folder, and then double-click `Sciex.Installer.Repair.exe`.

   • In the list of Installed SCIEX Modules, modules that installed successfully are marked with a green check mark ( ) and modules that were not installed are marked with a red × ( ). All modules selected during installation should be marked as passed.

   • On the SCIEX OS Prerequisites tab in the Installer Packages pane, packages shown in red text were not installed or are the incorrect version.

   • On the Subsystem Components tab in the Installer Packages pane, subsystems shown in red text were not installed or are the incorrect version.

2. Close the SCIEX OS Installation Repair Tool.

3. In the Windows Apps & features control panel, remove the following applications, if present, in this order:

   • LibraryView software

   • SCIEX OS software

   • LibraryView Framework

   • Microsoft Access Database Engine

   • Reporter

4. If applicable, remove all of the SQL server applications.

Note: Do not remove the SQL server applications if they are used by existing libraries.

For new installations and upgrades from the SCIEX OS software 1.6.1 and later versions, remove the following applications:

- Microsoft SQL Server 2008 Setup Support Files
- Microsoft SQL Server 2012 (64-bit)
- Microsoft SQL Server 2012 Native Client
- Microsoft SQL Server 2012 Setup (English)
- Microsoft SQL Server 2012 Transact_SQL ScriptDom
- Microsoft SQL Server Compact 3.5 SP2 ENU
- Microsoft SQL Server Compact 3.5 SP2 x64 ENU
- SQL Server Browser for SCL Server 2012
- Microsoft VSS Writer for SQL Server 2012

For upgrades from the SCIEX OS software 1.5 and earlier versions, remove the following applications:

- Microsoft SQL Server 2008 R2 (64-bit)
- Microsoft SQL Server 2008 R2 Native Client
- Microsoft SQL Server 2008 R2 Setup (English)
- Microsoft SQL Server 2008 R2 Setup Support Files
- Microsoft SQL Server Browser
- Microsoft SQL Server Compact 3.5 SP2 ENU
- Microsoft SQL Server Compact 3.5 SP2 x64 ENU
- Microsoft SQL Server VSS Writer

5. Restart the computer.

6. Open the SCIEX OS Installation Repair Tool.

7. If the **Clean up SCIEX OS** button is active, then click it.

8. After the cleanup is complete, close the SCIEX OS Installation Repair Tool.

9. Install the SCIEX OS software. Refer to the section: Install the SCIEX OS Software or Install the CAC Software.

10. If the issues cannot be resolved, then follow the instructions in the section: Installation Cleanup.

Installation Troubleshooting Tips

Note: The software in this procedure can be either the Central Administrator Console (CAC) or SCIEX OS software.

Table 6-1 Installation Issues

Error or Warning Message	Possible Cause	Corrective Action
`The installation could not be completed.` Refer to the figure: Figure 6-1.	Various causes are possible.	Do the procedure in the section: Installation Cleanup.
`The installed version of the Microsoft Visual C++ Redistributable has not been validated with the SCIEX OS software.` Refer to the figure: Figure 6-2.	The version of Microsoft Visual C++ Redistributable that is installed on the computer is later than the version distributed with the software.	If this computer is to be used for acquisition, then remove the Microsoft Visual C++ Redistributable version shown in the warning message, and then install the software again. No action is required if this computer is to be used for processing only.
`Microsoft.Practices.Prism. Regions.UpdateRegions Exception: An exception occurred while trying to create region objects.`	This version of the LibraryView Framework installed on the computer is not compatible with the software.	1. Remove the software. 2. Remove the LibraryViewFramework. 3. Rename `C:\ProgramData\SCIEX` to `C:\ProgramData \SCIEX_Removed`. 4. Install the software.
`Setup.exe - .NET Framework Initialization Error.` Refer to the figure: Figure 6-3.	.NET Framework Version 4.x is not installed.	Install .NET Framework by running `Install/ NDP472-KB4054530-x86- x64-AllOS-ENU.exe`, included in the installation package.

Table 6-1 Installation Issues (continued)

Error or Warning Message	Possible Cause	Corrective Action
The software does not start after the installation is changed with the **Modify** option in the installation program.	The software was installed while devices were active.	To prevent this issue, before using the **Modify** option, deactivate all devices. If the issue occurs, then delete the file: `C:\ProgramData\SCIEX\Clearcore2.Acquisition\HardwareProfile.hwp`. After this file is deleted, the software will open properly.

Figure 6-1 Installation Error (Example)
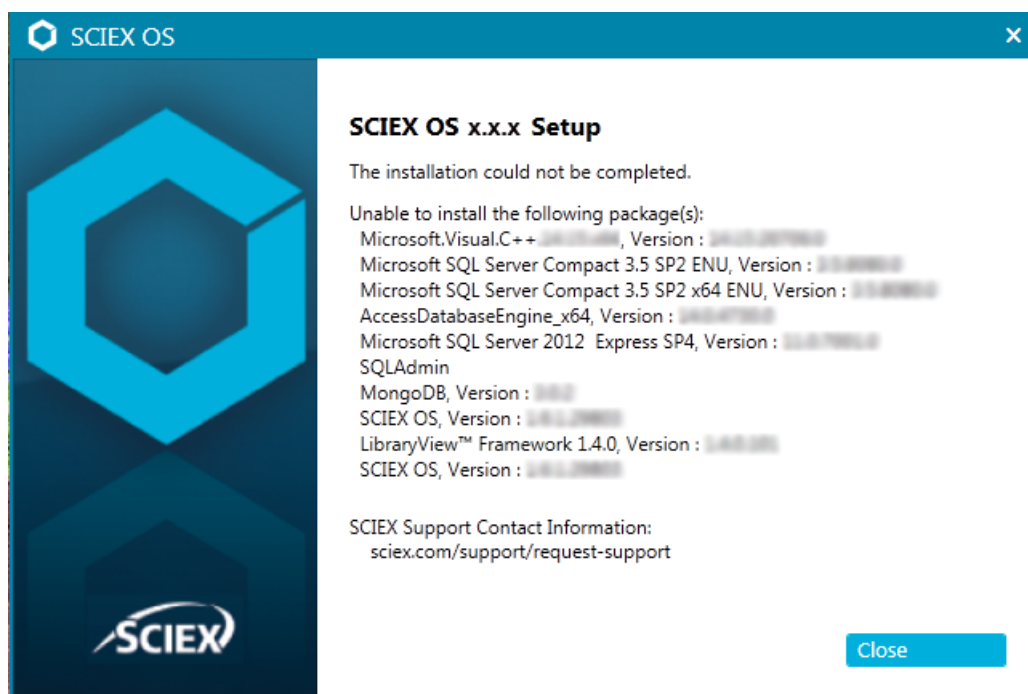
Figure 6-2 Microsoft Visual C++ Redistributable Error
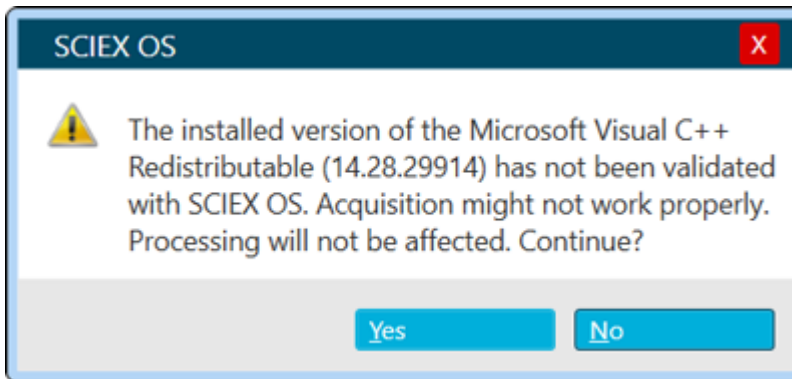
Figure 6-3 .NET Framework Initialization Error
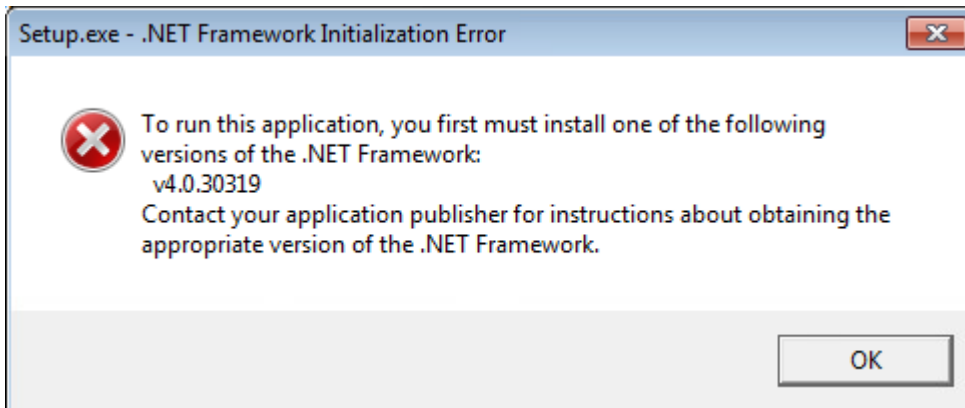
Installation Cleanup

Use this procedure to do an installation cleanup if the SCIEX OS Installation Repair Tool could not complete a cleanup. Refer to the section: SCIEX OS Installation Repair Tool.

1. If the following applications are installed, then in the Windows Apps & features control panel, remove the applications, in this order:

    •   LibraryView software

    •   SCIEX OS software

    •   LibraryView Framework

    •   Microsoft Access Database Engine

    •   Reporter

2. If applicable, then remove all of the SQL server applications.

> **Note:** If the SQL server applications are used by active libraries, then do not remove the applications.

For new installations and upgrades from the SCIEX OS software 1.6.1 and later versions, remove the following applications:

- Microsoft SQL Server 2008 Setup Support Files
- Microsoft SQL Server 2012 (64-bit)
- Microsoft SQL Server 2012 Native Client
- Microsoft SQL Server 2012 Setup (English)
- Microsoft SQL Server 2012 Transact_SQL ScriptDom
- Microsoft SQL Server Compact 3.5 SP2 ENU
- Microsoft SQL Server Compact 3.5 SP2 x64 ENU
- SQL Server Browser for SCL Server 2012
- Microsoft VSS Writer for SQL Server 2012

For upgrades from the SCIEX OS software 1.5 and earlier versions, remove the following applications:

- Microsoft SQL Server 2008 R2 (64-bit)
- Microsoft SQL Server 2008 R2 Native Client
- Microsoft SQL Server 2008 R2 Setup (English)
- Microsoft SQL Server 2008 R2 Setup Support Files
- Microsoft SQL Server Browser
- Microsoft SQL Server Compact 3.5 SP2 ENU
- Microsoft SQL Server Compact 3.5 SP2 x64 ENU
- Microsoft SQL Server VSS Writer

3. Back up and then delete all of the SQL server files in the following folders:

- SCIEX OS software 1.6.1 or later: `C:\Program Files\Microsoft SQL Server\MSSQL11.sqlexpress\MSSQL\Data`

- SCIEX OS software 1.5 or earlier: `C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data` or `C:\Program Files\Microsoft SQL Server\MSSQL10-50.sqlexpress\MSSQL\Data`

4. In the Windows Apps & features control panel, remove the Update for Microsoft Windows (KB4054590).
   This is the .NET Framework 4.7.2.

5. If applicable, then in the Windows Apps & features control panel, remove the following software:

    *   BPV Flex software

    *   BioPharmaView software

    *   MetabolitePilot software

    Note: These applications are not supported by the SCIEX OS software 3.4.

6. Back up and then delete the following folders:

    *   `C:\Program Files\SCIEX\LibraryView`

    *   `C:\Program Files\SCIEX\SCIEX OS`

    *   `D:\SCIEX OS Data`

7. Back up and then delete the `C:\ProgramData\SCIEX` folder.

8. Start the computer again.

9. Open the Windows Services control panel, and then make sure that there are no SQL or LibraryViewHost services in the list.

10. If the ClearCore2 service is shown in the Windows Services control panel, then open a Command Prompt window, type the following command, and then press **Enter**:

    `sc DELETE "Clearcore2.Service.exe"`

11. Install the software again. If applicable, then start the computer again when the prompt is shown.

12. After the software is installed, restore these files from the backup:

    *   `C:\ProgramData\SCIEX\Clearcore2.Acquisition`

    *   `C:\ProgramData\SCIEX\Clearcore2.Client`

    *   `C:\ProgramData\SCIEX\MassSpec\InstrumentData\Current.dat`

    *   `C:\ProgramData\SCIEX\MassSpec\InstrumentData\Current_Backup.dat`

Mass Spectrometer Firmware Versions

A

Note: For SCIEX Triple Quad and QTRAP systems, the version of the instrument controller board (ICB) that is installed on the system controls the versions of the supported firmware and configuration table.

Table A-1 Firmware and Configuration Table Versions

Mass Spectrometer	Firmware Version	Configuration Table Version
X500R QTOF system with LT-ICU1	ATLAS_QTOF_ICX_v0_r04	CONFIG_X500R_v0_r05
X500R QTOF system with LT-ICU2	AION_X500_ICX64_v2_r01	CONFIG_X500R_v2_r01
X500B QTOF system with LT-ICU1	ATLAS_QTOF_ICX_v0_r04	CONFIG_X500B_v0_r04
X500B QTOF system with LT-ICU2	AION_X500_ICX64_v2_r01	CONFIG_X500B_v2_r01
ZenoTOF 7600 system	AION_QTOF_ICX64_v0_r05	CONFIG_Zeno-TOF-7600_v0_r08
ZenoTOF 7600+ system	AION_QTOF_ICX64_v0_r05	CONFIG_ZenoTOF-7600+_v0_r01
SCIEX Triple Quad 4500 system with ICB3/ICB4	TripleQuad4500_PIL2007	FWTripleQuad4500R22
SCIEX Triple Quad 4500 system with ICB5	TripleQuad4500_QIL0101	FWTripleQuad4500R522
QTRAP 4500 system with ICB3/ICB4	QTrap4500_PIL2007	FWQTrap4500R21
QTRAP 4500 system with ICB5	QTrap4500_QIL0101	FWQTrap4500R521
SCIEX Triple Quad 5500 system with ICB3/ICB4	TripleQuad5500_PIL2007	FWTripleQuad5500R08
SCIEX Triple Quad 5500 system with ICB5	TripleQuad5500_QIL0101	FWTripleQuad5500R508

Table A-1 Firmware and Configuration Table Versions (continued)

Mass Spectrometer	Firmware Version	Configuration Table Version
QTRAP 5500 system with ICB3/ICB4	QTrap5500_PIL2007	FWQTrap5500R07
QTRAP 5500 system with ICB5	QTrap5500_QIL0101	FWQTrap5500R507
SCIEX Triple Quad 5500+ system with ICB3/ICB4	TripleQuad5500+_PIL2007	FWTripleQuad5500+R02
SCIEX Triple Quad 5500+ system with ICB5	TripleQuad5500+_QIL0101	FWTripleQuad5500+R502
SCIEX Triple Quad 6500 system with ICB3/ICB4	TripleQuad6500_PIL2007	FWTripleQuad6500R05
SCIEX Triple Quad 6500 system with ICB5	TripleQuad6500_QIL0101	FWTripleQuad6500R505
QTRAP 6500 system with ICB3/ICB4	QTrap6500_PIL2007	FWQTrap6500R04
QTRAP 6500 system with ICB5	QTrap6500_QIL0101	FWQTrap6500R504
SCIEX Triple Quad 6500+ system with ICB3/ICB 4 and the oil-sealed roughing pump	TripleQuad6500+_PIL2007	FWTripleQuad6500+R04
SCIEX Triple Quad 6500+ system with ICB3/ICB4 and the dry pump	TripleQuad6500+_PIL2007	FWTripleQuad6500+R31
SCIEX Triple Quad 6500+ system with ICB5 and the oil-sealed roughing pump	TripleQuad6500+_QIL0101	FWTripleQuad6500+R504
SCIEX Triple Quad 6500+ system with ICB5 and the dry pump	TripleQuad6500+_QIL0101	FWTripleQuad6500+R531
QTRAP 6500+ system with ICB3/ICB4 and the oil-sealed roughing pump	QTrap6500+_PIL2007	FWQTrap6500+R03
QTRAP 6500+ system with ICB3/ICB4 and the dry roughing pump	QTrap6500+_PIL2007	FWQTrap6500+R31

Table A-1 Firmware and Configuration Table Versions (continued)

Mass Spectrometer	Firmware Version	Configuration Table Version
QTRAP 6500+ system with ICB5 and the dry pump	QTrap6500+_QIL0101	FWQTrap6500+R503
QTRAP 6500+ system with ICB5 and the dry pump	QTrap6500+_QIL0101	FWQTrap6500+R531
SCIEX 7500 system with ICB3/ICB4 and the oil-sealed roughing pump	TripleQuad7500_PIL2007	FWTripleQuad7500QTRR03
SCIEX 7500 system with ICB3/ICB4 and the dry pump	TripleQuad7500_PIL2007	FWTripleQuad7500QTRR30
SCIEX 7500 system with ICB5 and the oil-sealed roughing pump	TripleQuad7500_QIL0101	FWTripleQuad7500QTRR503
SCIEX 7500 system with ICB5 and the dry pump	TripleQuad7500_QIL0101	FWTripleQuad7500QTRR530
SCIEX 7500+ system with the oil-sealed roughing pump	SCIEX7500+system_QIL0201	FWSCIEX7500+systemR501
SCIEX 7500+ system with the dry pump	SCIEX7500+system_QIL0201	FWSCIEX7500+systemR531

Devices and Firmware   B

The SCIEX OS software 3.4 supports the following devices.

In most cases, more recent firmware versions from the device manufacturer will operate with the SCIEX OS software 3.4. If issues occur, then change the device firmware to the version listed in the table. For information about firmware verification or upgrades, refer to the documentation that was supplied by the device manufacturer or contact a SCIEX Field Service Employee (FSE). For information about device installation and configuration, refer to the document: *Devices Setup Guide*.

Note: For information about drivers for Waters ACQUITY UPLC systems, contact Waters Support.

Note: For information about drivers for Thermo multichannel LC systems, contact Thermo Support.

Table B-1 Echo® MS and Echo® MS+ Systems

Device Component	Firmware
Echo® MS module[1]	2.0
Echo® MS+ module[1]	2.0

Table B-2 M5 MicroLC System

Device Component	Tested Firmware or Software
M5 MicroLC SCIEX OS Driver [2]	1.0
Eksigent Control software	4.3
LC pump	2.48
CTC PAL3 autosampler	2.4.18031.1655

Table B-3 ExionLC 2.0 Systems

Peripheral Device	Model	Tested Firmware	Communication Cable Required
LPG Pump	LPGP-200	1.07	Ethernet

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[1] If a firmware upgrade is required, then contact an FSE.
[2] For migration from the Analyst software to SCIEX OS, contact an FSE.

Table B-3 ExionLC 2.0 Systems (continued)

Peripheral Device	Model	Tested Firmware	Communication Cable Required
Binary Pump	BP-200	1.07	Ethernet
Binary Pump+	BP-200+	1.02	Ethernet
Autosampler	AS-200	1.22	Ethernet
Autosampler+	AS-200+	1.22	Ethernet
Column Switching (Valve drive)	DR-200	6.20	Ethernet
Column Oven	CO-200	2.02	Ethernet
Multiwavelength Detector	MWD-200	01.11.282	Ethernet
Diode Array Detector	DAD-200	01.11.282	Ethernet
Diode Array Detector - HS	DADHS-200	1.24.03	Ethernet
Wash System	WS-200	1.14	Ethernet

Table B-4 ExionLC AE Systems

Model	Tested Firmware	Communication Cable Required
ExionLC AE Controller	1.65	Ethernet
ExionLC AE Pump	1.12	Optic
ExionLC AE Multiplatesampler	3.30	Optic
ExionLC AE Autosampler	1.17	Optic
ExionLC AE Column Oven	1.03	Optic
ExionLC AE PDA Detector	2.08	Ethernet[3]
ExionLC AE UV Detector	1.11	Optic

[3] The PDA detector requires a switching hub to connect to the system controller and the acquisition computer. Refer to the document: *SCIEX OS Devices Setup Guide*.

Table B-5 ExionLC AC/ExionLC AD Systems

Peripheral Device	Tested Firmware (Other Firmware[4])	Communication Cable Required
ExionLC Controller	3.61 (2.0, 3.01, 3.40)	Ethernet
ExionLC AC Pump	5.001 (2.04)	Optic
ExionLC AC Autosampler	5.00 (2.05, 3.12)	Optic
ExionLC AC Column Oven	3.21	Optic
ExionLC AD Pump	3.30 (2.04, 3.11, 3.21)	Optic
ExionLC AD Autosampler	3.15 (3.12)	Optic
ExionLC AD Multiplate Sampler	3.30 (3.15)	Optic
ExionLC PDA Detector	4.02	Ethernet [5]
ExionLC UV Detector	2.03	Optic
ExionLC Rack Changer	2.0	Optic
ExionLC Degasser	N/A	N/A
ExionLC Solvent Selection Valve	N/A	N/A

Table B-6 Agilent 1290 Infinity and Infinity II Devices

Peripheral Device	Model	Tested Firmware (Other Firmware[4])	Communication Cable Required
1290 Infinity Devices			
Binary pump	G4220A	B.06.73, A.06.73, B.07.01),	Ethernet or CAN
Standard autosampler	G4226A	(A.07.01, A.06.54, A.07.01)	Ethernet or, if the system contains a DAD, then CAN
Column compartment	G1316C	(A.07.01, A.06.53)	CAN
DAD	G4212A	A.06.73, B.06.30	Ethernet
1290 Infinity II Devices			

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[4] Not tested but expected to work.
[5] The PDA Detector requires a switching hub to connect to the system controller and the acquisition computer. Refer to the document: *SCIEX OS Devices Setup Guide*.

Table B-6 Agilent 1290 Infinity and Infinity II Devices (continued)

Peripheral Device	Model	Tested Firmware (Other Firmware[4])	Communication Cable Required
High-speed pump	G7120A	(B.07.10)	CAN or Ethernet
Flexible pump	G7104A	(B.07.10)	CAN or Ethernet
Vialsampler	G7129B	(B.07.10)	CAN
Multisampler	G7167B	(D.07.17)	CAN or Ethernet
Multicolumn-thermostat	G7116B	D.07.10	CAN
DAD	G7117B	D.07.23 (D.07.10)	Ethernet

Table B-7 Agilent 1260 Infinity II Devices

Peripheral Device	Model	Tested Firmware (Other Firmware[4])	Communication Cable Required
Infinity II Devices			
Flexible pump	G7104C	(B.07.25)	Ethernet or, if the system contains a DAD, then CAN
Binary pump	G7112B	D07.33	CAN or Ethernet
Quarternary pump	G7111B	D.07.24	CAN or Ethernet
Bio-inert pump	G5654A	(D.07.13)	CAN or Ethernet
Vialsampler	G7129C	(D.07.26)	CAN
Multisampler	G7167A	(D.07.16)	Ethernet or, if the system contains a DAD, then CAN
Bio-inert multisampler	G5668A	(D.07.16)	Ethernet or, if the system contains a DAD, then CAN
Multicolumn thermostat	G7116A	D.07.13, D.07.16	CAN
DAD	G7117C	D.07.10	Ethernet
DAD WR	G7115A	D.07.25	Ethernet

Table B-7 Agilent 1260 Infinity II Devices (continued)

Peripheral Device	Model	Tested Firmware (Other Firmware[4])	Communication Cable Required
FLD spectra (Bio-inert)	G7121B	D.07.25	Ethernet

Table B-8 Shimadzu Devices

Peripheral Device	Tested Firmware (Other Firmware[4])	Communication Cable Required
CBM-20 A with Ethernet switch (system controller with 8 fiber optic ports)	3.61 (2.81, 3.01, 3.11, 3.31)	Ethernet
CBM-40 system controller	1.30 (0.31)	Ethernet
CBM-40 Lite system controller	1.30	Ethernet
SCL-40 system controller	1.30	Ethernet
SIL-20ACXR autosampler	2.05 (1.20, 1.22, 1.23, 1.25)	Optic
SIL-30AC autosampler	3.12	Optic
SIL-30ACMP autosampler	3.21 (3.15)	Optic
SIL-40 autosampler	1.05	Optic
SIL-40C autosampler	1.05	Optic
SIL-40C X3 autosampler	1.05 (1.04)	Optic
SIL-40C XR autosampler	1.05 (1.08)	Optic
LC-20AB binary solvent delivery unit	N/A	N/A
LC-20AD pump	3.11 (1.04, 1.10, 1.07)	Optic
LC-20AD XR pump	1.21 (1.20)	Optic
LC-30AD pump	3.21 (3.11)	Optic
LC-40D pump	1.06	Optic
LC-40D XR pump	1.06 (1.04)	Optic
LC-40B XR pump	1.04	Optic
LC-40D X3 pump	1.04	Optic

Table B-8 Shimadzu Devices (continued)

Peripheral Device	Tested Firmware (Other Firmware[4])	Communication Cable Required
LC-40B X3 pump	1.06 (1.04)	Optic
CTO-20AC column oven	2.10 (2.03)	Optic
CTO-30A column oven	3.11	Optic
CTO-40C column oven	1.01 (1.00)	Optic
CTO-40S column oven	1.01 (1.00)	Optic
SPD-20A UV-Vis detector	1.04	Optic
SPD-40V UV-Vis detector	1.06 (1.04)	Optic
SPD-M30A UV detector	3.11, 4.02	Ethernet[6]
SPD-M40 PDA detector	2.00	Ethernet[6]
RF-20A XS fluorescence detector	2.02	Optic
FCV-12AH valve	N/A	N/A
FCV-13AL valve	N/A	N/A
FCV-32AH valve	N/A	N/A
FCV-0206[H/H3] flow channel selection valve with drive	N/A	N/A
FCV-0607[H/H3] flow channel selection valve with drive	N/A	N/A
FCV-S flow channel selection valve with drive (1 box, 1 valve)	1.02	N/A
FCV-DR (drive)	1.02	N/A
LPGE-40 (no mixer)	1.02	N/A
LC-40 reservoir switching valve	1.02	N/A
FCV-11ALS solvent selection valve for LC-40 (1 pump)	1.02	N/A

[6] The detector requires a switching hub to connect to the system controller and the acquisition computer.

Table B-8 Shimadzu Devices (continued)

Peripheral Device	Tested Firmware (Other Firmware[4])	Communication Cable Required
FCV-11AL solvent selection valve for LC-40 (3 pumps)	1.02	N/A
Rack Changer II	2.0	Optic
Nexera Plate Changer	1.05	N/A

Windows Operating System Configuration   C

Only the English Language setting is supported.

The English, German, French, and Italian Region settings are supported.

Note: If the computer is connected to the Internet, then follow the recommended security guidelines. Go to sciex.com/productsecurity. Make sure that adequate virus protection is in place to prevent virus corruption of system functionality.

Windows Update

Making sure that critical security patches are installed is essential to maintaining the security of the computer. Follow these guidelines for the configuration and use of Windows Update:

- Windows 10: Configure Windows Update to notify only. Do not download and install updates automatically as this may impact systems during data acquisition.

- Download and install updates as soon as possible after notification is received.

- Before installing updates:

    - Wait until acquisition and processing is finished.

    - Deactivate the devices and stop the ClearCore2 service.

- Install all updates. If an issue occurs as the result of an update, report it to SCIEX at sciex.com/contact-us or sciex.com/request-support as soon as possible.

System Restore

By default, the Windows Task Scheduler runs the System Restore task at midnight and when the computer starts. The installation program disables the System Restore task, to optimize acquisition performance in IDA mode.

The System Restore task might slow down the system when it is active. If it is active during acquisition in IDA mode, the cycle time might be longer, increasing from milliseconds to seconds. This might result in fewer points across a chromatographic peak. Therefore, we recommend that the System Restore task be disabled, for optimum performance.

Note: System Restore does not impact performance for regular operations or for data processing.

Customer Security Guidance: Backups

Backup of customer data is the responsibility of the customer. Although SCIEX service and support personnel might provide advice and recommendations about customer data backup, it is up to the customer to make sure the data is backed up according to the policies, needs, and regulatory requirements of the customer. The frequency and coverage of customer data backup should be commensurate with organizational requirements and the criticality of the data that is generated.

Customers should make sure that backups are functional, because backups are a vital component of overall data management and essential to recovery in the event of a malicious attack, hardware failure, or software failure. Do not back up the computer during data acquisition, or else make sure that files being acquired are ignored by the backup software. We strongly recommend that a full backup be taken of the computer before any security updates are installed or any computer repairs are performed. This will facilitate a rollback in the rare case that a security patch affects any application functionality.

User Account Control Settings

We recommend the use of the default User Account Control Settings when the SCIEX OS 3.4 software is installed on the Windows 10, 64-bit, operating system. For the Administrator, the default setting is **Default - Notify me only when programs try to make changes to my computer**. For standard users, it is **Always notify me**.

The acquisition computer comes configured with the default User Account Control Settings.

1. Open Control Panel.

2. Click **Security and Maintenance** > **Change User Account Control settings**.
   The User Account Control Settings dialog opens.

3. Move the slider bar to the required level.

4. For the Administrator, select **Notify me only when programs try to make changes to my computer (default)**, and then click **OK**.

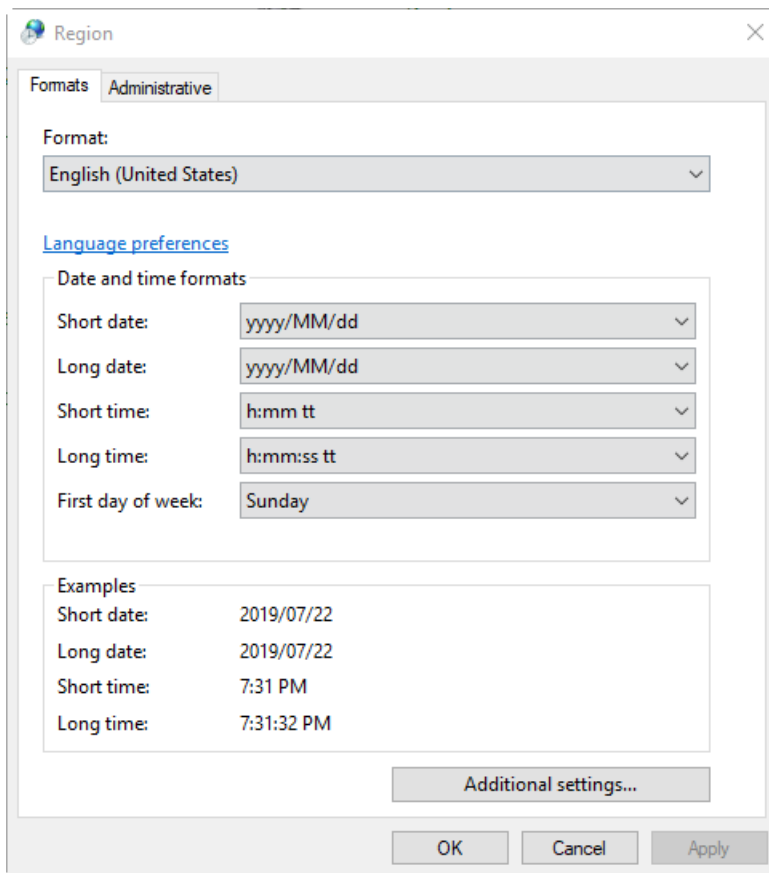**Figure C-1 User Account Control Settings: Administrator**
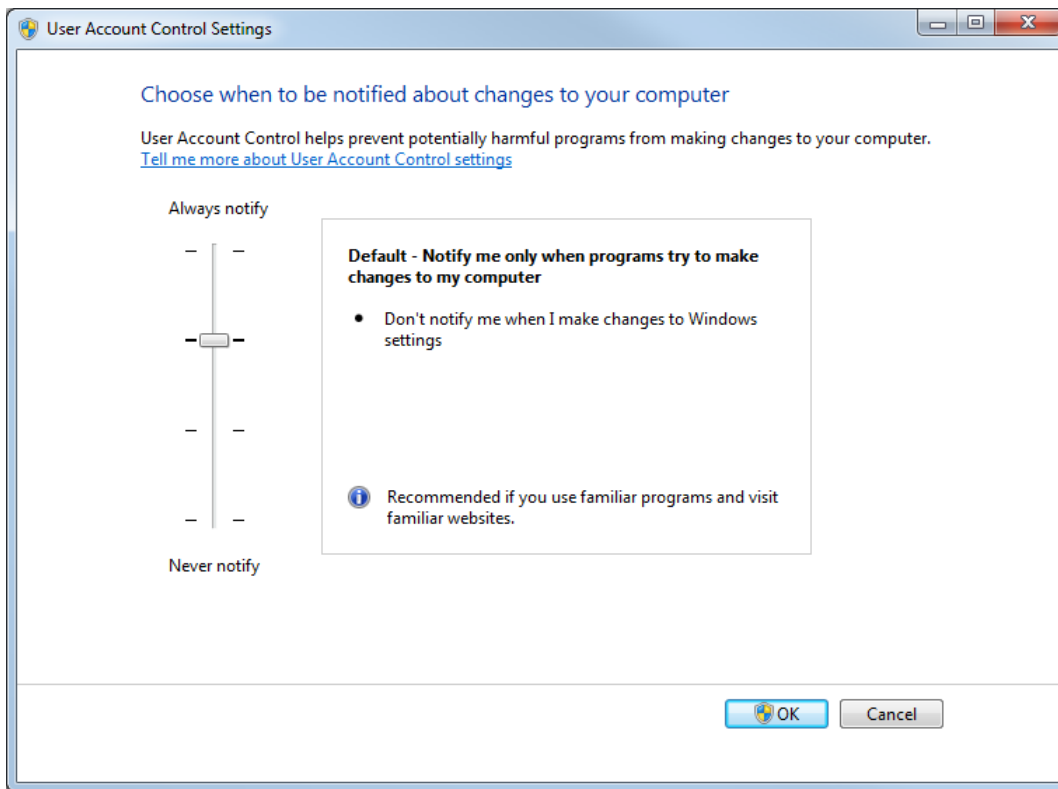
5. For standard users, select **Always notify me when**, and then click **OK**.

Region Settings

Note: Setting the **Format** field to a different value might cause the software to show the file information or the audit trail information incorrectly.

1. Open Control Panel.

2. Click **Region**.

Figure C-2 Region Dialog

3. Make sure that the **Format** field is set to **English (United States)**, **French (France)**, or **German (Germany)**.
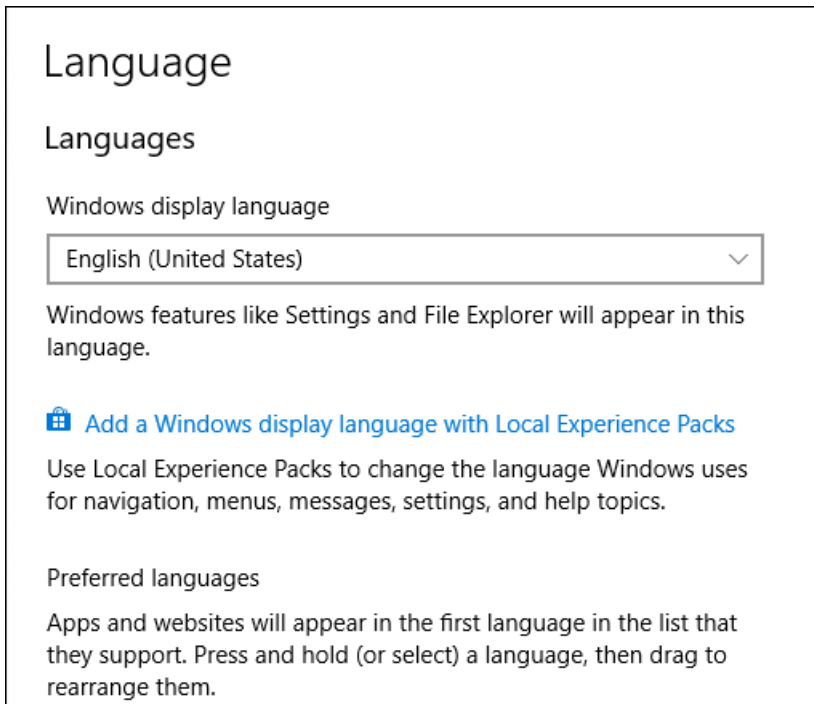
4. Click **Apply**.

5. Click **OK**.

Language Settings

Note: Setting the **Windows display language** to a different value might cause the software to show the file information or the audit trail information incorrectly.

1. Open Control Panel.

2. Click **Region**.

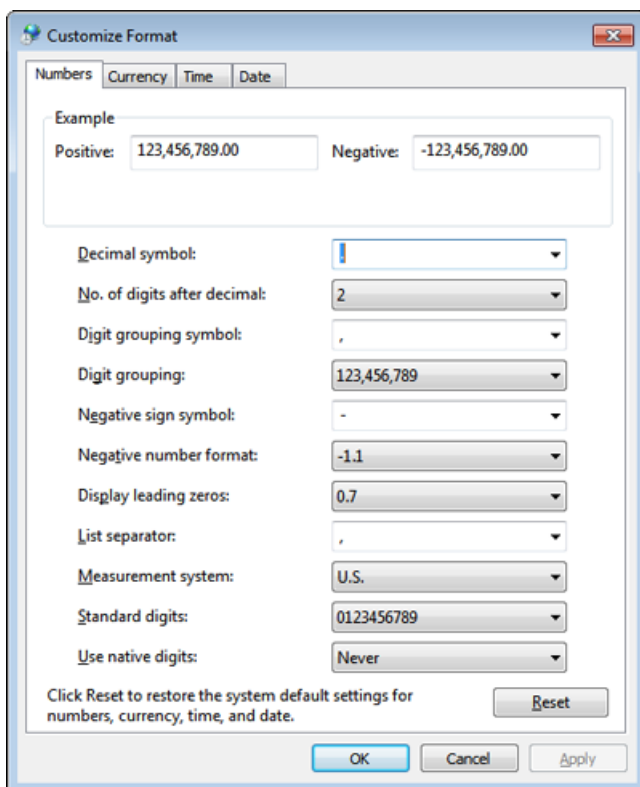3. Click **Language preferences**.

Figure C-3 Language Dialog

4. For the **Windows display language**, select **English (United States)**.

Local Settings

Only the local settings shown in the following figure are supported.

Figure C-4 Local Settings

Label	Supported in the SCIEX OS Software
Decimal symbol	Either '.' or ',' is supported.
No. of digits after decimal	Controlled by the number format in the SCIEX OS software.
Digit grouping symbol	Not supported.
Digit grouping	Not supported.
Negative sign symbol	Controlled by the SCIEX OS software.
Negative number format	Not supported.
Display leading zeros	Not supported.
List separator	Not supported.
Measurement system	Not supported.
Standard digits	Not supported.

Label	Supported in the SCIEX OS Software
Use native digits	Not supported.

Configure Windows Firewall

D

The SCIEX OS software connects to the Central Administrator Console (CAC) server with TCP ports 63333 and 44144. Use the procedures in this section to open the Windows firewall ports on the CAC server and the computer with the SCIEX OS when Windows Defender is used as firewall software (default). If different firewall software is used, then use instructions specific to that software to open the ports.

If the queue monitoring feature will be used, then ports 5000 and 5001 must be opened for inbound traffic on the CAC server.

Configure Incoming Connections

On the computer with the SCIEX OS software, ports 63333 and 44144 must be open for inbound traffic. On the Central Administrator Console (CAC) server, port 63333 must be open for inbound traffic.

To use the queue monitoring feature, open ports 5000 and 5001 on the CAC server.

1. Open the Windows Defender Firewall with Advanced Security.

2. Right-click the **Inbound Rules** menu, and then click **New Rule**.
    The Rule Type page opens.

3. Select **Port**, and then click **Next**.
    The Protocol and Ports page opens.

4. Set **Specific local ports** as required, and then click **Next**.

    *   SCIEX OS software: Set **Specific local ports** to `63333,44144`.

    *   CAC software: Set **Specific local ports** to `5000`, `5001`, and `63333`.

        Note: Ports 5000 and 5001 are required only if the queue monitoring feature will be used.

    The Action page opens.

5. Select **Allow the connection**, and then click **Next**.
    The Profile page opens.

    Note: Make sure that **Domain**, **Private**, and **Public** profiles are selected.

6. Click **Next**.
    The Name page opens.

7. Type `CAC inbound connections` in the **Name** field.

8. Click **Finish**.

Configure Outgoing Connections

On the computer with the SCIEX OS software, ports 63333 must be open for outbound traffic. On the Central Administrator Console (CAC) server, port 44144 must be open for outbound traffic.

1. Open the Windows Defender Firewall with Advanced Security.

2. Right-click the **Outbound Rules** menu, and then click **New Rule**.
    The Rule Type page opens.

3. Select **Port**, and then click **Next**.
    The Protocol and Ports page opens.

4. Set **Specific local ports** as required, and then click **Next**.

    *   SCIEX OS software: Set **Specific local ports** to `63333`.

    *   CAC server: Set **Specific local ports** to `44144` and `63333`.

    The Action page opens.

5. Select **Allow the connection**, and then click **Next**.
    The Profile page opens.

    Note: Make sure that **Domain**, **Private**, and **Public** profiles are selected.

    ---

6. Click **Next**.
    The Name page opens.

7. Type `CAC inbound connections` in the **Name** field.

8. Click **Finish**.

Install the Software Using a Deployment Tool

<div align="right">

E
</div>

Use the command lines in this procedure for the modular installation of the SCIEX OS software. User can install, change, repair or remove the software modules by running the silent mode or passive mode commands from the installation files location using the deployment tool.

```
setup.exe {/quiet | /passive} [/install=modules] [/add=modules] [/
repair=all] [/remove=modules] [/uninstall=all]
```

Table E-1 Elements and Attributes

Value String	Comment
/quiet	Runs the installation in silent mode without any user interaction.
/passive	Runs the software installation in unattended mode. The user sees only a progress bar.
/install=*module1, module2*	To install one or more than one software module. For a list of the module codes, refer to the table: Table E-2.
/add=*module1,module2*	To install one or more than one software module in an existing installation of this software version. For a list of the module codes, refer to the table: Table E-2.
/repair=all	To repair installed software modules.
/remove=*module1,module2*	To uninstall one or more than one software module from an existing installation of this software version. For a list of the module codes, refer to the table: Table E-2.
/uninstall=all	To remove the SCIEX OS software.

Table E-2 Software Modules

Code	Software Module
AG	Agilent drivers
AN	Analytics workspace (Processing)
AQ	Acquisition workspaces
CC	Central Administrator Console (CAC) (Administration)

Table E-2 Software Modules (continued)

Code	Software Module
EC	Echo® MS system
EX	ExionLC system
M5	M5 MicroLC system
MP	Molecule Profiler software (Processing)
MV	MarkerView software (Processing)
SH	Shimadzu drivers

Example: Quiet Install Command

```
Setup.exe /quiet /Install=MP
```

Example: Quiet Add and Remove Command

```
Setup.exe /quiet /Add=AQ,AG,SH,AN /Remove=MP
```

Example: Quiet Repair Command

```
Setup.exe /quiet /Repair=all
```

Example: Quiet Uninstall Command

```
Setup.exe /quiet /Uninstall=all
```

Example: Passive Install Command

```
Setup.exe /passive /Install=MP
```

Example: Passive Add and Remove Command

```
Setup.exe /passive /Add=AQ,AG,SH,AN /Remove=MP
```

Example: Passive Repair Command

```
Setup.exe /passive /Repair=all
```

Example: Passive Uninstall Command

```
Setup.exe /passive /Uninstall=all
```

Documentation for the SCIEX OS Software   F

For a list of the software guides that are installed with the SCIEX OS software, refer to the table: Table F-1. These guides can be accessed at the following locations: **Start** > **SCIEX OS**.

The software guides are installed in `<drive>:\Program Files\SCIEX\SCIEX OS\Documentation\`.

Table F-1 Software Documentation

Document	Description
Software Installation Guide	Supplies procedures for installation of the software. Installed with the software.
Release Notes	Gives a description of new features and any software issues. Installed with the software.
Laboratory Director Guide	Gives a description of the security and audit functionality of the SCIEX OS software. Installed with the software.
SCIEX OS Help System	Supplies procedures for setting up and using the SCIEX OS software to create methods, acquire samples, and analyze data. Installed with the software. To see the *Help System*, click the **Help** button in the SCIEX OS software.
CAC Help	Supplies procedures for using the Central Administrator Console (CAC) software to manage users, workgroups, workstations, and projects. Installed with the software. To see the *Help*, click the **Help** button in the CAC software.
Devices Setup Guide	Supplies procedures for configuration of devices for operation with the mass spectrometer and control by the SCIEX OS software. Available at sciex.com/customer-documents.
Explorer for TOF Systems Tutorial	Supplies procedures for using the Explorer workspace to analyze data that was acquired by TOF systems. Available at sciex.com/customer-documents.

Documentation for the SCIEX OS Software

Hardware guides are distributed on the *Customer Reference* DVDs for the system and ion source. The following table lists these guides.

Table F-2 Hardware Documentation

Document	Description
System User Guide	Supplies information about operation and maintenance of the mass spectrometer and using the SCIEX OS software.
Qualified Maintenance Person Guide	Supplies procedures for cleaning and maintenance of the mass spectrometer.
	Note: Only qualified operators should perform the procedures in this guide.
Devices Setup Guide	Supplies procedures for connection of devices to the computer and instrument.
Site Planning Guide	Supplies information about how to prepare the site, as well as materials required for installation of the instrument.
Turbo V Ion Source Operator Guide	X500 QTOF and ZenoTOF systems: Supplies procedures for installation and maintenance of the ion source.
IonDrive Turbo V Ion Source Operator Guide	Supplies procedures for installation and maintenance the ion source.
OptiFlow Turbo V Ion Source Operator Guide	ZenoTOF systems: Supplies procedures for installation and maintenance the ion source.
OptiFlow Pro Ion Source Operator Guide	SCIEX 7500 systems: Supplies procedures for installation and maintenance the ion source.
Echo® MS Core Module User Guide	Echo® MS systems: Supplies procedures for operation and maintenance of the Echo® MS core module.
Echo® MS+ System User Guide	Echo® MS+ systems: Supplies procedures for operation and maintenance of the Echo® MS+ system.

Note: The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

Contact Us

Customer Training

- In North America: NA.CustomerTraining@sciex.com
- In Europe: Europe.CustomerTraining@sciex.com
- Outside the EU and North America, visit sciex.com/education for contact information.

Online Learning Center

- SCIEX Now Learning Hub

SCIEX Support

SCIEX and its representatives have a global staff of fully-trained service and technical specialists. They can supply answers to questions about the system or any technical issues that might occur. For more information, go to the SCIEX website at sciex.com or use one of the following links to contact us.

- sciex.com/contact-us
- sciex.com/request-support

Cybersecurity

For the latest guidance on cybersecurity for SCIEX products, visit sciex.com/productsecurity.

Documentation

This version of the document supersedes all previous versions of this document.

To find software product documentation, refer to the release notes or software installation guide that comes with the software.

To find hardware product documentation, refer to the documentation that comes with the system or component.

The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

Note: To request a free, printed version of this document, contact sciex.com/contact-us.