SCCM Deployment Guide

This guide explains how to use Microsoft System Center Configuration Manager 2007 (SCCM) to install NVivo 9 to client machines without requiring user interaction.

This document should be read in conjunction with the NVivo 9 Network Administrator's Guide, which includes information about system requirements and installation options.

Overview

Microsoft SCCM uses packages to distribute software to client machines. A package represents a software application to be installed on a client computer.

This document guides you through the process of deploying NVivo using SCCM:

- Step 1 – Determine which packages you need
- Step 2 – Prepare the source files
- Step 3 – Create the packages (to install NVivo and its prerequisites)
- Step 4 – Create a program for each package
- Step 5 – Create a task sequence (executes the packages in sequence)
- Step 6 – Advertise the task sequence

Step 1 - Determine which packages you need

You need to create a package to install NVivo and another package to activate the software. You also need to create a package for each prerequisite that you need to install. The prerequisites will vary, depending on the operating system of the client machines, software currently installed, and whether you are installing the 32-bit or 64-bit version of NVivo 9.

Use the table below to determine which packages you need to create:

Packages	NVivo (x86) on Windows XP (x86 or x64)	NVivo (x86) on Windows Vista (x86 or x64)	NVivo (x86) on Windows 7 (x86 or x64)	NVivo (x64) on Windows 7 x64
Windows Installer 4.5	✓	✓	-	-
Microsoft .NET Framework 3.5 SP1	✓	✓	-	-
SQL Server 2008 R2 SP1 Express (x86)	✓	✓	✓	-
SQL Server 2008 R2 SP1 Express (x64)	-	-	-	✓
QuickTime 7.7	✓	✓	✓	-
Windows Media Player 11	✓	-	-	-
NVivo 9 (x86)	✓	✓	✓	-
NVivo 9 (x64)	-	-	-	✓
NVivo 9 Activation	✓	✓	✓	✓

NOTE: The 64-bit version of NVivo 9 has some known limitations—refer to http://redirect.qsrinternational.com/known-issues-nv9-en.htm for more information.

Step 2 - Prepare the source files

Before you can create the packages, all the files required to install the software must be available in a source directory on a file share (e.g. \\FileServer\SourceDirectory) that is accessible by the Configuration Manager and the client machines.

The following table describes the source files needed for each package:

Package	Source files	Steps to create source files
Windows Installer 4.5	The Windows installer or update file appropriate for the client operating system	1. Download the appropriate Windows Installer 4.5 package or update file: **- For XP (x86)** WindowsXP-KB942288-v3-x86.exe **- For XP (x64)** WindowsServer2003-KB942288-v4-x64.exe **- For Vista (x86)** Windows6.0-KB942288-v2-x86.msu **- For Vista (x64)** Windows6.0-KB942288-v2-x64.msu
Microsoft .NET Framework 3.5 SP1	dotnetfx35.exe	1. Download the Microsoft .NET Framework Windows Installer package—refer to Appendix A.
SQL Server 2008 R2 SP1 Express (x86)	SQLEXPR_x86_ENU.exe SQLx86.bat	1. Download the SQL Server 2008 R2 SP1 Express (x86) Windows Installer package—refer to Appendix A. 2. Create the batch file manually—refer to Appendix B. NOTE: You need to create the batch file, because the command line options exceed the length of the command line field in the SCCM Configuration Manager.
SQL Server 2008 R2 SP1 Express (x64)	SQLEXPR_x64_ENU.exe SQLx64.bat	1. Download the SQL Server 2008 R2 SP1 Express (x64) Windows Installer package—refer to Appendix A. 2. Create the batch file manually—refer to Appendix B. NOTE: You need to create the batch file, because the command line options exceed the length of the command line field in the SCCM Configuration Manager.
QuickTime 7.7	AppleApplicationSupport.msi QuickTime.msi AppleSoftwareUpdate.msi QuickTime.bat	1. Download the QuickTime 7.7 Windows Installer package — refer to Appendix A. 2. Extract the .msi files using the command: 　QuickTimeInstaller.exe /extract 3. Create the batch file manually—refer to Appendix B. NOTE: The batch file allows you to install all QuickTime components via a single SCCM package (rather than creating three separate packages).
Windows Media Player 11	wmp11-windowsxp-x86-enu.exe WMP.bat	1. Download the Windows Media Player 11 Windows Installer package—refer to Appendix A. 2. Create the batch file manually—refer to Appendix B.
NVivo 9 (x86 or x64)	All the files extracted from the NVivo 9 32-bit or 64-bit Windows Installer package.	1. Download the 32-bit or 64-bit NVivo 9 Windows Installer package from the QSR website—refer to Appendix A. 2. Extract the contents of the package using the command: 　NVivo9.exe /a
NVivo 9 Activation	activation.xml activation.bat	1. Create the XML file manually—refer to Appendix B. 2. Create the batch file manually—refer to Appendix B.

Step 3 - Create the packages

Now that you have worked out which prerequisites you need to install and you have prepared your source files, you are ready to create the packages.

To create a new SCCM package:

1   To launch the Configuration Manager Console, click **Start**, point to **All Programs**, click **Microsoft System Center**, click **Configuration Manager 2007**, and then click **ConfigMgr Console**.

2   In the Configuration Manager console, navigate to **System Center Configuration Manager** / **Site Database** / **Computer Management** / **Software Distribution**.

3   Right-click **Packages**, click **New**, and then click **Package**.
    The **New Package Wizard** opens.

4   On the **General** page, enter the name of the software, its version, manufacturer, language and a descriptive comment, and then click **Next**.

5   On the Data Source page, select **This package contains source files**.

6   Click the **Set** button to display the **Set Source Directory** dialog box.

7   Enter the UNC path of the source directory that contains the source files that you created in '*Step 2 - Prepare the source files*'.

8   Click **OK** to return to the **Data Source** page, and then click **Next**.

9   Continue through the wizard, selecting your preferred options, and then click **Finish** to create the package.

Repeat this procedure for each package that you need to create. Once you have created a package for each prerequisite and two packages for NVivo (installation and activation), you are ready to move to the next step in the process.

Step 4 - Create a program for each package

Every package you create needs a program that defines the command line parameters to use when installing the software and specifies system requirements and other run options.

To create a new SCCM program:

1   To launch the Configuration Manager Console, click **Start**, point to **All Programs**, click **Microsoft System Center**, click **Configuration Manager 2007**, and then click **ConfigMgr Console**.

2   In the Configuration Manager console, navigate to **System Center Configuration Manager** / **Site Database** / **Computer Management** / **Software Distribution** / **Packages**.

3   Expand the package that you want to create a program for.

4   Right-click the **Programs** folder, click **New**, and then click **Program**.
    The **New Program Wizard** opens.

5   On the **General** page, enter a descriptive name for the program.

6   In the **Command line**, type the command line that will be used to execute the program (or click **Browse** to select a batch file). In many cases, you will use the batch files you created in '*Step 2 - Prepare the source files*'. See the following table for more information.

Package	Command line	Comment
Windows Installer 4.5	<Installer Filename> /quiet /norestart	The executable file name varies depending on the version you are installing, XP (x86 or x64) or Vista (x86 or x64)—refer to *Step 2 - Prepare the source files*.
Microsoft .NET Framework 3.5 SP1	dotnetfx35.exe /qb	
SQL Server R2 SP1 Express (x86)	SQLx86.bat	The batch file contains a single command that is too long to enter directly into this field. See Appendix B.
SQL Server R2 SP1 Express (x64)	SQLx64.bat	The batch file contains a single command that is too long to enter directly into this field. See Appendix B.
QuickTime	QuickTime.bat	This batch file contains three separate commands that are executed in sequence to install the required QuickTime components in order. See Appendix B.
Windows Media Player 11	WMP.bat	This batch file contains a command that extracts the required installer files and rebuilds them into an executable that can be silently installed.
NVivo 9 **(x86 or x64)**	msiexec /Option <Required Parameter> [Optional Parameter]	Refer to the Network Administrator's Guide for detailed information about the options you can specify when you install NVivo. If you exceed the length of the command line, you will need to create a batch file to execute your command line statements.
NVivo 9 Activation	activation.bat	The content of this batch file varies depending on whether you are installing 32-bit or 64-bit NVivo, and the operating system you are installing on. See Appendix B.

7   From the **Run** list, select **Normal**, **Minimized**, **Maximized** or **Hidden** to determine how the program runs on the client machine, and then click **Next**.

8   On the **Requirements** page, enter information about the system requirements that apply to this program. Use these options to determine how much disk space should be available for the setup, the maximum amount of time to let the program run, and the operating systems supported by this program. Then click **Next**.

9   On the **Environment** page, choose when this program can run. No user interaction is required to install NVivo and its prerequisites, however the computer may be restarted as part of the task sequence, so you should select whichever option suits your organization.

10   Under **Run mode**, select **Run with administrative rights**.

11   Under **Drive mode**, select **Runs with UNC name**. Then click **Next**.

12   Continue through the wizard, selecting your preferred options, and then click **Finish** to create the program.

Step 5 - Create a task sequence

Now that you have created the packages and programs, you need to create a task sequence which allows you to specify a series of packages to be executed in order.

First, create the new task sequence:

1   To launch the Configuration Manager Console, click **Start**, point to **All Programs**, click **Microsoft System Center**, click **Configuration Manager 2007**, and then click **ConfigMgr Console**.

2   In the Configuration Manager console, navigate to **System Center Configuration Manager** / **Site Database** / **Computer Management** / **Operating System Deployment**.

3   Right-click the **Task Sequences** folder, click **New**, and then click **Task Sequence**.
    The **New Task Sequence Wizard** opens.

4   On the **Create New Task Sequence** page, click **Create a new custom task sequence**, and then click **Next**.

5   On the **Task Sequence Information** page, enter a descriptive name for the task sequence, and then click **Next**.

6   On the **Summary** page, check the name for the task sequence, and then click **Next**.
    A new (empty) task sequence is created.

7   Click **Close** to exit the wizard.

Next, add the required packages to the task sequence. You need to add the prerequisite packages you require (see *Step 1 - Determine which packages you need*) and then the two NVivo packages (installation and activation).

We recommend that you add computer restarts to the task sequence after the installation of Microsoft Windows Installer 4.5 and prior to the installation of SQL (the SQL installation may fail if the client has a pending restart for any reason).

To add the packages and restarts to the task sequence:

1   In the Configuration Manager console, navigate to **System Center Configuration Manager** / **Site Database** / **Computer Management** / **Operating System Deployment** / **Task Sequences**.

2   Right-click on the new task sequence, and then click **Edit**.

3   Add the required packages and restarts to the task sequence:

   •   To add a package to the task sequence, click **Add**, then click **General**, then click **Install Software**, and then click **Browse** to select the package.

   •   To add a computer restart to the task sequence:

      a)   Click **Add**, then click **General**, and then click **Restart Computer**.

      b)   On the **Properties** tab for the restart, under **Specify what to run after restart**, click **The currently installed default operating system**.

4   Make sure that the packages and restarts are in the correct order—you can reorder the list if necessary. The packages and restarts should be sequenced as follows:

   - Microsoft Windows Installer 4.5

   - Restart Computer (recommended)

   - Microsoft .Net Framework 3.5 SP1

   - Restart Computer (recommended)

   - SQL Server 2008 R2 SP1 Express Edition (x86 or x64)

   - QuickTime 7.7

   - Windows Media Player 11

   - NVivo 9 (32-bit or 64-bit)

   - NVivo 9 Activation

5   Click **OK** to close the task sequence.

Step 6 - Advertise the task sequence

Now everything is set up, you need to create an advertisement for the task sequence that will be sent to the client machines.

To advertise the task sequence:

1   In the Configuration Manager console, navigate to **System Center Configuration Manager** / **Site Database** / **Computer Management** / **Operating System Deployment** / **Task Sequences**.

2   Right-click on the task sequence, and then click **Advertise**.
    The **New Advertisement Wizard** is displayed.

3   Enter a descriptive name for the advertisement and (optionally) a comment.

4   Select the collection (of client machines) that you want to advertise the task sequence to. For example, a collection of Windows 7 machines.

5   Click **Next**.

6   On the **Schedule** page, select the dates and times that you want the task sequence to run.

7   Continue through the wizard, selecting your preferred options, and then click **Finish** to create the advertisement.

At the scheduled time and date SCCM sends the task schedule to the client machines. When these machines recognize that the schedule is available, the installation process begins. If a package fails to install on a particular machine, the task sequence stops (for that machine).

Appendix A - Software download locations

The NVivo 9 (32-bit and 64-bit) installer packages are available for download from the QSR website:
http://www.qsrinternational.com/support_downloads.aspx

Installing NVivo 9 and its prerequisites requires Windows Installer 4.5, which can be downloaded (if not already installed) from:
http://www.microsoft.com/downloads/details.aspx?FamilyID=5a58b56f-60b6-4412-95b9-54d056d6f9f4

NVivo 9's prerequisites are available for download from the following locations:

Microsoft .NET Framework 3.5 SP1
http://download.qsrinternational.com/Software/NVivo9/Components/dotnetfx35.exe (231 MB)

Microsoft SQL Server 2008 R2 SP1 Express Edition (x86) - For the 32-bit version of NVivo 9 only
http://download.qsrinternational.com/Software/NVivo9/Components/SQLEXPR_x86_ENU.exe (106.0 MB)

Microsoft SQL Server 2008 R2 SP1 Express Edition (x64) - For the 64-bit version of NVivo 9 only
http://download.qsrinternational.com/Software/NVivo9/Components/SQLEXPR_x64_ENU.exe (117.0 MB)

Quick Time Player 7.7 - For the 32-bit version of NVivo 9 only
http://download.qsrinternational.com/Software/NVivo9/Components/QuickTimeInstaller.exe (37.1 MB)

Windows Media Player 11 (x86) - For Windows XP only
http://download.qsrinternational.com/Software/NVivo9/Components/wmp11-windowsxp-x86-enu.exe (24.5 MB)

NOTE: Later releases of the prerequisite components may become available. However we recommend that you use the versions listed above, as these have been tested with NVivo 9.

Appendix B - Other installation files

This appendix explains how to create the batch and XML files that are described in '*Step 2 - Prepare your source files*' and '*Step 3 - Create programs*'. You can copy the text from this document or download the files from the following locations:

http://download.qsrinternational.com/Document/NVivo9/NVivo9-SCCM-Scripts.zip

http://download.qsrinternational.com/Document/NVivo9/SampleActivation.xml

SQLx86.bat (for 32-bit NVivo)

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
\\<FileServer\SourceDirectory>\SQLEXPR_x86_ENU.exe /ACTION=INSTALL /FEATURES=SQLEngine
/INSTANCENAME=QSRNVivo9 /SQLCOLLATION=Latin1_General_BIN /SQLSVCSTARTUPTYPE=Automatic
/SQLSVCACCOUNT="NT AUTHORITY\NETWORK SERVICE" /SQLSYSADMINACCOUNTS="BUILTIN\ADMINISTRATORS"
/IAcceptSQLServerLicenseTerms="True" /Q
exit
```

SQLx64.bat (for 64-bit NVivo)

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
\\<FileServer\SourceDirectory>\SQLEXPR_x64_ENU.exe /ACTION=INSTALL /FEATURES=SQLEngine
/INSTANCENAME=QSRNVivo9 /SQLCOLLATION=Latin1_General_BIN /SQLSVCSTARTUPTYPE=Automatic
/SQLSVCACCOUNT="NT AUTHORITY\NETWORK SERVICE" /SQLSYSADMINACCOUNTS="BUILTIN\ADMINISTRATORS"
/IAcceptSQLServerLicenseTerms="True" /Q
exit
```

QuickTime.bat

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
start /wait \\<FileServer\SourceDirectory>\AppleApplicationSupport.msi /passive /norestart
start /wait \\<FileServer\SourceDirectory>\QuickTime.msi DESKTOP_SHORTCUTS=0 /passive
/norestart
start /wait \\<FileServer\SourceDirectory>\AppleSoftwareUpdate.msi /passive /norestart
exit
```

WMP.bat

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
\\<FileServer\SourceDirectory>\wmp11-windowsxp-x86-enu.exe /q:A /c:"setup_wm.exe /Q /R:N
/P:#e"
exit
```

activation.xml

Copy the text below into Notepad, and set the values within the tags, and then save as a .xml file.

```xml
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<Activation>
  <Request>
    <FirstName>John</FirstName>
    <LastName>Sysadmin</LastName>
    <Email>admin@yourorg.com</Email>
    <Organization>Your Organization</Organization>
    <Department>Your Department</Department>
    <AddressLine1>Level 2</AddressLine1>
    <AddressLine2>100 Main St</AddressLine2>
    <City>Boston</City>
    <State>MA</State>
    <Country>USA</Country>
    <Zipcode>02129</Zipcode>
    <Fax>+1-555-555-5555</Fax>
    <Phone>+1-555-555-5555</Phone>
  </Request>
</Activation>
```

NOTE: Fields in bold are mandatory. You must use a valid email address or the activation will fail. Also, abbreviations must be used for the following countries:

- For United States of America use USA
- For United Kingdom use UK

activation.bat (for 32-bit NVivo on 32-bit O/S or for 64-bit NVivo on 64-bit O/S)

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
"c:\Program Files\QSR\NVivo 9\nvivo" -a \\<FileServer\SourceDirectory>\activation.xml
exit
```

activation.bat (for 32-bit NVivo on 64-bit O/S)

Copy the text below into Notepad, and change the location of the source directory to the file share that you created in '*Step 2 - Prepare the source files*', and then save as a .bat file.

```
@echo off
"c:\Program Files (x86)\QSR\NVivo 9\nvivo" -a \\<FileServer\SourceDirectory>\activation.xml
exit
```