ICP Expert Software Installation Instructions for 21 CFR Part 11 Environments

NOTE NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to www.agilent.com.

Introduction

For installation of:

- ICP Expert Pro

- Spectroscopy Configuration Manager (SCM)

The Agilent ICP Expert 21 CFR 11 Software can be installed on an instrument computer ('standalone') or on a network. This document describes installation on an instrument computer and on a network in a 21 CFR Part 11 environment.

The Agilent ICP Expert software is supported with the instrument computer connected directly to the instrument.

The software for 21 CFR Part 11, which is contained on several disks, comprises:

- ICP Expert Pro — provides you with the application software to run the instrument. This software must be installed.

- SCM — incorporating the Spectroscopy Configuration Manager (SCM), the Spectroscopy Database Administrator utility (SDA) and the Privileges and Profiles.

  - SCM provides you with a tool to manage your 21 CFR Part 11 environment. It provides the means to create, configure and maintain data in relation to system security, user management and data paths.

  - SDA provides a database environment to store and maintain your data. In addition, this disk will install Microsoft SQL Server 2008 Express Edition and Microsoft .Net Framework 4.5.2 (if they are not already installed on your computer).

  - Privileges and Profiles controls which applications/functions may be run by a particular user. It also establishes the level of authority a user may have with regard to signatures and accessing certain parts of an application

- Help — provides you with information about all the components of the software.

Procedural outline

This software provides a powerful tool for performing analyses using the instrument in a safe and secure data storage environment, assisting with meeting 21 CFR Part 11 requirements.

Agilent Technologies

The key steps to installing and setting up the software are:

- Preparing the computer
  - Recommended administrative tasks such as checking SQL status, Internet filtering and firewalls and disabling computer power settings
  - Installing the application software (select from Scenario 1-3)
- Setting up databases within SDA
  - Connecting to the server
  - Setting preferences
  - Creating new databases
  - Creating server accounts
  - Creating database accounts
  - Ensuring the Supplied Templates and Results databases are attached
- Setting up SCM
  - Setting the Workstation location
  - Establishing Groups
  - Establishing Projects
  - Create Users and associating them with the Groups and Projects
  - Create/assign permissions and privileges to the User Profiles and associate the Users with the User Profiles
- Starting the ICP Expert software and completing the Software Registration
- Performing Wavelength Calibration and Detector Calibration

For local computer installations, where the computer controls the instrument and stores the collected data, refer to 'Scenario 1'.

For network installations, refer to the appropriate 'Custom' installation in 'Scenarios 2 to 3'. See the section 'Setup configuration' for the differences between each scenario.

The table below provides page numbers for procedures listed above as well as additional instructions for uninstalling the software and database management.

Procedure	Page
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Upgrading the software	18
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Administrative tasks

There are several settings that should be checked before setting up SDA and SCM. These are explained below. In future, this section may also be referenced for Troubleshooting.

Microsoft Windows operating system updates

Perform any outstanding Microsoft Windows operating system updates before you install your software. Alternatively, disconnect the computer from the network before performing the install.

SQL as an exception

In some instances, particularly for network installations, it has been necessary to list the SQL Server as an Exception in the System and Security Center of Microsoft Windows 7 after installing SCM and SDA.

To do this:

1   Click **Start > Control Panel > System and Security**.

2   Select **Windows Firewall**.

3   Click **Allow a program or feature through the Windows Firewall**.

4   If the following are not included in the exceptions list is not included in the list of Exceptions, click "Change Settings"and then click **Allows another program**.

- SQL Server Windows NT – 64 bit
- SQL Server Browser Service EXE
- Database Server
- Configuration Manager

5   Browse to C:\Program Files\Microsoft SQL Server|MSSQL.10_50.SQLExpress\MSSQL\Binn and select the sqlserver.exe. Click **Open** and then **Add**.

6   Browse to C:\Program Files (x86)\Microsoft SQL Server\90\Shared and then select sqlbrowser.exe. Click **Open** and then **Add**.

7   Browse to C:\Program Files (x86)\Varian\21 CFR 11\Configuration manager\Server\CMData and then click nxServer.exe. Click **Open** and then **Add**.

8   Browse to C:\Program Files (x86)\Varian\21 CFR 11\Configuration manager\Server and then click ConfigManager.exe. Click **Open** and then **Add**.

9   Click **OK**.

Computer power options

To minimize the risk of data loss, ensure the Instrument Computer, Laboratory Management Computer and/or IT Server has the Hibernate or Sleep power saving mode turned off.

To do this:

1   Click **Start > Control Panel > Hardware and Sound > Power Options**.

2   Select the **Balanced (recommended)** radio button.

3   Click **Change plan settings**.

4   Select an appropriate setting from the "Put computer to sleep" drop-down menu selection. We strongly recommend selecting **Never**.

5   Click **Apply** then **OK**.

6   Restart the computer to enable the changes.

Setup configuration

This section describes three possible scenarios for setting up your instrument and supplied software. The scenario chosen depends on the desired configuration for collection of data and control of electronic records using the SCM application. The scenarios are:

Procedure	Page
Scenario 1 All software is installed on the computer connected directly to the instrument.	4
Scenario 2 The application software is installed on the instrument computer, SCM is installed on the laboratory management computer and SDA is installed on an IT server.	8
Scenario 3 The application software is installed on the instrument computer and SDA and SCM are installed on an IT server.	13

The default installation folders for the ICP Expert 21 CFR 11 software are:

- C:\Program Files (x86)\Agilent\ICP Expert

- The Spectroscopy Database Administrator (SDA) software is located in C:\Program Files(x86)\Agilent\Database Utilities

- The SDA database files are located in C:\Spectroscopy Databases

- The Spectroscopy Configuration Manager (SCM) software is located in C:\Program Files(x86)\Varian\21CFR11\Configuration manager and C:\Program Files (x86)\Agilent\CFR

Agilent has validated the documented installation procedure using the standard installations; therefore Agilent strongly recommends that you follow these instructions. Choose the correct scenario from the list below and then follow the instructions to install the software.

Accessing the Help

Throughout this document you are referred to the ICP Expert Help, the SDA Help or the SCM Help for more information. To access the Help files, with the appropriate software program open, press F1 on your keyboard or select the Help button where appropriate.

Installing the software

Scenario 1

Scenario 1 involves one computer connected to the instrument, with all software installed on this computer.

The following software gets installed on the instrument computer:

- Application software

- SDA (which includes Microsoft SQL and Microsoft .Net)

- SCM including Privileges and Profiles

- Help

To install the software:

1   Log onto the instrument computer with Administrator privileges.

2   Insert the application software disk. At the AutoPlay prompt select the **Run ICPExpertSetup.exe** and click **Yes** at the prompt.

3   A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

NOTE   If no installation screen appears, run 'ICPExpertSetup.exe' from the DVD directory.

4   Follow the prompts on the screen until the 'Select Destination Location' window appears. Confirm the directory in which you would like to install the application. Alternatively, click **Browse** to choose a different location. Click **Install**.

NOTE   Agilent strongly recommends the Agilent\ICP Expert folder and applications are installed in the recommended C:\Program Files (x86) directory.
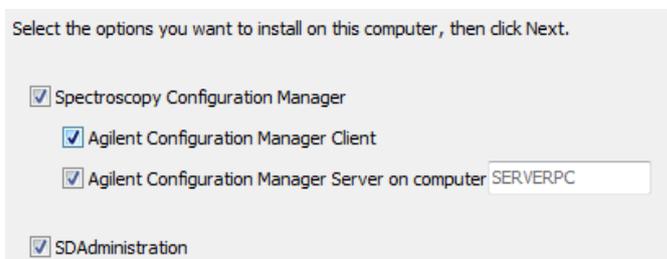
NOTE   During installation-of the Microsoft .Net framework, the computer may appear frozen and the 'Cancel' button may be unavailable. This is correct. The installation can take 3–5 minutes. Do not try to exit the installation during this time.

5   Follow the prompts.

6   At the 'Agilent Technologies SPS 4 Driver Installer' dialog, click **Next** to install the driver. Click **Finish** when prompted.

7   Click **Finish** to complete the installation.

8   Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

9   A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

NOTE   If no installation screen appears, run 'setupCFR.exe' from the CD directory.

10   Follow the prompts until the 'Installed Options' window is displayed.

11   Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

12   Follow the prompts.

NOTE   The installation of the Microsoft .Net Framework, SQL Server 2008 R2, SQL Server 2008 Express, Agilent SDAdministrator and ICP Expert Workspace can take several minutes. Do not exit during the installation.

13 Follow the prompts.

14 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish**

15 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

NOTE	The installation of the ICP Expert Workspace and Privileges and Profiles can take several minutes. Do not exit during the installation.

16 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

17 Remove the Spectroscopy Configuration Manager disk from the CD drive.

18 Restart the computer to complete the installation.

Registering and configuring the software

Once installation is complete, you will need to:

• Configure SDA

• Configure SCM

• Register your ICP Expert Software

• Perform a wavelength calibration and detector calibration

To configure SDA:

1 Double -click on the 'SDAdministrator' desktop shortcut or click Start > All Programs > Agilent > Database Utilities > SDAdministrator.

2 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

3 Refer to the Help for instructions on setting up SDA.

The Supplied Templates Database and Results Database must be copied to the Instrument Computer and attached to the database server as follows:

1 Once SDA is configured, browse to C:\ProgramData\Agilent\ICP Expert\CFR folder.

2 Copy the **VAIMDB_SuppliedTemplates(000).mdf** and **VAIMDB_SuppliedTemplates(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

3 The Supplied Worksheets database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

4 Copy the **VAIMDB_Results(000).mdf** and **VAIMDB_Results(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

5 The Results database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

NOTE	The SDAAdministrators account must be granted access to the 'VAIM Admin' Database and any Administrators who need access to the SDA must be added to the SDA Administrators Group.

To add the User Group to the database account(s):

1 Select **Advanced Setup**, on the **Database Accounts** tab, select the **BUILTIN\Users**, select (highlight) the desired database from the 'Database Access' list and then click the >> button.

2 Repeat Step 1 for each additional database.

To configure the SCM:

1 Double-click the 'Configuration Manager' desktop shortcut or click **Start > All Programs > Agilent > 21CFR11 > Configuration Manager.**

2 Enter 'administrator' as the user identification and 'agilent' as the password. You will be prompted to enter a new password and confirm it. Ensure that there are at least six characters in your new password.

3 Create a Station, and assign it the computer name. This can be found in **Control Panel** > **System** > **Computer Name**. The computer name is the full computer name, without the domain.

4 Create a Group, Project, User(s) and User Profile and assign them to the Station. It is recommended that the initial User Profile be set to 'Service'.

For more details on how to set up SCM, refer to the Help.

To start and register the ICP Expert software:

NOTE	Ensure the software registration is completed by the user of the Agilent ICP-OES spectrometer. For further information refer to the Software Registration Help.

1 Double-click the ICP Expert icon on the computer desktop.

2 The first time the ICP Expert software is open a Software Registration dialog will appear. Click **Next**.

3 Complete all the fields on the 'Customer Details' page. Click **Next**.

NOTE	The Product Key is found on the cover of the Agilent ICP Expert software DVD case which was delivered with the instrument.

4 Complete all the fields on the 'Product Details' page. Click **Next**.

5 Complete all the fields on the 'Work Environment Details' page. Click **Register**.

6 A dialog appears stating 'Your Agilent Software Registration has been successful'**.**

NOTE	If your computer is not connected to the internet, refer to the Software Registration Help for further information.

7 The application will now open.

8 Enter the User Identification, select the desired Group and Project and then enter the password.

9 Click **Allow Access** if the Windows Firewall prompt appears.

10 To connect the ICP Expert software to the ICP-OES instrument refer to the Agilent 5100 ICP-OES User's Guide.

Wavelength calibration and detector calibration

When the software installation is complete, you *must* perform a wavelength calibration and detector calibration before initiating any measurements with your instrument. Refer to the Agilent 5100 ICP-OES User's Guide for steps on how to perform these calibrations. The logged on User will need to be assigned to either the Service User Profile or given Instrument Calibration privilege to perform the wavelength and detector calibration.

Scenario 2

This scenario is for a configuration where:

- The application software is installed on the instrument computer.

- SCM with Privileges and Profiles is installed on the laboratory management computer.

- SDA is installed on an IT server.

Instrument computer

To install the software:

1 Log onto the instrument computer with Administrator privileges.

2 Insert the application software disk. At the AutoPlay prompt select the **Run ICPExpertSetup.exe** and click **Yes** at the prompt.

3 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

NOTE	If no installation screen appears, run 'ICPExpertSetup.exe' from the DVD directory.

4 Follow the prompts on the screen until the 'Select Destination Location' window appears. Confirm the directory in which you would like to install the application. Alternatively, click **Browse** to choose a different location. Click **Install**.

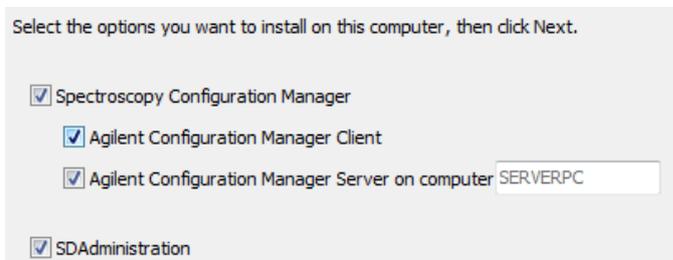| NOTE	Agilent strongly recommends the Agilent\ICP Expert folder and applications are installed in the recommended C:\Program Files (x86) directory.

NOTE	During installation-of the Microsoft .Net framework, the computer may appear frozen and the 'Cancel' button may be unavailable. This is correct. The installation can take 3–5 minutes. Do not try to exit the installation during this time.

5 Follow the prompts.

6 At the 'Agilent Technologies SPS 4 Driver Installer' dialog, click **Next** to install the driver. Click **Finish** when prompted.

7 Click **Finish** to complete the installation.

8 Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

9 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

If no installation screen appears, run 'setupCFR.exe' from the CD directory.

10 Follow the prompts until the 'Installed Options' window is displayed.

11 Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

Select the options you want to install on this computer, then click Next.

☑ Spectroscopy Configuration Manager
　☑ Agilent Configuration Manager Client
　☑ Agilent Configuration Manager Server on computer SERVERPC

☑ SDAdministration

12 Uncheck Agilent Configuration Manager Client and Agilent Configuration Manager Server. The server name entry box will now be enabled. Enter the server name. Recheck only Agilent Configuration Manager Client.

NOTE The 'Server name' is the name of the computer on which SCM is to be installed (in this case the Laboratory Management Computer). The correct name can be found on the Laboratory Management Computer by **Control Panel > System > Computer Name**. The server name is the full computer name, without the domain.

13 Click **Next**.

14 Follow the prompt s until the 'Customer Information' window appears.

15 Enter the customer information, select the appropriate 'Install this application for:' option and click **Next.**

16 Select **Custom** in the 'Setup Type' window and then click **Next**.

17 Deselect the SCM server by clicking the '⌄' symbol to the left and clicking the cross symbol (✖), as shown below:

⊟ ▭⌄ Administration
　　　▭⌄ Configuration manager
⊞ ✖⌄ Server

18 Click **Next**.

19 Enter the server name and then click **Next**.

NOTE The 'Server name' is the name of the computer on which SCM is to be installed (in this case the Laboratory Management Computer). The correct name can be found on the Laboratory Management Computer by **Control Panel > System > Computer Name**. The server name is the full computer name, without the domain.

20 Click **Install**.

21 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish.**

22 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

NOTE The installation of the ICP Expert Workspace and Privileges and Profiles can take several minutes. Do not exit during the installation.

23 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

24 Remove the Spectroscopy Configuration Manager disk from the CD drive.

25 Restart the computer to complete the installation.
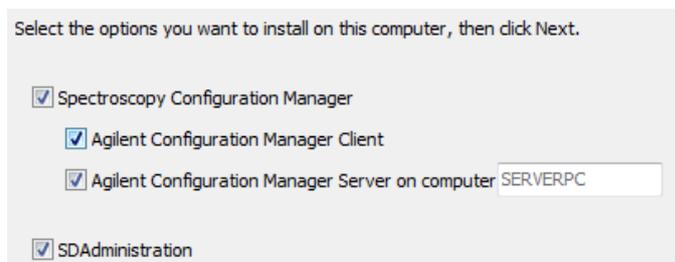
Laboratory management computer

To install the software:

1 Log onto the laboratory management computer with Administrator privileges.

2 Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

3 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

> **NOTE** If no installation screen appears, run 'setupCFR.exe' from the CD directory.

4 Follow the prompts until the 'Installed Options' window is displayed.

5 Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

Select the options you want to install on this computer, then click Next.

☑ Spectroscopy Configuration Manager
   ☑ Agilent Configuration Manager Client
   ☑ Agilent Configuration Manager Server on computer SERVERPC

☑ SDAdministration

6 Follow the prompts.

> **NOTE** The installation of the Microsoft .Net Framework, SQL Server 2008 R2, SQL Server 2008 Express, Agilent SDAdministrator and ICP Expert Workspace can take several minutes. Do not exit during the installation.

7 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish**.

8 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

> **NOTE** The installation of the ICP Expert Workspace and Privilege and Profiles can take several minutes. Do not exit during the installation.

9 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

10 Remove the Spectroscopy Configuration Manager disk from the CD drive.

11 Restart the computer to complete the installation.

IT server

Microsoft Windows Server 2008

If Microsoft Windows Server 2008 is being used as the IT Server, Microsoft .NET Framework Core (.NET Framework 3.5 SP1) needs to be installed first. If Microsoft Windows Server 2008 is not being used, these steps can be skipped.

1 On the server running Windows Server 2008, right-click **Windows Powershell** and then select **Run as administrator.**

2 Type the following commands:

Import-Module ServerManager
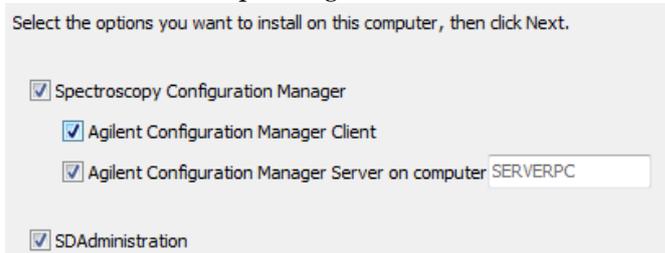
Add-WindowsFeature as-net-framework

To install the software:

1 Log onto the IT server with Administrator privileges.

2 Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

3 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

> **NOTE** If no installation screen appears, run 'setupCFR.exe' from the CD directory.

4 Follow the prompts until the 'Installed Options' window is displayed.

5 Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

Select the options you want to install on this computer, then click Next.

☑ Spectroscopy Configuration Manager
  ☑ Agilent Configuration Manager Client
  ☑ Agilent Configuration Manager Server on computer SERVERPC

☑ SDAdministration

6 Follow the prompts.

> **NOTE** The installation of the Microsoft .Net Framework, SQL Server 2008 R2, SQL Server 2008 Express, Agilent SDAdministrator and ICP Expert Workspace can take several minutes. Do not exit during the installation.

7 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish**.

8 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

> **NOTE** The installation of the ICP Expert Workspace and Privileges and Profiles can take several minutes. Do not exit during the installation.

9 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

10 Remove the Spectroscopy Configuration Manager disk from the CD drive.

11 Restart the computer to complete the installation.

Registering and configuring the software

Once installation is complete, you will need to:

- Configure SDA (IT Server)

- Configure SCM (Laboratory Management Computer)

- Register your ICP Expert Software (Instrument Computer)

- Perform a wavelength calibration and detector calibration

To configure SDA on the IT Server:

1 Double -click on the 'SDAdministrator' desktop shortcutor click **Start > All Programs > Agilent > Database Utilities > SDAdministrator**.

2 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

3 Refer to the Help for instructions on setting up SDA.

The Supplied Templates Database and Results Database must be copied to the IT Server and attached to the database server as follows:

1 Once SDA is configured, browse to C:\ProgramData\Agilent\ICP Expert\CFR folder.

2 Copy the **VAIMDB_SuppliedTemplates(000).mdf** and **VAIMDB_SuppliedTemplates(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

3 The Supplied Worksheets database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

4 Copy the **VAIMDB_Results(000).mdf** and **VAIMDB_Results(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

5 The Results database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

| NOTE | The SDAAdministrators account must be granted access to the 'VAIM Admin' Database and any Administrators who need access to the SDA must be added to the SDA Administrators Group. |

To add the User Group to the database account(s):

1 Select **Advanced Setup**, on the **Database Accounts** tab, select the **BUILTIN\Users**, select (highlight) the desired database from the 'Database Access' list and then click the >> button.

2 Repeat Step 1 for each additional database.

To configure the SCM on the Laboratory Management Computer:

1 Double-click the 'Configuration Manager' desktop shortcut or click **Start > All Programs > Agilent > 21CFR11 > Configuration Manager.**

2 Enter 'administrator' as the user identification and 'agilent' as the password. You will be prompted to enter a new password and confirm it. Ensure that there are at least six characters in your new password.

3 Create a Station, and assign it the computer name. This can be found in **Control Panel** > **System** > **Computer Name**. The computer name is the full computer name, without the domain.

4 Create a Group, Project, User(s) and User Profile and assign them to the Station. It is recommended that the initial User Profile be set to 'Service'.

For more details on how to set up SCM, refer to the Help.

To start and register the ICP Expert software (Instrument Computer):

NOTE	Ensure the software registration is completed by the user of the Agilent ICP-OES spectrometer. For further information refer to the Software Registration Help.

1   Double-click the ICP Expert icon on the computer desktop.

2   The first time the ICP Expert software is open a Software Registration dialog will appear. Click Next.

3   Complete all the fields on the 'Customer Details' page. Click **Next**.

NOTE	The Product Key is found on the cover of the Agilent ICP Expert software DVD case which was delivered with the instrument.

4   Complete all the fields on the 'Product Details' page. Click **Next**.

5   Complete all the fields on the 'Work Environment Details' page. Click **Register**.

6   A dialog appears stating 'Your Agilent Software Registration has been successful'**.**

NOTE	If your computer is not connected to the internet, refer to the Software Registration Help for further information.

7   The application will now open.

8   Enter the User Identification, select the desired Group and Project and then enter the password.

9   Click **Allow Access** if the Windows Firewall prompt appears.

10 To connect the ICP Expert software to the ICP-OES instrument refer to the Agilent 5100 ICP-OES User's Guide.

Wavelength calibration and detector calibration

When the software installation is complete, you *must* perform an instrument calibration and detector calibration before initiating any measurements with your instrument. Refer to the Agilent 5100 ICP-OES User's Guide for steps on how to perform these calibrations. The logged on User will need to be assigned to either the Service User Profile or given Instrument Calibration privilege to perform the wavelength and detector calibration.

Scenario 3

This scenario is for a configuration where:

• The application software is installed on the instrument computer.

• SDA and SCM including Privileges and Profiles are installed on an IT Server.

Instrument computer

To install the software:

1   Log onto the instrument computer with Administrator privileges.

2   Insert the application software disk. At the AutoPlay prompt select the **Run ICPExpertSetup.exe** and click **Yes** at the prompt.

3 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

> **NOTE** If no installation screen appears, run 'ICPExpertSetup.exe' from the DVD directory.

4 Follow the prompts on the screen until the 'Select Destination Location' window appears. Confirm the directory in which you would like to install the application. Alternatively, click **Browse** to choose a different location. Click **Install**.

> **NOTE** Agilent strongly recommends the Agilent\ICP Expert folder and applications are installed in the recommended C:\Program Files (x86)\Agilent\ICP Expert directory.
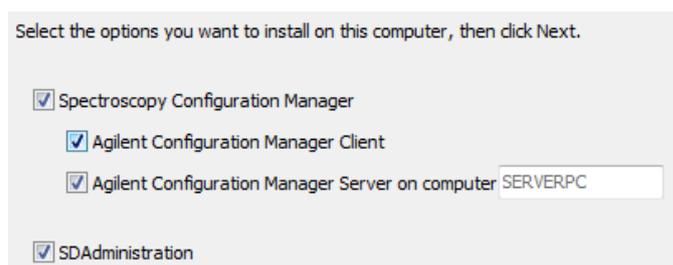
> **NOTE** During installation-of the Microsoft .Net framework, the computer may appear frozen and the 'Cancel' button may be unavailable. This is correct. The installation can take 3–5 minutes. Do not try to exit the installation during this time.

5 Follow the prompts.

6 At the 'Agilent Technologies SPS 4 Driver Installer' dialog, click **Next** to install the driver. Click **Finish** when prompted.

7 Click **Finish** to complete the installation.

8 Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

9 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

> **NOTE** If no installation screen appears, run 'setupCFR.exe' from the CD directory.

10 Follow the prompts until the 'Installed Options' window is displayed.

11 Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

12 Uncheck Agilent Configuration Manager Client and Agilent Configuration Manager Server. The server name entry box will now be enabled. Enter the server name. Recheck only Agilent Configuration Manager Client.

> **NOTE** The 'Server name' is the name of the computer on which SCM is to be installed (in this case the IT Server). The correct name can be found on the IT Server by **Control Panel > System > Computer Name**. The server name is the full computer name, without the domain.

13 Click **Next**.

14 Follow the prompt s until the 'Customer Information' window appears.

15 Enter the customer information, select the appropriate 'Install this application for:' option and click **Next.**

16 Select **Custom** in the 'Setup Type' window and then click **Next**.

17 Deselect the SCM server by clicking the ' ▾ ' symbol to the left and clicking the cross symbol (✖), as shown below:

18 Click **Next**.

19 Enter the server name and then click **Next**.

NOTE	The 'Server name' is the name of the computer on which SCM is to be installed (in this case the IT Server). The correct name can be found on the IT Server by **Control Panel > System > Computer Name**. The server name is the full computer name, without the domain.

20 Click **Install**.

21 When the 'Completed' window appears after installing the SCM software, click Finish and then follow the prompts to complete the installation.

22 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish.**

23 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

NOTE	The installation of the ICP Expert Workspace and Privileges and Profiles can take several minutes. Do not exit during the installation.

24 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

25 Remove the Spectroscopy Configuration Manager disk from the CD drive.

26 Restart the computer to complete the installation.

IT server

Microsoft Windows Server 2008

If Microsoft Windows Server 2008 is being used as the IT Server, Microsoft .NET Framework Core (.NET Framework 3.5 SP1) needs to be installed first. If Microsoft Windows Server 2008 is not being used, these steps can be skipped.

1 On the server running Windows Server 2008, right-click **Windows Powershell** and then select **Run as administrator.**

2 Type the following commands:

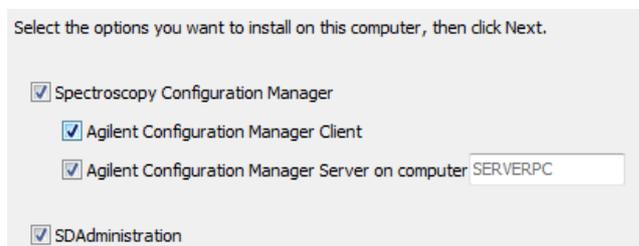**Import-Module ServerManager**

Add-WindowsFeature as-net-framework

To install the software:

1 Log onto the IT server with Administrator privileges.

2 Insert the disk labeled Spectroscopy Configuration Manager. At the AutoPlay prompt select the **Run setupCFR.exe** and click **Yes** at the prompt.

3 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

| NOTE | If no installation screen appears, run 'setupCFR.exe' from the CD directory. |

4 Follow the prompts until the 'Installed Options' window is displayed.

5 Items will be automatically checked if required. If any items are already installed the corresponding checkbox will be unchecked.

6 Follow the prompts.

| NOTE | The installation of the Microsoft .Net Framework, SQL Server 2008 R2, SQL Server 2008 Express, Agilent SDAdministrator and ICP Expert Workspace can take several minutes. Do not exit during the installation. |

7 When the 'Completed' window appears after installing the Spectroscopy Configuration Manager software, click **Finish**

8 The installation of the Application Privileges and Profiles and the ICP Expert Workspace will occur.

| NOTE | The installation of the ICP Expert Workspace and Privileges and Profile can take several minutes. Do not exit during the installation. |

9 On the 'Completing the ICP Expert 21 CFR 11 Installation Setup Wizard', click **Finish**.

10 Remove the Spectroscopy Configuration Manager disk from the CD drive.

11 Restart the computer to complete the installation.

Registering and configuring the software

Once installation is complete, you will need to:

• Configure SDA (IT Server)

• Configure SCM (IT Server)

• Register your ICP Expert Software (Instrument Computer)

• Perform a wavelength calibration and detector calibration

To configure SDA on the IT Server:

1 Double -click on the 'SDAdministrator' desktop shortcutor click **Start > All Programs > Agilent > Database Utilities > SDAdministrator**.

2 A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

3 Refer to the Help for instructions on setting up SDA.

The Supplied Templates Database and Results Database must be copied to the IT Server and attached to the database server as follows:

1   Once SDA is configured, browse to C:\ProgramData\Agilent\ICP Expert\CFR folder.

2   Copy the **VAIMDB_SuppliedTemplates(000).mdf** and **VAIMDB_SuppliedTemplates(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

3   The Supplied Worksheets database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

4   Copy the **VAIMDB_Results(000).mdf** and **VAIMDB_Results(000)_log.LDF** file to the C:\Spectroscopy Databases folder on the IT Server (or another location designated for database storage).

5   The Results database can then be attached to the database server using SDA. Refer to the SDA Help for instructions on attaching a database.

> **NOTE** The SDAAdministrators account must be granted access to the 'VAIM Admin' Database and any Administrators who need access to the SDA must be added to the SDA Administrators Group.

To add the User Group to the database account(s):

1   Select **Advanced Setup**, on the **Database Accounts** tab, select the **BUILTIN\Users**, select (highlight) the desired database from the 'Database Access' list and then click the >> button.

2   Repeat Step 1 for each additional database.

To configure the SCM on the IT Server:

1   Double-click the 'Configuration Manager' desktop shortcut or click **Start > All Programs > Agilent > 21CFR11 > Configuration Manager.**

2   Enter 'administrator' as the user identification and 'agilent' as the password. You will be prompted to enter a new password and confirm it. Ensure that there are at least six characters in your new password.

3   Create a Station, and assign it the computer name. This can be found in **Control Panel** > **System** > **Computer Name**. The computer name is the full computer name, without the domain.

4   Create a Group, Project, User(s) and User Profile and assign them to the Station. It is recommended that the initial User Profile be set to 'Service'.

For more details on how to set up SCM, refer to the Help.

To start and register the ICP Expert software (Instrument Computer):

> **NOTE** Ensure the software registration is completed by the user of the Agilent ICP-OES spectrometer. For further information refer to the Software Registration Help.

1   Double-click the ICP Expert icon on the computer desktop.

2   The first time the ICP Expert software is open a Software Registration dialog will appear. Click **Next**.

3   Complete all the fields on the 'Customer Details' page. Click **Next**.

> **NOTE** The Product Key is found on the cover of the Agilent ICP Expert software DVD case which was delivered with the instrument.

4   Complete all the fields on the 'Product Details' page. Click **Next**.

5   Complete all the fields on the 'Work Environment Details' page. Click **Register**.

6 A dialog appears stating 'Your Agilent Software Registration has been successful'**.**

7 The application will now open.

8 Enter the User Identification, select the desired Group and Project and then enter the password.

9 Click **Allow Access** if the Windows Firewall prompt appears.

10 To connect the ICP Expert software to the ICP-OES instrument refer to the Agilent 5100 ICP-OES User's Guide.

Wavelength calibration and detector calibration

When the software installation is complete, you *must* perform a wavelength calibration and detector calibration before initiating any measurements with your instrument. Refer to the Agilent 5100 ICP-OES User's Guide for steps on how to perform these calibrations. The logged on User will need to be assigned to either the Service User Profile or given Instrument Calibration privilege to perform the wavelength and detector calibration.

Upgrading the software

This procedure describes how to upgrade ICP Expert 21 CFR 11 version 7.0.1 or earlier to ICP Expert 21 CFR 11 version 7.1.0.

During the upgrade procedure, ensure you install the Agilent\ICP Expert folder in the same location as the original version 7.0.1 or earlier software.

The default installation folders for the ICP Expert 21 CFR 11 software are:

- C:\Program Files (x86)\Agilent\ICP Expert
- The Spectroscopy Database Administrator (SDA) software is located in C:\Program Files(x86)\Agilent\Database Utilities
- The SDA database files are located in C:\Spectroscopy Databases
- The Spectroscopy Configuration Manager (SCM) software is located in C:\Program Files(x86)\Varian\21CFR11\Configuration manager and C:\Program Files (x86)\Agilent\CFR

To upgrade the software:

1 On the instrument computer, follow Steps 1–7 on Page 5 to upgrade the ICP Expert Software.

2 Go to the computer or server running the currently installed version of Spectroscopy Database Administrator.

3 Double click on the 'SDAdministrator' desktop shortcut or click **Start > All Programs > Agilent > Database Utilities > SDAdministrator**.

- A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

4 Log on to the server from the **Advanced Setup** tab.

5 From the Databases tab, select the **Detach** sub-tab, and select the appropriate database from the list. Click on **Detach**.

6 Navigate to C:\Spectroscopy Databases and either rename (if you would like to keep a copy of the old database) or delete both the VAIMDB_SuppliedTemplates(000).mdf and VAIMB Supplied Templates (000)_log.LDF files.

7 Insert the disk labeled Spectroscopy Configuration Manager. Cancel out of the AutoPlay prompt.

8 Navigate to the CFR Supplied DB folder on the SCM installation disk and copy VAIMDB_SuppliedTemplates(000).mdf in to C:\Spectroscopy Databases.

9 Double click on the 'SDAdministrator' desktop shortcut or click **Start > All Programs > Agilent > Database Utilities > SDAdministrator**.

- A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

10 Logon to the server, and then attach the database by selecting it from the sub-tab **Attach** in the **Database** tab.

Back up and restore SCM and SDA

This procedure describes some practices that can be put in place to back up and restore SCM settings and SDA databases:

- The SCM settings, including all groups, projects, users and user profiles and privilege settings

- Databases within SDAdministrator, including all data and method files that are saved within a specific database

Backing up SCM settings

To back up SCM settings:

1 Navigate to the 'SCM Management' folder on the Spectroscopy Configuration Manager DVD.

2 Double-click 'BackupSCM.exe'.

- If a User Account Control dialog box appears, click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

3 Follow the prompts on the screen until the 'Select Destination Location' window appears. Confirm the directory in which you would like to save the SCM settings. Alternatively, click **Browse** to choose a different location. Click **Next**.

| NOTE | Agilent strongly recommends the C:\Program Files (x86)\Varian\21 CFR 11\Configuration Manager\Server\CM Data\Backup SCM folder is installed in the recommended directory. |

4 The 'Folder Does Not Exist' dialog box may appear. Click **Yes** to create the folder.

5 Navigate to this directory on the PC. Copy the 'Backup SCM' folder and move it to a secure location that meets data security requirements.

Backing up SDA databases

To back up a database from the SDA:

1 Double click on the 'SDA' desktop shortcut or click **Start > All Programs > Agilent > Database Utilities > SDAdministrator**.

- A User Account Control dialog box will appear. Click **Yes** for 'Do you want to allow the following program to make changes to this computer?'.

2 Log on to the server from the **Advanced Setup** tab.

3 From the **Databases** tab, select the **Detach** sub-tab, and select the appropriate database from the list. Click on **Detach**.

4 Navigate to **c:\ Spectroscopy Databases** and copy the detached database, which will have the file extension *.mdf, and move it to a secure location that meets data security requirements.

| NOTE | Only the *.mdf file is required. |

Restoring SCM

To restore the backed up SCM settings:

1 Run 'RestoreSCM.exe' from the SCM Management folder on the Spectroscopy Configuration Manager DVD.

- If a User Account Control dialog box appears, click Yes for 'Do you want to allow the following program to make changes to this computer?'.

2 Follow the prompts on the screen until the 'Select Location' window appears. Confirm the directory in which the 'Backup SCM' folder has been copied. Click **Next**.

3 A command prompt window will appear with a message that the operation has been successful.

Launch the SCM and the existing administrator logon credentials, group, project and user settings and privileges will be accessible.

Restoring SDA

To restore backed up SDA databases:

1 Navigate to the folder where your databases were saved in Step 4 of the 'Backing up SDA databases' procedure on Page 20.

2 Copy the databases into the C:\Spectroscopy Databases folder.

3 Follow Steps 4–10 in the 'Attaching a database' procedure on Page 22.

Uninstalling the software

This procedure includes removal of the 21 CFR Part 11 package and Microsoft SQL and Microsoft .Net 4.5.1 or 4.5.2. To uninstall the software, you must be logged on to the instrument computer, laboratory management computer and IT server as an Administrator.

| NOTE | If Microsoft .Net 4.5.1 or 4.5.2 is used by other applications installed on the computer, you are not required to uninstall the Microsoft .Net 4.5.1 or 4.5.2 program. |

IMPORTANT	If you choose to remove the Microsoft .Net 4.5.1 or 4.5.2 program, it is vital that Microsoft .Net 4.5.1 or 4.5.2 is uninstalled after Microsoft SQL Server. Removing Microsoft .Net 4.5.1 or 4.5.2 first will cause the remaining uninstall procedures to fail. In that instance, you will need to reformat the hard drive to completely remove the software.

To uninstall the software:

1 Click **Start > Control Panel > Uninstall a program**.

2 Click **ICP Expert Privileges and Profiles 1.0** and then select **Uninstall**. Follow the prompts on the screen to remove the privileges and profiles software.

3 When the ICP Expert Privileges and Profiles 1.0 is removed, you are returned to the 'Add/Remove Programs' screen. Click **Spectroscopy Configuration Manager** and then select **Change**. Follow the prompts to remove the SCM software.

4 When the SCM software is removed, you are returned to the 'Add/Remove Programs' screen. Click **Agilent SDAdministrator** and then select **Uninstall**.

5 When the Agilent SDAdministrator is removed, you are returned to the 'Add/Remove Programs' screen. Click **ICP Expert 21 CFR 11 Installation 1.0** and then select **Uninstall**.

6 When the ICP Expert 21 CFR 11 Installation 1.0 is removed, you are returned to the 'Add/Remove Programs' screen. Click **Agilent 5100 Workspace** and then select **Uninstall**.

7 When the Agilent 5100 Workspace is removed, you are returned to the 'Add/Remove Programs' screen. Click **Agilent Workspace Components** and then select **Uninstall**.

8 When the Agilent Workspace Components is removed, you are returned to the Add/Remove Programs' screen. Click **Agilent Setup Encryption** and then select **Uninstall.**

9 When the Agilent Setup Encryption is removed, you are returned to the 'Add/Remove Programs' screen. Click **VAIMCM Extensions** and select **Uninstall**.

10 When the VAIMCM Extension, you are returned to the 'Add/Remove Programs' screen, you are returned to the 'Add/Remove Programs' screen. Click **ICP Expert** and then select **Uninstall**. Return to the 'Add/Remove Programs' screen.

11 When the ICP Expert is removed, you are returned to the 'Add/Remove Programs' screen, you are returned to the 'Add/Remove Programs' screen. Click **Microsoft SQL Server 2008 R2 (64-bit)** and then click **Uninstall/Change**.

12 Click **Finish** to uninstall the components.

13 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server Native Client** and then click **Uninstall**.

14 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server R2 Management Objects (...** and then click **Uninstall**.

15 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server Compact 3.5 SP2 ENU** and then click **Uninstall**.

16 Click **Microsoft .Net Framework 4.5.1 or 4.5.2** and then select **Change/Remove**. Follow the prompts to uninstall the program.

17 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server 2008 R2 Policies** and then select **Change/Remove**. Follow the prompts to uninstall the program.

18 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server 2008 R2 Setup (English)** and then click **Uninstall**.

19 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server 2008 R2 Setup Support Files** and then click **Uninstall**.

20 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server Browser** and then click **Uninstall**.

21 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Compact SP2 Query Tools ENU** and then click **Uninstall**.

22 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft SQL Server VSS Writer** and then click **Uninstall**.

23 Press F5 to refresh 'Add/Remove Programs'. Select **Microsoft Report Viewer Redistributable 2008 SP1** and then click **Uninstall**.

Once all the software has been uninstalled:

`IMPORTANT` The following steps will delete the existing database(s), which contains their ICP Expert Worksheet and templates files. To save the database(s), copy the files with the *.mdf file name extensions out of the C:\Spectroscopy Databases folder into a temporary folder before you perform this procedure.

1 Go to C:\Spectroscopy Databases (if your databases were installed on a different drive, go to that location), delete all databases and subfolders and then delete the Spectroscopy Database folder.

2 Open Windows Explorer and search for "Agilent". Delete these instances of the Agilent folders.

3 Search for "Varian" and delete the instances of the Varian folders.

4 Check that all the ICP Expert and SDA components have been removed from the Registry. Ask your Network Administrator to perform this task.

5 Repeat the steps above for each computer the ICP Expert, SDA and SCM are installed on. The steps required will depend on the scenario installed.

6 Restart the computer, and follow the installation instructions for the appropriate scenario (see Page 4) to re-install the software.

7 To attach the database(s) refer to the next section, 'Attaching a database'.

Attaching a database

This procedure describes how to attach a database if the ICP Expert and Spectroscopy Configuration Manager software has been uninstalled.

To attach a database:

1 Copy the files with the *.mdf file name extensions out of the C:\Spectroscopy Databases folder in to a temporary folder.

2 Follow the uninstall procedure, then reinstall the application software and Spectroscopy Configuration Manager as described in the 'Setup Configuration' section.

3 Once the software is installed, copy the previously copied database(s) from the temporary folder back into the C:\Spectroscopy Databases folder.

`IMPORTANT` Do not copy the original VAIMAdminDatabase.mdf folder back into the C:\Spectroscopy Databases folder.

4 Open SDA, select **Advanced Setup**, and then log onto the database.

5 Click the **Database** tab and select the **Attach** tab.

6 Click **Select File** and select the database(s) copied back into the C:\Spectroscopy Databases folder.

7 Highlight the database(s) and click **Attach Databases**.

8 A reason for change dialog box should appear. Enter a reason for the change.

9 Exit SDA.

10 Refer to the Help for instructions on setting up SDA.

Troubleshooting

The ICP Expert Help contains Troubleshooting for ICP Expert 21 CFR 11 software and SDA. To locate the Help information for SCM, double-click the 'Configuration Manager' icon from the desktop and select 'Help' from the 'Help' menu. If you are unable to open the Help, contact your Agilent representative.

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This information is subject to change without notice.

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