

Migrating SIMS, FMS and Discover to SQL 2012

applicable to 7.154 onwards

Mini Guide



Revision History

Version	Change Description	Date
Version 1.0	Initial Release	04/07/2013
Version 1.1	Migration has been enhanced to include the option to automatically redirect the Discover clients.	13/11/2013

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C | Contents

01 Key Information	1
Introduction	1
What is the Recommended Process?.....	2
02 Migrating the Databases on the Existing Server	5
Introduction	5
Permissions	5
Running the SIMS SQL Migration Utility	6
Migrating Discover after SIMS	14
03 Migrating the Databases to a New Server.....	17
Introduction	17
Permissions	17
Running the SIMS SQL Migration Utility	18
Additional Notes for Discover Migrations	18
Migrating the SQL 2008 Databases to SQL 2012	19
Attaching the Migrated SQL 2012 Database(s) to the New SQL 2012 Server	22
04 Additional Information	31
Redirecting SIMS and Remapping the Document Management Server Manually	31
Redirecting SIMS	31
Remapping the Document Management Server.....	31
Redirecting the Discover Clients	32
Setting up a Discover Redirection for the Future	33
SQL 2012 Host Configuration Requirements	33
Additional Action for FMS Users with Scanned Documents....	34
Instance Naming Guidelines	34
Command Line Parameters	35
Parameters	35
Data Centre Migrations	38
Key Points.....	38
Examples:	39
05 Frequently Asked Questions	41
Frequently Asked Questions	41

01 | Key Information

Introduction	1
What is the Recommended Process?.....	2

Introduction

This document guides you through the process of migrating your SIMS, FMS and Discover databases from Microsoft SQL 2008/2008 R2 to Microsoft SQL Server 2012.

WARNINGS: You must upgrade SIMS, FMS and Discover to the 2013 Summer release or later before migrating to SQL 2012. Failure to follow this advice will result in you being unable to upgrade Discover using SOLUS³. You must upgrade SIMS, FMS and Discover to the 2013 Autumn release or later if you wish to use the automatic Discover redirection facility.

If you use SOLUS³, you must upgrade to SOLUS³ 3.6 before carrying out the SQL 2012 migration.

SQL 2012 refers to Microsoft SQL Server 2012, which is the database technology that SIMS uses to store its data.

The migration process involves moving the SIMS, FMS and Discover databases from the older Microsoft SQL Servers (2008 or 2008 R2) to a new 2012 SQL Server and reconnecting our software to the new database location. This could be either on a different or the same machine.

The SQL 2012 migration can be carried out on live systems from the SIMS, FMS and Discover Summer 2013 Release until the end of support date for your current SQL Server edition:

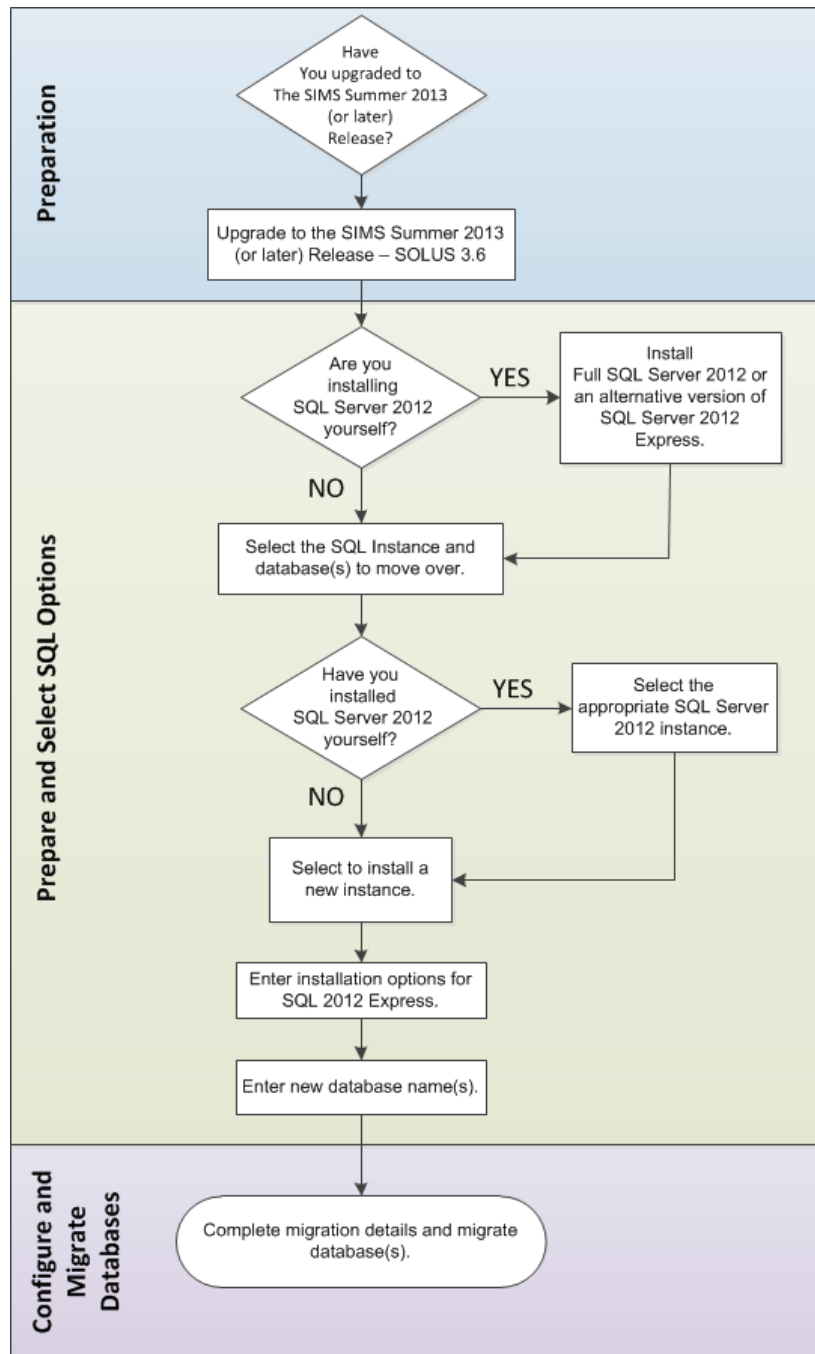
- Customers on SQL Server 2008 will be supported until they apply the SIMS 2014 Autumn Release.
- Customers on SQL Server 2008 R2 will be supported until they apply the SIMS 2015 Spring Release.

The SIMS SQL 2012 Migration Utility consists of the following components:

- The file required to run the SQL migration (SQLMigration.exe)
- The *Migrating SIMS, FMS and Discover to SQL 2012* mini guide (this document)
- Microsoft SQL Server 2012 SP1 Express edition.

What is the Recommended Process?

NOTE: In this handbook, migrating from a SQL 2008 Instance to a SQL 2012 Instance on the same server is covered in the Migrating the Databases on the Existing Server chapter, migrating from a SQL 2008 Instance to a SQL 2012 Instance on a new machine is covered in the Migrating the Databases to a New Server chapter.



IMPORTANT NOTE: *Ensure that your disaster recovery plan works correctly following the migration.*

02 | Migrating the Databases on the Existing Server

Introduction	5
Running the SIMS SQL Migration Utility	6

Introduction

This chapter describes a migration where databases are migrated to a SQL 2012 Instance that is held on the same physical server as the SQL 2008 Server Instance that your databases were originally on.

NOTE: The SIMS SQL 2012 Migration Utility is provided as a separate download from SOLUS.

Before beginning the migration, ensure that you have reviewed the Frequently Asked Questions (please see *Frequently Asked Questions* on page 41).

This process will optionally install and configure a SQL Server 2012 Express SP1 Database Server Instance to act as a host for SIMS and to migrate the existing SIMS, FMS and Discover databases from the SQL 2008/2008 R2 host to SQL 2012 Express (or full SQL 2012).

NOTE: The SQL 2008/2008 R2 Database Server will remain available for all non-SIMS/FMS/Discover purposes during the entire migration process.

Users who have already installed SQL Server Express 2012 or full SQL Server 2012 should carry out the host configuration instructions before running the migration (please see *SQL 2012 Host Configuration Requirements* on page 33).

Permissions

The following permissions are required to carry out the processes described in this chapter:

- A user with System Administrator rights should install SQL Server Express 2012 SP1.
- The user who migrates the SIMS/FMS/Discover databases will need to be logged into the SQL 2008/Express and SQL 2012/Express with Database Administrator, e.g. sa, rights. This user will also need Windows permissions to the Files system (data and backup folders of both SQL Servers).

NOTE: The user can be logged in using their Windows account as long as they have administrator rights.

Running the SIMS SQL Migration Utility

IMPORTANT NOTES: The SIMS SQL 2012 Migration Utility can be run only on the machine on which it is installed, i.e. the SIMS Server. It cannot be run from a mapped network drive. It must be installed and run on the host server(s).

All users must be logged out of the SIMS, FMS and Discover databases during the migration. Any users still logged on will be disconnected and any unsaved data will be lost.

The utility performs backups on each database at the start of the migration.

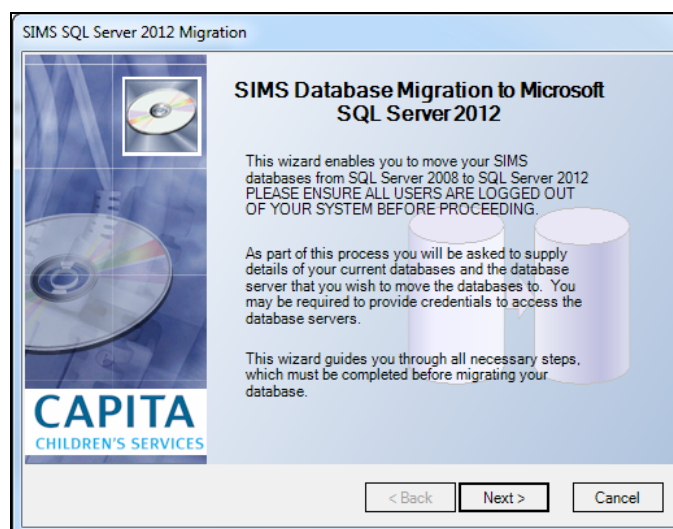
Ensure that you have upgraded to the SIMS, FMS and Discover 2013 Summer release or later (Autumn release or later if you wish to use the automatic Discover redirection facility) before continuing.

This utility migrates the SIMS, FMS and Discover databases from a SQL 2008 Instance to a SQL 2012 Instance. Optionally, it can install the new SQL 2012 Instance for you.

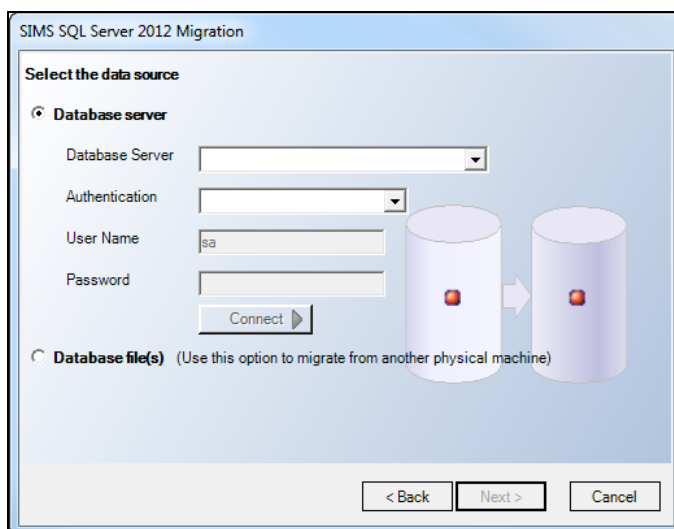
If you wish to migrate more than one database at a time, e.g. an FDS system with more than one FMS database, you will need to run this utility more than once in order to migrate multiple FMS databases.

You can also run this utility from the Command Line. This approach is particularly useful for Hosted sites with more than one SIMS, FMS or Discover database because it enables you to batch migrate these databases (please see *Command Line Parameters* on page 35).

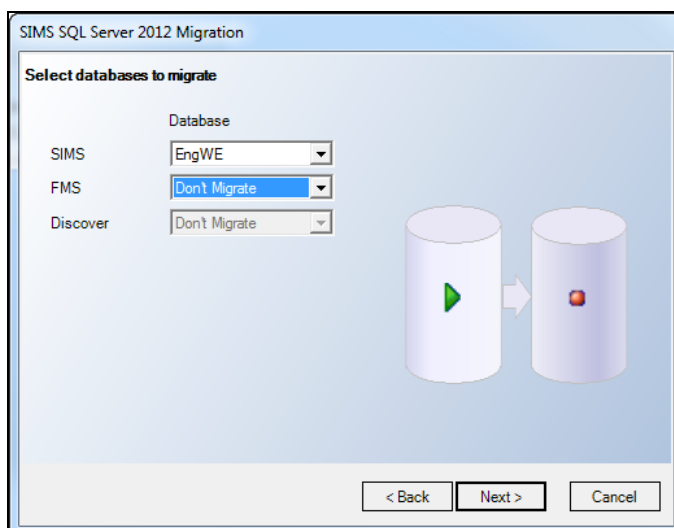
1. Once the SQL 2012 Migration zip file has been downloaded and unzipped on the SIMS Server, right-click the SQLMigration.exe file and select **Run as Administrator** to launch the utility.



2. Click the **Next** button to proceed.



3. Select the **Database server** radio button.
4. Enter the details of your existing SQL 2008 server by selecting the Database Server from the drop-down list then select the appropriate Authentication and enter the **User Name** and **Password**, if required.
5. Click the **Connect** button.
6. Once connected to the database server, click the **Next** button.



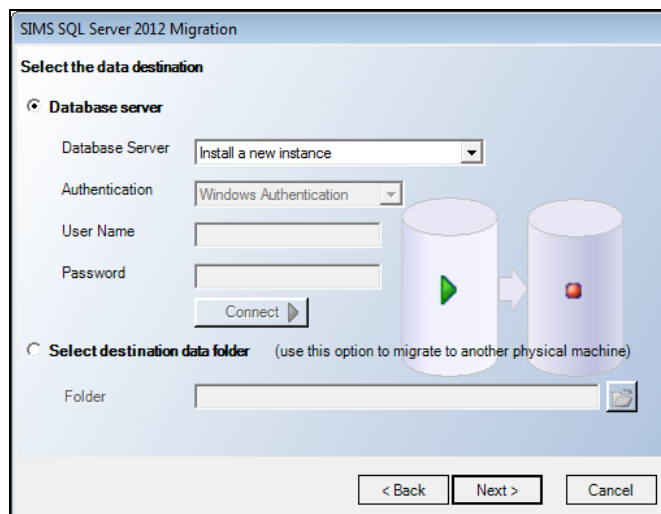
7. Select the database(s) you wish to migrate.

IMPORTANT NOTES: It is recommended that SIMS and Discover databases are migrated at the same time because the utility configures the settings automatically. However, if you have already migrated SIMS, or a joint SIMS and Discover migration resulted in the Discover migration failing and rolling back, there will be an opportunity to select the SIMS database on a subsequent Discover migration in order to complete its configuration (where the SIMS database is on the same destination SQL 2012 Instance that you want Discover on). This process is described at the end of this chapter. Otherwise the configuration will need to be carried out manually.

One of each type of database can be migrated at the same time. If you have multiple databases, e.g. FMS, you will need to rerun the utility to migrate each database individually.

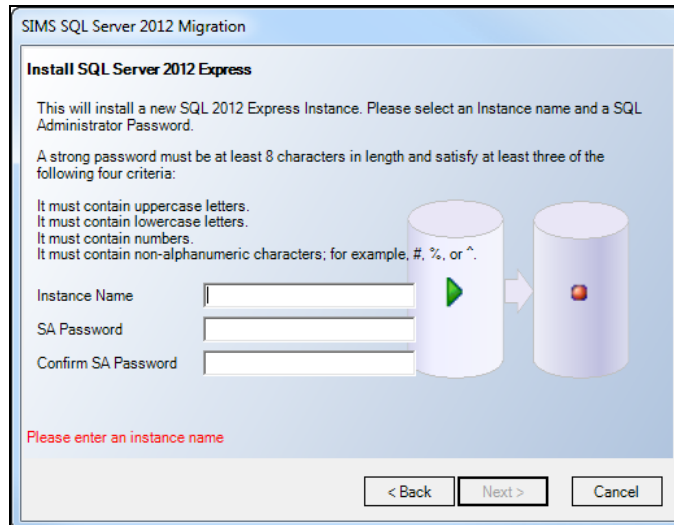
The migration will not work for FMS databases with a name beginning with a number. In these circumstances, the database must be renamed prior to the migration.

8. Click the **Next** button.



9. On the **Select the data destination** page:
 - a. If you have already created a new SQL 2012 Instance on this machine, select it from the **Database Server** drop-down list, enter your **Authentication** and click the **Connect** button. Click the **Next** button and proceed to Step 16.
 - b. If you have not already created a new SQL 2012 Instance, select **Install a new instance** from the **Database Server** drop-down list. Click the **Next** button.

10. If you are installing a SQL Server 2012 Express SP1 Instance, the **Install SQL Server 2012 Express** screen is displayed (if you are not installing SQL Server 2012 Express, proceed to step 16).



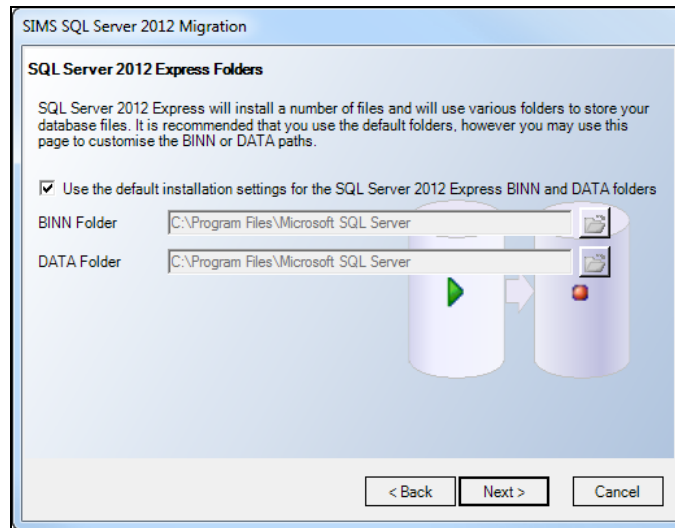
11. Enter an **Instance Name**, e.g. SIMS2012 (please see *Instance Naming Guidelines* on page 34).
12. Enter a System Administrator (sa) SQL Server 2012 Express password and confirm the password. This password will be required later in the migration process and for other SQL System Administrator tasks. Passwords should be memorable, be more than eight characters long and satisfy the following Strong Password criteria:
- Must contain upper case letters
 - Must contain lower case letters
 - Must contain numbers
 - Must contain non-alphanumeric characters, e.g. .#_~!.

NOTE: Some non-alphanumeric characters have specific meanings in batch files, e.g. &. Therefore, if batch files are used for SQL maintenance, care must be taken on the selection of any non-alphanumeric characters used in the password.

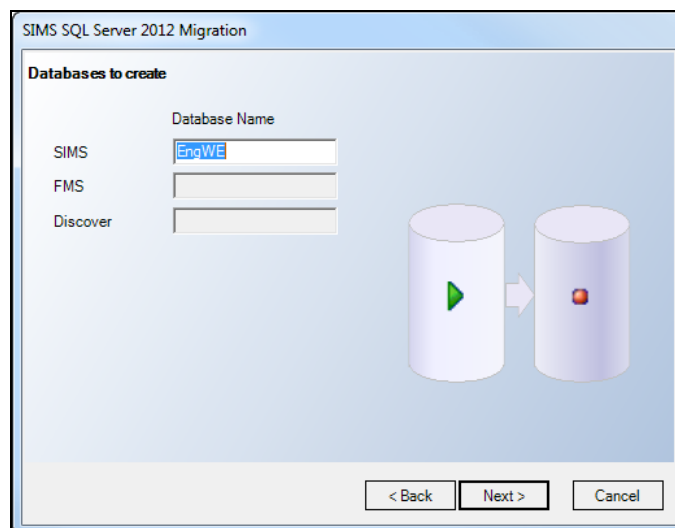
Must not be:

- 'Password'
- 'Admin'
- 'Administrator'
- 'sa'
- 'sysadmin'
- the name of the user currently logged onto the machine
- the machine name
- a blank or NULL condition.

13. Click the **Next** button.

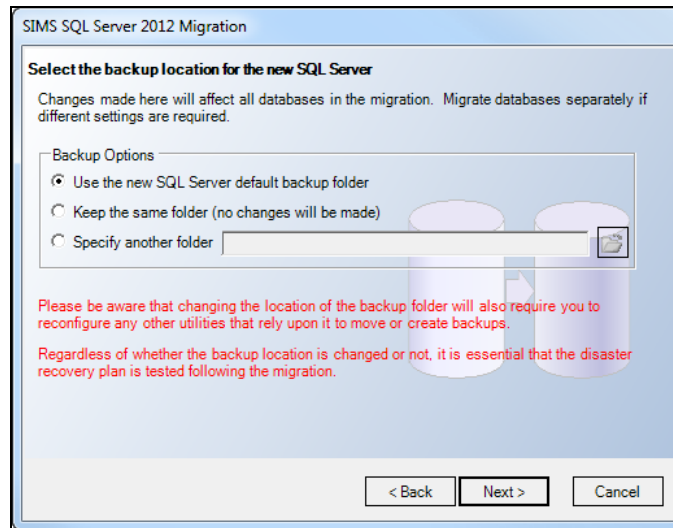


14. The **SQL Server 2012 Express Folders** screen enables you to change the default locations of the BINN and DATA folders, if required:
- If you do not need to change the default locations, proceed to step 15.
 - If you need to change the settings:
 - a. Deselect the **Use the default installation settings for the SQL Server 2012 Express BINN and DATA folders** check box.
 - b. Click the **Open File** buttons, navigate to and select the preferred locations for each folder.
15. Click the **Next** button.



16. On the **Databases to create** screen, the database name(s) default to their current names (or default names where databases are being moved from one machine to another). These can be edited, if required.

17. Click the **Next** button.



18. On the **Select the backup location for the new SQL Server** screen, select the appropriate radio button:

NOTE: If you are carrying out a Discover only migration, proceed to Step 19.

- **Use the new SQL Server default backup folder**

If you select this radio button, the SIMS/FMS database backup will use the default SQL 2012 folder. This is the recommended option for standard installations.

- **Keep the same folder (no changes will be made)**

Select this radio button to keep your current (i.e. SQL 2008) backup location folder. If you select this option, you will not need to reconfigure any utilities that rely on the location to move or create backups.

NOTE: This option is not available if you are moving to a different server because this location will no longer be available.

- **Specify another folder**

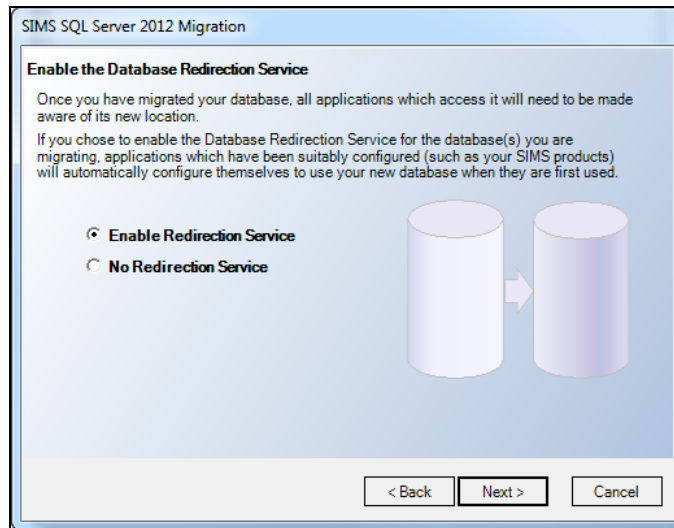
This is the recommended option. Ideally, the backup should be on a separate physical disk drive to the database, but on the same physical machine.

If this check box is selected, click the **Open File** button, navigate to and select the preferred location for backups to be created.

IMPORTANT NOTES: Changing the location of the backup folder will require you to reconfigure any other utilities that rely on it to move or create backups.

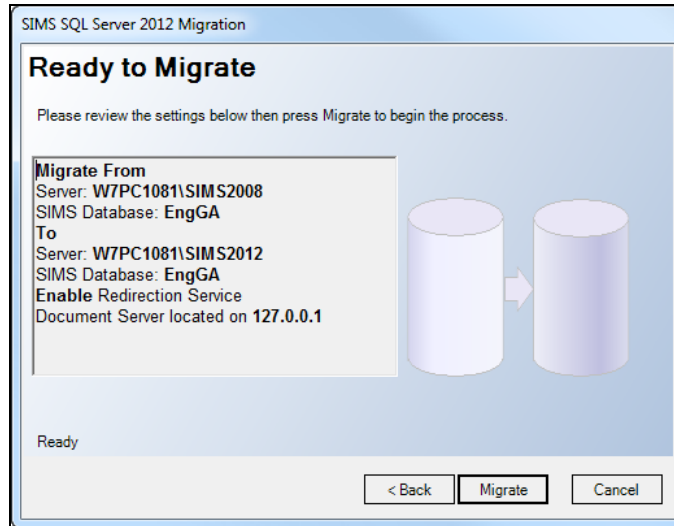
Regardless of whether the backup location is changed, it is essential that the disaster recovery plan is tested following the migration.

19. Click the **Next** button.



20. The **Enable the Database Redirection Service** screen requires you to enable or disable this service. One of the radio buttons must be selected.
- To enable the service, select the **Enable Redirection Service** radio button. If the Document Server is held in a different location to the default, an additional field is displayed. This field enables you to specify the location. Click the **Open File** button and locate the appropriate folder.
- IMPORTANT NOTE:** If the *SIMS Connect.ini* file on the SQL 2008 server machine contains a full stop to represent the machine name, e.g. *ServerName=. \SIMS2008*, the redirect facility will not work. In this circumstance, you should amend the *Connect.ini* file to specify the full machine name, e.g. *ServerName=SIMSSERVER\SIMS2008*.
- If the redirection service is not required, select the **No Redirection Service** radio button.

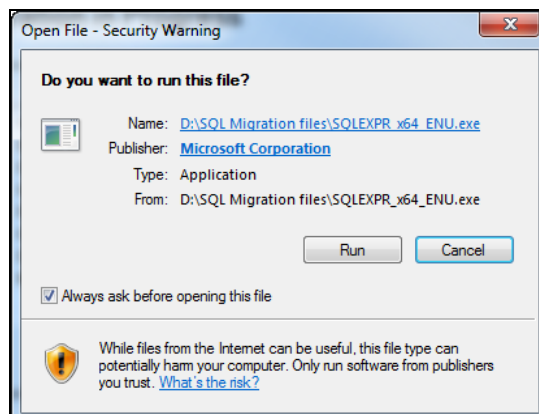
21. Click the **Next** button.



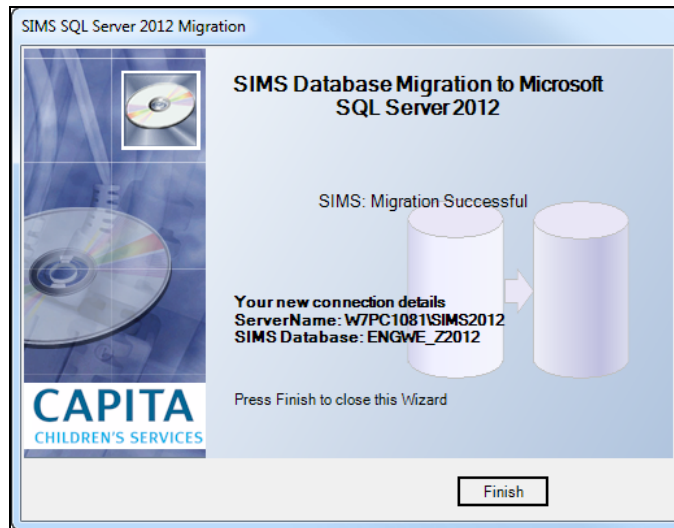
NOTE: Any users still logged into the affected databases at this point will be logged out. Any financial processes in progress will be rolled back. If you are performing a Discover migration, all Discover services will be stopped automatically.

22. The **Ready to Migrate** screen summarises the selections that have been made. To change any settings, click the **Back** button or click the **Migrate** button to begin the migration.

If you are installing SQL Server 2012 Express, the **Open File - Security Warning** dialog may be displayed during the migration process.



23. Click the **Run** button.



Once the process has completed, the **Migration Successful** screen is displayed. This screen summarises your new connection details.

24. Click the **Finish** button to close the wizard.

NOTE: After a Discover database is migrated and configured, a data transfer is instigated automatically.

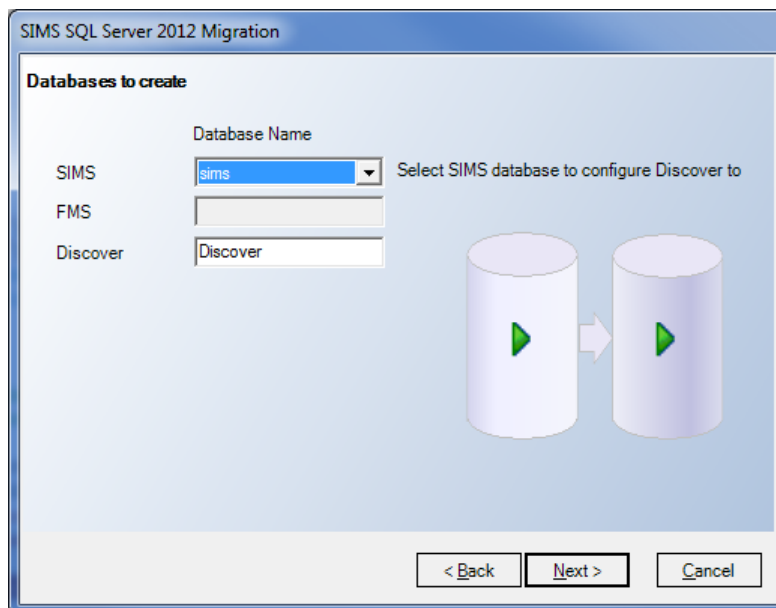
The migration utility can then be rerun to migrate additional databases.

IMPORTANT NOTE: *If you have chosen not to use the redirection service, you will need to carry out manual redirections (please see Additional Information on page 31).*

Migrating Discover after SIMS

WARNING: *It is recommended that Discover and SIMS are migrated at the same time.*

In circumstances where SIMS and Discover are being moved to the same destination server, but for whatever reason Discover is being moved after SIMS, the **Databases to create** screen enables you to select the SIMS database for the Discover configuration.



Where the appropriate SIMS database is selected, the SIMS SQL 2012 Migration Utility configures Discover automatically. Otherwise, Discover will need to be configured manually.

03 | Migrating the Databases to a New Server

Introduction	17
Running the SIMS SQL Migration Utility	18

Introduction

This chapter covers the processes involved when you are installing SQL 2012 on a new server and are moving the migrated database(s) across to this server, i.e. SQL 2008 is on one machine and SQL 2012 is (or will be) on a different machine.

NOTE: The SIMS SQL 2012 Migration Utility is provided as a separate download from SOLUS.

Before beginning the migration, ensure that you have reviewed the Frequently Asked Questions (please see *Frequently Asked Questions* on page 41).

This process will optionally install and configure a SQL Server 2012 Express SP1 Database Server Instance to act as a host for SIMS and to migrate the existing SIMS, FMS and Discover databases from the SQL 2008/2008 R2 host to SQL 2012 Express (or full SQL 2012).

NOTE: The SQL 2008/2008 R2 Database Server will remain available for all non-SIMS/FMS/Discover purposes during the entire migration process.

Users who have already installed SQL Server Express 2012 or full SQL Server 2012 should carry out the host configuration instructions before running the migration (please see *SQL 2012 Host Configuration Requirements* on page 33).

Permissions

The following permissions are required to carry out the processes described in this chapter:

- A user with System Administrator rights should install SQL Server Express 2012 SP1.
- The user who migrates the SIMS/FMS/Discover databases will need to be logged into the SQL 2008/Express and SQL 2012/Express with Database Administrator, e.g. sa, rights. This user will also need Windows permissions to the Files system (data and backup folders of both SQL Servers).

NOTE: The user can be logged in using their Windows account as long as they have administrator rights.

Running the SIMS SQL Migration Utility

IMPORTANT NOTES: The SIMS SQL 2012 Migration Utility can only be run on the machine on which it is installed, i.e. the SIMS Server. It cannot be run from a mapped network drive. It must be installed and run on the host server(s).

All users must be logged out of the SIMS, FMS and Discover databases during the migration. Any users still logged on will be disconnected and any unsaved data will be lost.

The utility performs backups on each database at the start of the migration.

Ensure that you have upgraded to the SIMS, FMS and Discover 2013 Autumn releases (Autumn release or later if you wish to use the automatic Discover redirection facility) before continuing.

This utility migrates the SIMS, FMS and Discover databases from a SQL 2008 Instance to a SQL 2012 Instance. Optionally, it can install the new SQL 2012 Instance for you.

If you wish to migrate more than one database at a time, e.g. an FDS system with more than one FMS database, you will need to run this utility more than once in order to migrate multiple FMS databases.

You can also run this utility from the Command Line. This approach is particularly useful for Hosted sites with more than one SIMS, FMS or Discover database because it enables you to batch migrate these databases (please see *Command Line Parameters* on page 35).

As you are migrating to a SQL 2012 Instance on a different physical machine, you will need to run this process twice; once to export the data from the existing SQL 2008 Instance and again to import it into the new SQL 2012 Instance, having copied the data file(s) to the new SQL 2012 machine manually.

On the SQL 2008 Instance machine, when you are given the choice of the destination SQL Server, you will need to select the **Database file(s)** option.

On the SQL 2012 Instance machine, when you are given the choice of the source SQL Server, you will need to select the **Database file(s)** option.

You will not be offered redirection options.

Additional Notes for Discover Migrations

If you are moving SIMS and Discover to a new Server, you should carry out the process in the following order:

1. Use the SIMS SQL 2012 Migration Utility to attach the migrated SIMS database to the SQL 2012 Instance first (do not attach the Discover database at the same time). This is because the Discover installation requires the details of the SIMS server to be added in.
2. Install Discover on the new SQL 2012 server (this can be carried out using SOLUS³ or your usual method). Please refer to the *Discover Typical Installation Guide* for details.

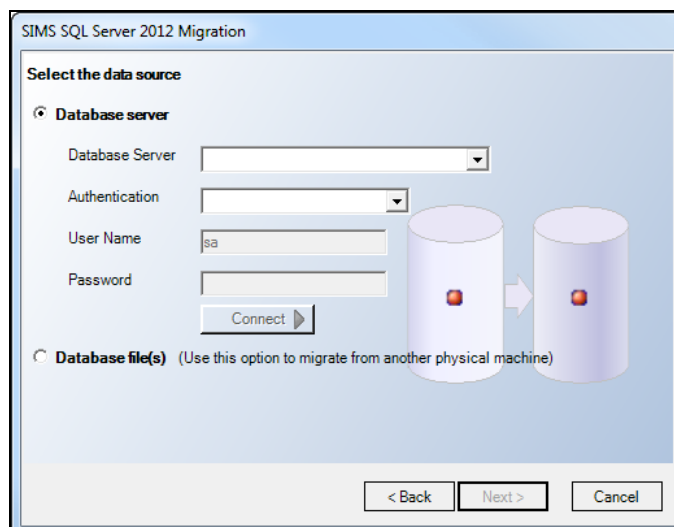
3. Run the SIMS SQL 2012 Migration utility again to attach the Discover database.
4. Carry out the Discover Client redirection (please see *Redirecting the Discover Clients* on page 32).

Migrating the SQL 2008 Databases to SQL 2012

1. Once the SQL 2012 Migration zip file has been downloaded and unzipped on the SIMS Server, right-click the SQLMigration.exe file and select **Run as Administrator** to launch the utility.

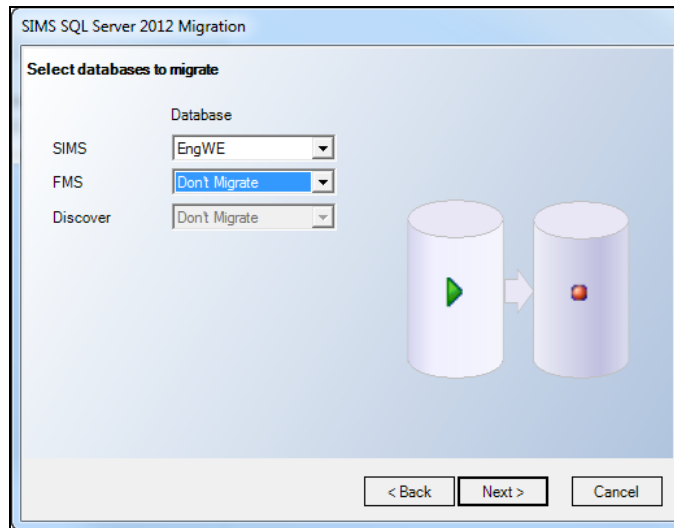


2. Click the **Next** button to proceed.



3. Select the **Database server** radio button.
4. Enter the details of your existing SQL 2008 server by selecting the **Database Server** from the drop-down list then select the appropriate **Authentication** and enter the **User Name** and **Password**, if required.
5. Click the **Connect** button.

- Once connected to the database server, click the **Next** button.

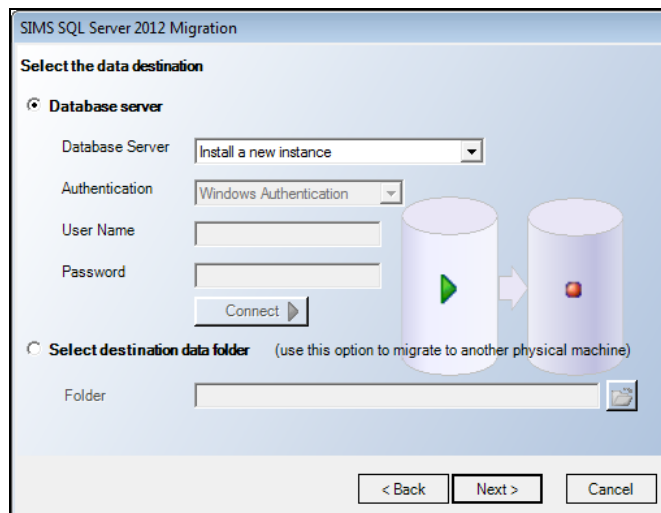


- Select the database(s) you wish to migrate.

IMPORTANT NOTES: One of each type of database can be migrated at the same time. If you have multiple databases, e.g. FMS, you will need to rerun the utility to migrate each database individually.

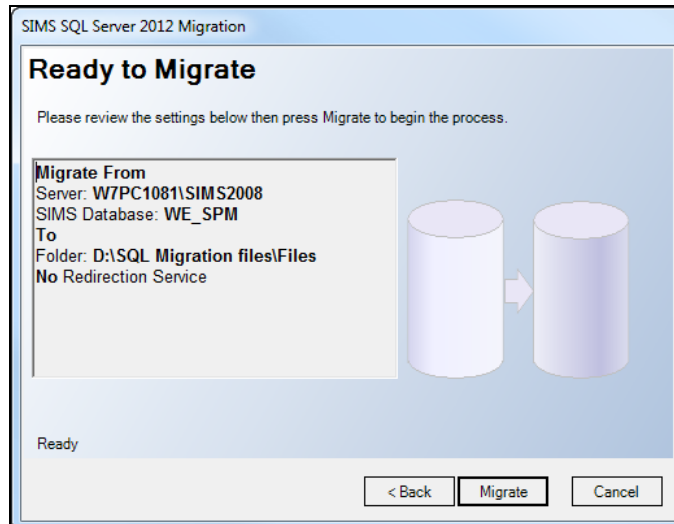
The migration will not work for FMS databases with a name beginning with a number. In these circumstances, the database must be renamed prior to the migration.

- Click the **Next** button.



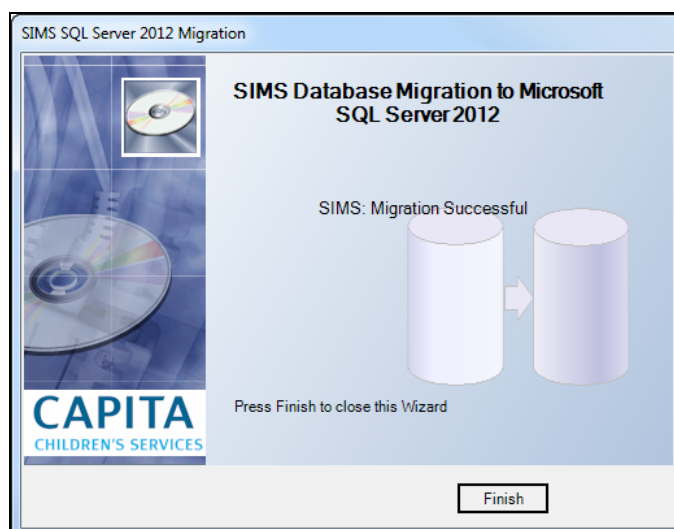
- As you intend to migrate the SIMS system to a new physical machine, you should select the **Select destination data folder** radio button. This option exports the database(s) selected previously to an output file. Click the **Browser** button, navigate to and highlight the folder in which you want to store the output file then click the **OK** button.
- Click the **Next** button.

NOTE: You will then have to copy the output file(s) to the new physical machine and run this utility on the new machine.



11. The **Ready to Migrate** screen summarises the selections that have been made. To change any settings, click the **Back** button or click the **Migrate** button to begin the migration.

NOTE: Any users still logged into the affected databases at this point will be logged out. Any financial processes in progress will be rolled back. If you are performing a Discover migration, all Discover services will be stopped automatically.



Once the process has completed, the **Migration Successful** screen is displayed. This screen will summarise your new connection details.

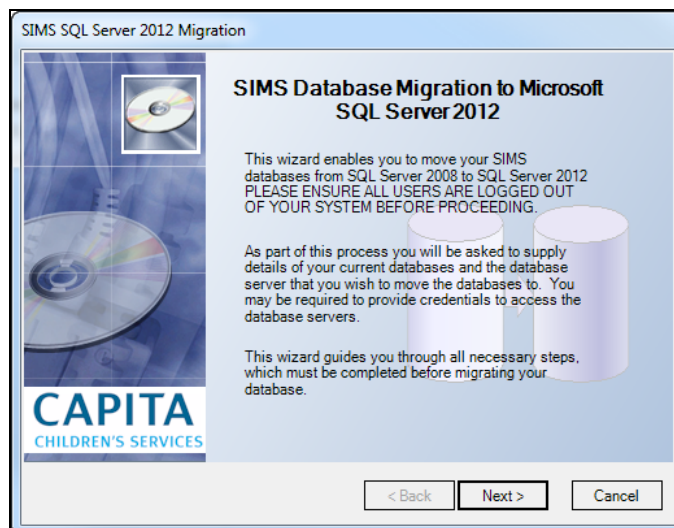
12. Click the **Finish** button to close the wizard.

13. If you are migrating to a new machine, copy files across to the new server and run the SIMS SQL 2012 migraMion utility on the new machine as described in the next section.

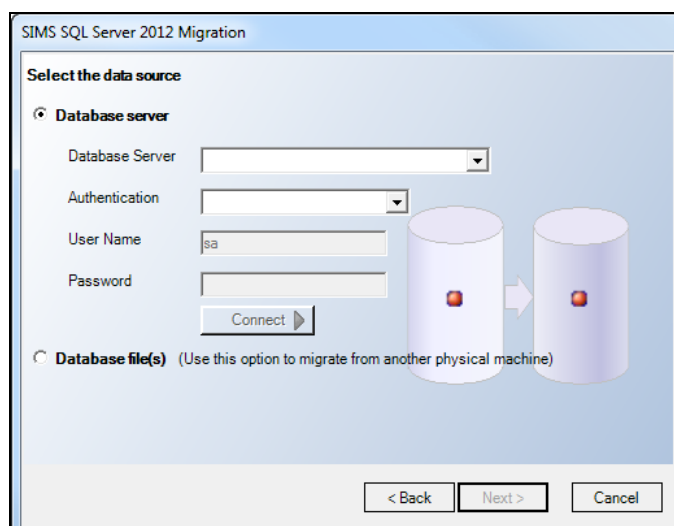
Attaching the Migrated SQL 2012 Database(s) to the New SQL 2012 Server

The database(s) migrated in the previous section must be moved to an appropriate location on the new server so that they can be attached to the SQL 2012 Instance on the new server. The SIMS SQL 2012 Migration Utility must then be run again to attach the database(s) and install SQL Server 2012 Express, if required.

1. Right-click the SQLMigration.exe file and select **Run as Administrator** to launch the utility.



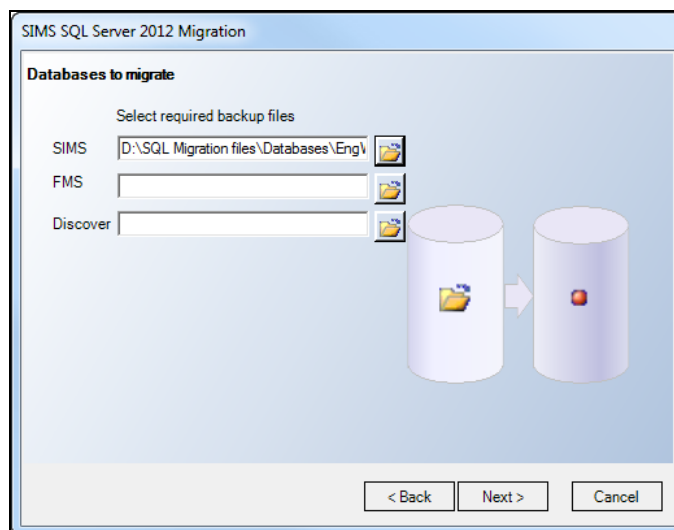
2. Click the **Next** button to proceed.



3. Select the **Database file(s)** radio button as you have carried out the migration process on the old SQL 2008 server (as described in the previous section) and you have copied the database file to the new SQL 2012 server. The migration utility uses this file to import into the new SQL 2012 Instance that you will select later in this process.

IMPORTANT NOTE: If you are migrating the SIMS and Discover databases to separate machines, you will have to install and configure the Discover services manually. The SIMS and Discover databases must be on the same destination Instance for the utility to configure Discover services automatically.

4. Click the **Next** button.



5. Click the **Open File** button adjacent to each database type that is ready to be migrated, then navigate to and select the database backup files.

NOTE: If you are attaching a SIMS and Discover database, you are advised to attach the SIMS database first and then run the utility to attach the Discover database (please see Additional Notes for Discover Migrations on page 18).

6. Click the **Next** button.

The screenshot shows the 'SIMS SQL Server 2012 Migration' window. The title bar says 'SIMS SQL Server 2012 Migration'. The main heading is 'Select the data destination'. There are two radio buttons: 'Database server' (selected) and 'Select destination data folder'. Under 'Database server', there are fields for 'Database Server' (a dropdown menu showing 'Install a new instance'), 'Authentication' (a dropdown menu showing 'Windows Authentication'), 'User Name' (a text box), and 'Password' (a text box). There is a 'Connect' button. To the right of these fields is a diagram showing two database cylinders connected by an arrow. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

7. On the **Select the data destination** screen:
 - a. If you have already created a new SQL 2012 Instance on this machine, select it from the **Database server** drop-down list. Select the correct **Authentication**, adding the **User Name** and **Password**, if required. Then click the **Connect** button.
Click the **Next** button and proceed to Step 14.
 - b. If you have not already created a new SQL 2012 Instance, select **Install a new instance** from the **Database server** drop-down list. Proceed to Step 8.
8. If you are installing a SQL Server 2012 Express SP1 Instance, the **Install SQL Server 2012 Express** screen is displayed.

The screenshot shows the 'SIMS SQL Server 2012 Migration' window. The title bar says 'SIMS SQL Server 2012 Migration'. The main heading is 'Install SQL Server 2012 Express'. Below the heading, there is text: 'This will install a new SQL 2012 Express Instance. Please select an Instance name and a SQL Administrator Password.' followed by a list of criteria for a strong password: 'A strong password must be at least 8 characters in length and satisfy at least three of the following four criteria: It must contain uppercase letters. It must contain lowercase letters. It must contain numbers. It must contain non-alphanumeric characters; for example, #, %, or ^.' There are three text boxes: 'Instance Name', 'SA Password', and 'Confirm SA Password'. To the right of these fields is a diagram showing two database cylinders connected by an arrow. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. A red error message 'Please enter an instance name' is visible at the bottom left.

9. Enter an **Instance Name**, e.g. SIMS2012 (please see *Instance Naming Guidelines* on page 34).

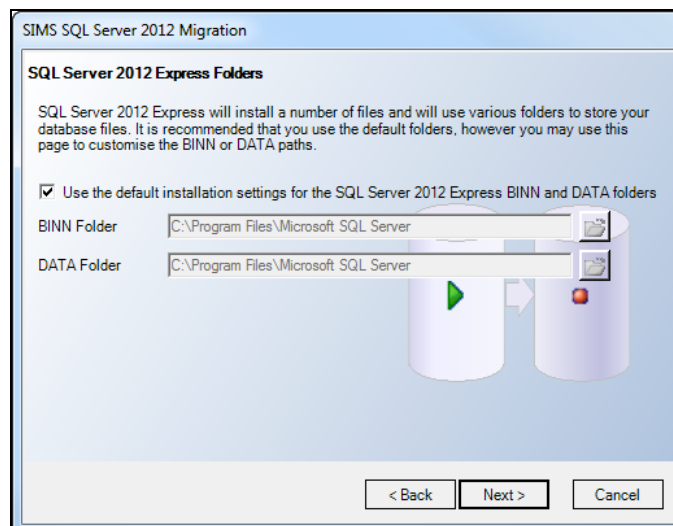
10. Enter a System Administrator (sa) SQL Server 2012 Express password and confirm the password. This password will be required later in the migration process and for other SQL System Administrator tasks. Passwords should be memorable, be more than eight characters long and satisfy the following Strong Password criteria:

- Must contain upper case letters
- Must contain lower case letters
- Must contain numbers
- Must contain non-alphanumeric characters, e.g. .#_~!.

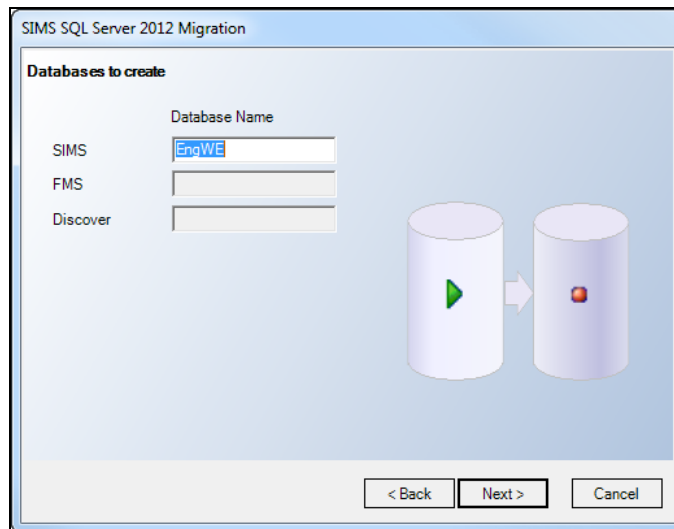
NOTE: Some non-alphanumeric characters have specific meanings in batch files, e.g. &. Therefore, if batch files are used for SQL maintenance, care must be taken on the selection of any non-alphanumeric characters used in the password.

Must not be:

- 'Password'
 - 'Admin'
 - 'Administrator'
 - 'sa'
 - 'sysadmin'
 - the name of the user currently logged onto the machine
 - the machine name
 - a blank or NULL condition.
11. Click the **Next** button.

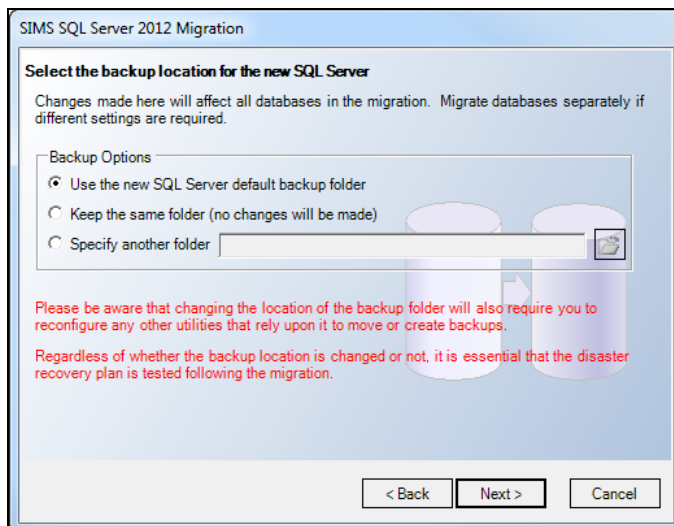


12. The **SQL Server 2012 Express Folders** screen enables you to change the default locations of the BINN and DATA folders, if required:
 - If you do not need to change the default locations, proceed to step 13.
 - If you need to change the settings:
 - a. Deselect the **Use the default installation settings for the SQL Server 2012 Express BINN and DATA folders** check box.
 - b. Click the **Open File** buttons, navigate to and select the preferred locations for each folder.
13. Click the **Next** button.



14. On the **Databases to create** screen, the database name(s) provided are default names as the databases are being moved from one machine to another. These can be edited.

15. Click the **Next** button.



On the **Select the backup location for the new SQL Server** screen, select the appropriate radio button:

NOTE: This screen is not displayed for a Discover only migration. Proceed to Step 17.

- **Use the new SQL Server default backup folder**

If you select this radio button, the SIMS/FMS database backup will use the default SQL 2012 folder. This is the recommended option for standard installations.

- **Keep the same folder (no changes will be made)**

NOTE: This option is not available if you are moving to a different server because this location is no longer available.

- **Specify another folder**

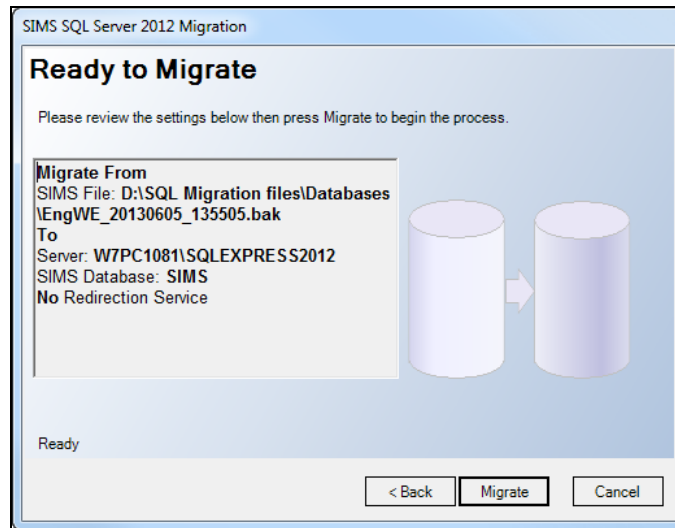
This is the recommended option. Ideally, the backup should be on a separate physical disk drive to the database, but on the same physical machine.

If this check box is selected, click the **Open File** button, navigate to and select the preferred location for backups to be created.

IMPORTANT NOTES: Changing the location of the backup folder will require you to reconfigure any other utilities that rely on it to move or create backups.

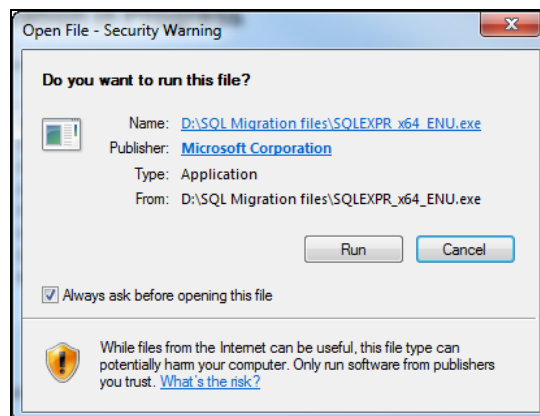
Regardless of whether the backup location is changed, it is essential that the disaster recovery plan is tested following the migration.

16. Click the **Next** button.

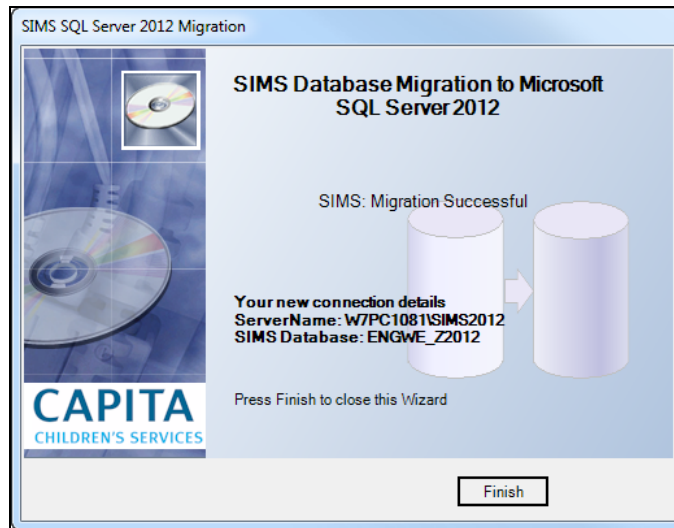


17. The **Ready to Migrate** screen summarises the selections that have been made. To change any settings, click the **Back** button or click the **Migrate** button to begin the migration.

If you are installing SQL Server 2012 Express SP1, the **Open File - Security Warning** dialog may be displayed during the migration process.



18. Click the **Run** button.



Once the process has completed, the **Migration Successful** screen is displayed. This screen summarises your new connection details.

19. Click the **Finish** button to close the wizard.

IMPORTANT NOTES: The SIMS, FMS and Discover Redirection Services cannot run when you are moving to a new server. You must now carry out the redirections and remap the Document Server manually (please see Additional Information on page 31).

04 | Additional Information

Redirecting SIMS and Remapping the Document Management Server Manually	31
Redirecting the Discover Clients	32
SQL 2012 Host Configuration Requirements	33
Instance Naming Guidelines	34
Command Line Parameters	35
Data Centre Migrations	38

Redirecting SIMS and Remapping the Document Management Server Manually

These instructions are provided as guidance for users who are not using the Redirection Service and Document Server Remapping Service.

Redirecting SIMS

To redirect SIMS manually, search for every Connect.ini file on your system and edit each one so that it points to the correct (SQL 2012) ServerName and DatabaseName.

Where 'redirect' Connect.ini files are in use, only the Connect.ini that the redirect service points to needs to be edited. For example, the Connect.ini files held on a client machine in Program Files\SIMS\SIMS.net may be redirect Connect.ini files and therefore do not need to be edited, but the Connect.ini held in the SIMS folder on the server will require the new ServerName and converted DatabaseName (if this has changed) to be edited to show the new details.

Remapping the Document Management Server

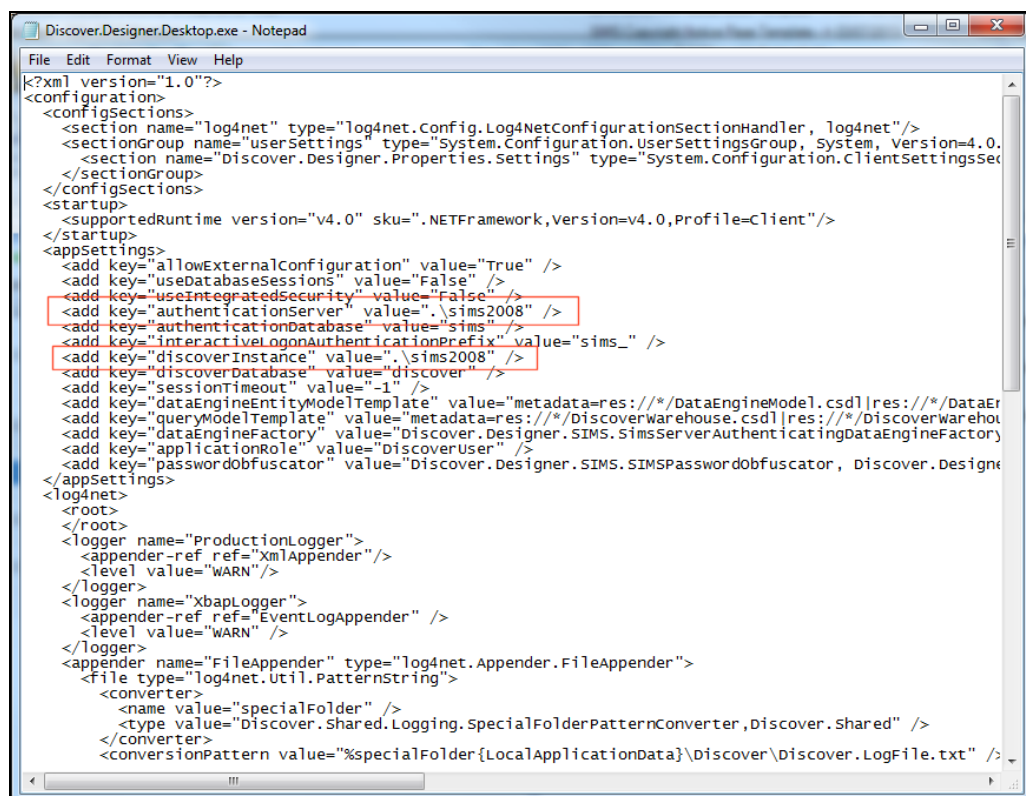
NOTE: These actions should be carried out on the physical Document Management Server.

1. Open Windows Explorer and search for the document storage folder. The default location is C:\DOCSTORAGE but this may be different on your system. Double-click the folder name.
2. Double-click the folder that represents the SQL Server machine name, e.g. MySIMSDBServer.
3. Double-click the folder that represents the SQL Server 2008 Instance Name, e.g. SIMS2008.
4. Locate the folder that represents the SIMS database, e.g. SIMS.
5. Copy the folder, e.g. C:\DOCSTORAGE\MySIMSDBServer\SIMS\SIMS.

6. Create a new folder to represent the new SQL 2012 Instance, e.g. C:\DOCSTORAGE\MySIMSDBServer\SIMS2012.
7. Paste the folder copied in Step 5 into the newly created folder, e.g. C:\DOCSTORAGE\MySIMSDBServer\SIMS2012\SIMS.
8. The old server directory can now be deleted if it is not required.

Redirecting the Discover Clients

1. Navigate to the Discover.Designer.Desktop.exe.config file. This is typically located in:
 - C:\Program Files\SIMS\Discover Client (32-bit)
 - C:\Program Files(x86)\SIMS\Discover Client (64-bit)
2. Open the file in your preferred text editing programme, e.g. Notepad.
3. Edit the following values to reflect the new server (and database, if the database name has changed) details:
 - `<add key="authenticationServer" value="SimsServer"/>`
 - `<add key="authenticationDatabase" value="SimsDatabase"/>`
 - `<add key="interactiveLogonAuthenticationPrefix" value="SimsDatabase_" />` (Note trailing underscore)
 - `<add key="discoverInstance" value="DiscoverServer"/>`
 - `<add key="discoverDatabase" value="DiscoverDatabase"/>`

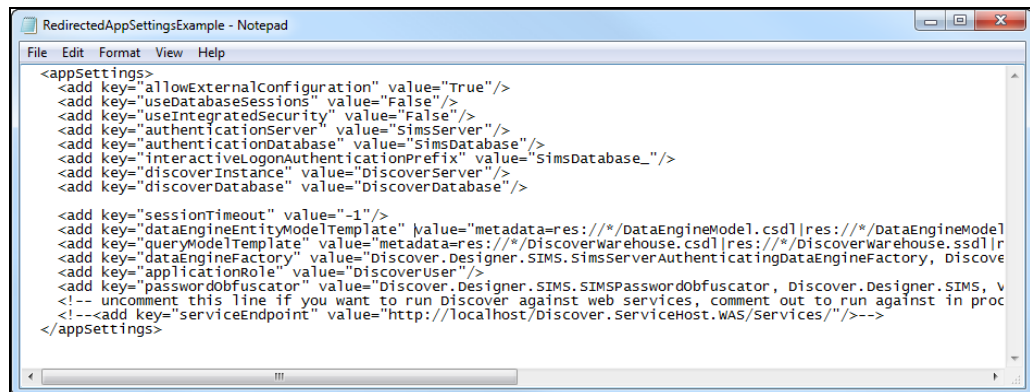


4. Save the file.
5. Repeat this process on each Discover Client machine.

Setting up a Discover Redirection for the Future

An alternative option is to edit the file to set up a redirection so that you will not have to edit the individual files in future.

1. Create a new text file in a location accessible to all clients (any name and extension).
2. Copy and paste the whole appSettings section from any client configuration into the new file, as shown in the following example:



3. For every client, delete the whole appSettings section (the piece copied to the shared file in Step 2).
4. Add the following key instead:


```
<appSettings file="[Path from this client to the shared file]" />
```

 (note the closing tag)

SQL 2012 Host Configuration Requirements

The SIMS SQL 2012 Migration Utility attempts to enable suitable connectivity for SIMS users. Therefore, users who have installed SQL Server 2012 Express SP1 using the SIMS SQL 2012 Migration Utility are unlikely to need to carry out the following instructions.

By default, SQL Express is installed with limited or no network connectivity. SIMS is a Client Server Application, so most users will need to enable network connectivity.

For those who have installed SQL 2012 products themselves, the following tasks need to be completed to enable suitable connectivity:

- SQL Server must be configured for local and remote connections (TCP/IP or TCP/IP and Named Pipes)
- The SQLBrowser Service must be started (Automatic).

If a firewall is in operation:

- The SQLBrowser Service must be added to the firewall exception list.
- The SQLServer Service must be added to the firewall exception list.

NOTE: SIMS also makes server and database level changes when the SIMS database is migrated to the SQL 2012 host. These changes are made on behalf of all customers, regardless of the method used to install the SQL 2012 host.

Additional Action for FMS Users with Scanned Documents

By default, SQL Server 2012 is installed with FILESTREAM turned off. Where scanned documents are stored in FMS, FILESTREAM must be enabled on the server and the database.

If you are carrying out a migration of the FMS database on a self-installed copy of SQL 2012 Server, you must first create a new Instance of SQL. On this new Instance, you must activate FILESTREAM. You must then apply Patch 16361 (which activates FILESTREAM in FMS and enables scanned documents to be used) to a blank FMS database. Once this process has been carried out, you can carry out the migration of the FMS database. The FILESTREAM patch can be obtained from your SIMS Support Unit.

IMPORTANT NOTE: *It is not possible to move the FMS database in SQL 2008 to SQL 2012 before running the patch because FILESTREAM is not yet activated and the process would fail.*

If you are installing SQL 2012 using the SIMS SQL 2012 Migration Utility, FILESTREAM is activated automatically and you do not need to apply the patch.

Instance Naming Guidelines

Multiple SQL Server 2012 Express installations can co-exist on the same machine, along with other installations of SQL Server, e.g. SQL Server 2008, SQL Server 2008 R2. The maximum number of SQL Server Instances on the same machine is 16. These Instances must be named uniquely.

NOTE: While multiple Instances can co-exist on the same machine, this will impair performance and you are advised to maintain the minimum number of SQL Server Instances.

- Instance names are not case sensitive.
- Instance names cannot contain the terms Default, MSSQLServer or any other reserved keywords. If a reserved keyword is used in an Instance name, an error will occur.
- Instance names are limited to 16 characters.
- The first character in the Instance name must be a letter or an underscore (_). Acceptable letters are those defined by the Unicode Standard 2.0, including Latin characters a-z and A-Z, and letter characters from other languages.
- Subsequent characters can be letters defined by the Unicode Standard 2.0, decimal numbers from Basic Latin or other national scripts, the dollar sign (\$), or an underscore (_).

- Embedded spaces or other special characters are not allowed in Instance names, nor are the backslash (\), comma (,), colon (:), semi-colon (;), single quotation mark ('), ampersand (&), number sign (#), or at sign (@).

Command Line Parameters

Command line parameters enable a user to set up a script to run the migration in 'batch' mode. A script could be created to minimise the user interaction required to migrate a SIMS database, by pre-populating the screens with the required information. The Command Line Parameters are case sensitive and must be entered correctly for the script to run successfully. For parameters such as paths, quotes (") will need to be put around the value if there are any spaces in the path.

Parameters

IMPORTANT NOTE: Parameter names are case sensitive.

Parameter Name	What it means	Example / Comment
--sInstance --dInstance	The Instance name of the source (--sInstance) or destination (--dInstance) SQL Server.	--sInstance Server2\Instance2 --dInstance Server1\Instance1 These will be the same for an in place update. Additionally, non-local SQL Servers can be specified in Command Line mode.
--sSIMSDatabase --dSIMSDatabase	The name of the source (--sInstance) / destination (--dInstance) SIMS databases.	--sSIMSDatabase SIMS2 --dSIMSDatabase SIMS2
--sFMSDatabase --dFMSDatabase	The name of the source (--sInstance) / destination (--dInstance) FMS databases.	--sFMSDatabase FMS2 --dFMSDatabase FMS2
--sDiscoverDatabase --dDiscoverDatabase	The name of the source (--sInstance) / destination (--dInstance) Discover databases.	--sDiscoverDatabase DISCOVER2 --dDiscoverDatabase DISCOVER2
--Help	Displays the list of command line options.	

Parameter Name	What it means	Example / Comment
--sSIMSPath	Allows the source path of the SIMS backup (*.bak) to be specified	This allows the SIMS database backup file to be specified for migration.
--sFMSPath	Allows the source path of the FMS backup (*.bak) file to be specified	This allows the FMS database backup file to be specified for migration.
--sDiscoverPath	Allows the source path of the Discover backup (*.bak) file to be specified	This allows the Discover database backup file to be specified for migration.
--dPath	Allows the destination folder for data files to be specified.	This folder contains the backup(s) exported from the two part manual process.
--BackupPath	Allows the folder for backup to be specified.	If a backup folder is not specified, the backup location will default to the SQL 2012 default backup folder.
--sSQLUser --dSQLUser	A SQL username for the source (--sSQLUser) or destination (--dSQLUser) database. Defaults to use the Windows account of the logged on user, if omitted.	This must be the username of the SQL System Administrator (SA or equivalent).
--sSQLPwd --dSQLPwd	The SQL user's password for the source (--sSQLPwd) or destination (--dSQLPwd) database. Only required when --SQLUser is used.	This must be the password of the SQL System Administrator (SA or equivalent) username entered.
--redirect	Registers the database for redirection services.	
--DMSPath	Allows the path to the Document Server to be specified if not otherwise found.	
--dInstallNewInstance	Install destination as a new Instance of SQL Server.	

Parameter Name	What it means	Example / Comment
--dNewInstanceSAPwd	SA password of the new server.	This is required if --dInstallNewInstance is used.
--dSQLBinnPath	Overrides the root directory of the SQL Server Binn Data Directory, i.e. C:\Program Files\Microsoft SQL Server.	Optional for new SQL Server Instances.
--dSQLDataPath	Overrides the root directory of the SQL Server Data directory, i.e. C:\Program Files\Microsoft SQL Server.	Optional for new SQL Server Instances.

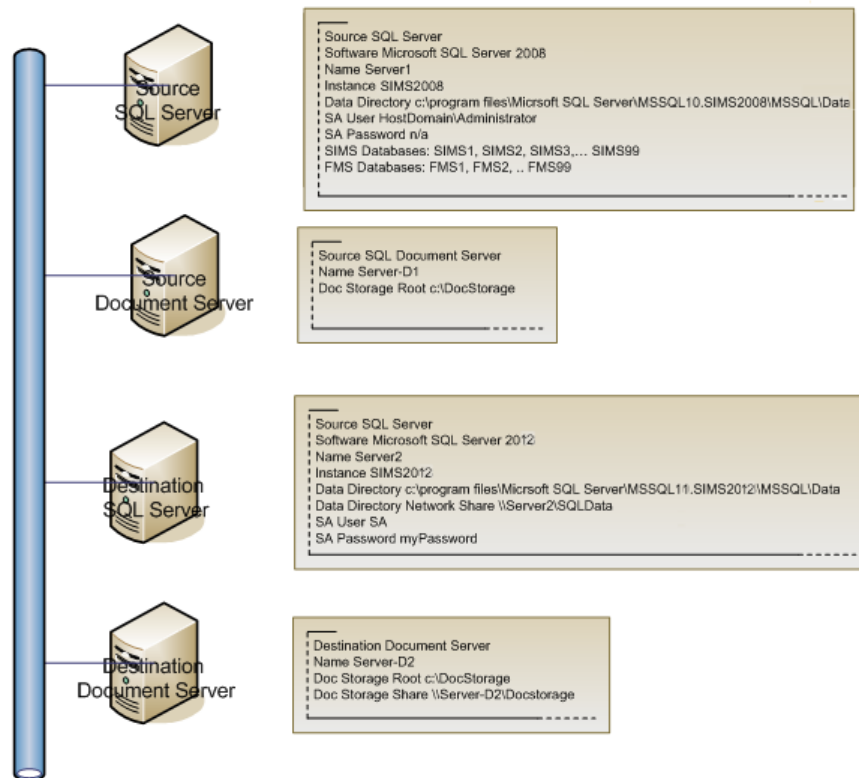
For example (on a machine with Instances of SQL 2008 and SQL 2012):

```
SQLMigration --sInstance machinename\sql2008 --sSQLUser sa
--sSQLPwd P@ssw0rd --sSIMSDatabase sims --sFMSSDatabase fms
--sDiscoverDatabase Discover --dInstance machinename\sql2012
--dSQLUser sa --dSQLPwd P@ssw0rd --dSIMSDatabase sims1
--dFMSSDatabase fms1 --dDiscoverDatabase Discover1 --Redirect
```

This migrates a SIMS, FMS and Discover database from an Instance called **sql2008** to one called **sql2012** on the same machine. It uses SA credentials and names the databases **sims1**, **fms1** and **Discover1** then sets the SIMS and FMS clients to use redirection.

Data Centre Migrations

Capita recommends the use of the Command Line facilities of the SIMS SQL 2012 Migration Utility to produce a script for migration. For example:



Key Points

- Once the SQL migration is complete, the document stores will need to be moved to their new location manually, with the folder name as the new server Instance\database name. Shares may be set up to facilitate this but these should be restricted to domain administrators or sub-domain administrators for obvious reasons. Good practice would be to delete the shares after use or to use admin shares.

```
XCOPY C:\DocStorage\Server1\SIMS2008\SIMS1
\\Server-D2\Docstorage\Server2\SIMS1 /S
```

```
XCOPY C:\DocStorage\Server1\SIMS2008\SIMS2
\\Server-D2\Docstorage\Server2\SIMS2 /S
```

```
XCOPY C:\DocStorage\Server1\SIMS2008\SIMS3
\\Server-D2\Docstorage\Server2\SIMS3 /S
```

...

```
XCOPY C:\DocStorage\Server1\SIMS2008\SIMS99
\\Server-D2\Docstorage\Server2\SIMS99 /S
```

NOTE: There are no FMS document storage folders because FMS documents are included in the database backup file and are moved with the database.

- Typically, the automatic redirection options will not work in a Citrix/Terminal Server/Centrally hosted database server environment and is not supported by the command line parameters. Typically, Terminal Server/Citrix environments use redirection techniques, such as drive mappings, to manage their system. This usually makes it relatively easy to update the one per school (fms)connect.ini files centrally.
- Scripting the migration between physical servers is relatively straightforward. This is achieved in two phases, as illustrated in the following examples.

Examples:

On the SQL 2008 Server

```
SQLMigration --sInstance Server2\SQL2008 --sSIMSDatabase
SIMS1 --sSQLUser SA --sSQLPwd Secret --dPath
c:\TransferFolder
```

```
SQLMigration --sInstance Server1\SQL2008 --sSIMSDatabase
SIMS2 --sSQLUser SA --sSQLPwd Secret --dPath
c:\TransferFolder
```

```
SQLMigration --sInstance Server1\SQL2008 --sSIMSDatabase
SIMS3 --sSQLUser SA --sSQLPwd Secret --dPath
c:\TransferFolder
```

```
SQLMigration --sInstance Server1\SQL2008 --sSIMSDatabase
SIMS99 --sSQLUser SA --sSQLPwd Secret --dPath
c:\TransferFolder
```

This detaches SIMS1, 2, 3 and 99 and puts the *.BAK file into the C:\TransferFolder.

These may then need to be moved to the new server:

```
XCOPY C:\TransferFolder\*.*
\\Server2\SQLBackup\TransferFolder\*.*
```

On the SQL 2012 Server

```
SQLMigration --dInstance Server1\SQL2012 --dSIMSDatabase
SIMS1N --dSQLUser SA --dSQLPwd Secret --sPath "c:\program
files\Microsoft SQL
Server\MSSQL11.SIMS2012\MSSQL\Data\TransferFolder\SIMS1.ba
k "
```

```
SQLMigration --dInstance Server1\SQL2012 --dSIMSDatabase
SIMS2 --dSQLUser SA --dSQLPwd Secret --sPath "c:\program
files\Microsoft SQL
Server\MSSQL11.SIMS2012\MSSQL\Data\TransferFolder\SIMS2.ba
k"
```

```
SQLMigration --dInstance Server1\SQL2012 --dSIMSDatabase
SIMS3N --dSQLUser SA --dSQLPwd Secret --sPath "c:\program
files\Microsoft SQL
Server\MSSQL11.SIMS2012\MSSQL\Data\TransferFolder\SIMS3.ba
k"
```

04 | Additional Information

```
SQLMigration --dInstance Server1\SQL2012 --dSIMSDatabase  
SIMS99 --dSQLUser SA --dSQLPwd Secret --sPath "c:\program  
files\Microsoft SQL  
Server\MSSQL11.SIMS2012\MSSQL\Data\TransferFolder\SIMS99.b  
ak "
```

You can then complete the migrations.

NOTE: In this example, SIMS1 and SIMS3 are also renamed to SIMS1N and SIMS3N, to illustrate how this is carried out.

05 | Frequently Asked Questions

Frequently Asked Questions	41
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Frequently Asked Questions



What is the SQL 2012 migration – what does this mean?



SQL 2012 refers to Microsoft SQL Server 2012, which is the database technology SIMS uses to store its data. The migration process involves moving the SIMS database from the older Microsoft SQL Servers (2008 or 2008 R2) to a new 2012 SQL server and reconnecting our software to the new database location. This could be either on a different or the same machine.



Which SIMS, FMS and Discover versions are supported for the SQL migration?



The SQL 2012 migration can be carried out on live systems from the SIMS/FMS Summer 2013 release until the end of support date for your current SQL Server edition:

- Customers on SQL Server 2008 will be supported until they apply the SIMS 2014 Autumn Release.
- Customers on SQL Server 2008 R2 will be supported until they apply the SIMS 2015 Spring Release.

NOTE: You must have upgraded SIMS, FMS and Discover to the Autumn 2013 release or later if you wish to use the automatic Discover redirection facility.



What happens if we do not move to SQL 2012?



The SIMS suite will stop support for SQL 2008 on the SIMS 2014 Summer Release and for SQL 2008 R2 on the SIMS 2014 Autumn Release. When support has ended for a version of SQL Server, we will not support you if any errors or security issues occur as a result of using an unsupported version of SQL Server.



What does the SQL 2012 migration utility do?



The utility enables you to:

- install a SQL Server 2012 Express SP1 edition (if required)
- migrate the SIMS, FMS and Discover databases over to the new SQL server
- redirect SIMS, FMS and Discover clients automatically to the newly moved database server.

NOTE: You must have upgraded SIMS, FMS and Discover to the 2013 Autumn release to use the automatic redirection facility for Discover.

Alternatively, you can choose to do any of these steps manually. However, most users will find it easier and more applicable to use the migration utility to perform these tasks.



What are the benefits of moving to SQL 2012?



SQL 2012 is the latest Microsoft database server platform and development organisations wanting to take advantage of its new features need to move onto this platform. Sites using the free Express edition will see their storage limit increased to 10 GB.

A full list of the features for each edition of Microsoft SQL Server 2012 is available (<http://msdn.microsoft.com/en-us/library/cc645993.aspx>).



Are there any costs involved?



If you are using the free Express edition of SQL Server we have previously provided then we would recommend that you use the SIMS SQL 2012 Migration Utility to install the SQL 2012 Express SP1 edition, which has no additional cost.

If you have purchased a licence for a previous version of SQL Server (e.g. SQL Server 2008) then dependent on your purchasing agreement, it might also cover you for a licence for SQL Server 2012. We would recommend checking your licence agreement because it might already cover you for installing or upgrading to SQL Server 2012. Further details on Microsoft licensing agreements are available

(<http://www.microsoft.com/licensing/about-licensing/sql2012.aspx#tab=4>).

NOTE: If you are not using the SQL Server 2012 Express edition provided with this migration utility, you will need to configure it to host a SIMS and FMS database (please see SQL 2012 Host Configuration Requirements on page 33).

**Should SIMS and FMS databases be migrated at the same time?**

Capita recognises that you may choose to migrate SIMS at a different time to FMS and it is possible to do this. However, this will mean that the server will have two Instances of SQL in concurrent live operation. It is expected that most servers will perform less well when running two Instances of SQL than they would for databases running on a single Instance. Therefore, where possible, we advise that both databases are migrated at the same time.

**Should SIMS and Discover databases be migrated at the same time?**

It is recommended that the SIMS and Discover databases are migrated at the same time. The exception is if you are moving to a new server machine, when SIMS should be migrated first so that the Discover configuration will work.

**Is SQL Server 2012 Express suitable for my school?**

SQL Server 2012 Express is a free version of SQL Server 2012, ideal for small schools. It is free to install and run, however it is limited to 10GB database size and cannot utilise all of the power available on servers, resulting in reduced performance.

A full comparison of the different editions of SQL Server including Express is available

([http://msdn.microsoft.com/en-us/library/cc645993\(v=SQL.110\).aspx](http://msdn.microsoft.com/en-us/library/cc645993(v=SQL.110).aspx)).



What does the redirection service do?



The new SQL Server 2012 host will have a different identity on the network than the SQL 2008 host. A SQL Identity name consists of both the Machine Name and Instance Name (if it is not a default Instance).

The migration itself will, if possible, modify:

- the Document Server Storage Structure (the folder system is arranged by Instance name and database name).
- scheduled tasks for SIMS applications, such as AutoReports, VLE, SIMS Scheduled Tasks, B2B, DBAttach, and SOLUS, which contain correctly formatted server and database parameters in their command line parameters.

If you subscribe to the redirection service during the migration, the SIMS/FMS clients will automatically update the `CONNECT.INI`/`FMSCONNECT.INI` files with the location of the migrated database. This process occurs the first time that a SIMS/FMS user on a particular machine uses SIMS/FMS after the migration. The activity is seamless to the user, but the login may take longer than normal. The Discover clients will update the `Discover.Designer.Desktop.exe.config` file with the location of the migrated database.

NOTE: The redirection facilities will be available only if they are enabled during the migration process. If they are not enabled during the migration process, you must update the connection information manually (please see Additional Information on page 31).



I need more information on the SQL 2012 migration for Discover



We recommend that both the SIMS and Discover SQL migrations are performed at the same time. If these are performed on the same machine then the SQL Migration utility will also reconnect the Discover services to the newly moved databases. If the Discover database is migrated on its own to a SQL Instance that already contains the migrated SIMS database, it will be possible for the migration utility to configure the Discover services to point to that database automatically.

If the migrations are performed 'out of step' or the databases are migrated to separate servers, the Discover configuration can still be accomplished. In this case, you will be required to manually update the configuration of the Discover services to point to the newly moved database(s).

NOTE: If the migration is to another physical machine, it is recommended that SIMS is migrated before Discover, in order to complete the Discover configuration.

In addition, with the SIMS 2013 Autumn Release, the Discover clients can redirect automatically when the SQL databases are moved.

**I need more information on the SQL migration for InTouch**

From the SIMS 2013 Summer Release, customers using InTouch who choose to install a new SQL 2012 Instance on the same machine will be asked to run a configuration tool that will configure the service to connect to the newly moved SIMS database.

Customers using InTouch who choose to install a new SQL 2012 Instance on a different machine before the SIMS 2014 Spring Release will require the InTouch service to be re-installed. Please contact SIMS Professional Services on 0844 893 6000 or email the team (info@capita-sims.co.uk) so an appointment can be arranged.

**I need more information on the SQL migration with SLG**

If you are a self-hosting SIMS Learning Gateway system, you will need to move the supporting infrastructure over to the new SQL 2012 Server. Please refer to the *Active Directory Provisioning Technical Guide* for more information.

Customers who have their SLG systems hosted by another party (e.g. CAPITA or their Local Authority) should inform their hosting provider of the new location for the moved SIMS database.

**I need more information on the SQL 2012 migration with SOLUS3**

We have kept the SQL 2012 migration of the SOLUS³ system outside of the SIMS SQL 2012 Migration Utility in order to maintain security and we released the SOLUS³ 3.6 update in August to support the migration. SOLUS³ 3.6 fully supports SQL 2012 and contains functionality that enables you to migrate your SOLUS³ system to a new server and enables the SOLUS³ 3.6 agents to redirect to the new server with minimal intervention.

Full details are included in the SOLUS³ documentation.

**Who can run the migration?**

The migration can be run by a system administrator (sa) or by a user with equivalent rights.



Will SQL 2008/2008 R2 be disabled once I have migrated?



No. SQL 2008/2008 R2 will continue to operate once the SIMS/FMS/Discover database(s) have been migrated. In order for the redirection service to operate, SQL 2008/2008 R2 must be left running for a suitable period of time, i.e. until all users have logged into SIMS and/or FMS.

When SQL 2008/2008 R2 is no longer needed and only if it is not used for any other applications on your system, you are advised to disable the SQL Server Service for SQL 2008/2008 R2 for a period of time to check that it is no longer required and then to uninstall the Instance as this will speed up the host machine.



What information should I have before I start?



- The name of the SQL 2008/2008 R2 Instance that holds the SIMS, FMS and/or Discover database(s).
- SQL 2008/2008 R2 SA (or equivalent) username and password.
- The name of the database(s) to be migrated.
- If you already have SQL Server 2012 (Full or Express) installed, you will need to have the SA (or equivalent) username and password and the name of the SQL 2012 Instance. Alternatively, you can use your Windows User Account to log in.



What operating systems are supported for the migration?



The minimum requirement for the migration destination machine is Windows 7 or Windows Server 2008.

NOTE: From the SIMS/FMS 2013 Autumn Release onwards, we no longer support Windows XP and Windows Server 2003. Microsoft SQL Server 2012 is not supported by Capita or Microsoft on Windows XP or Windows Server 2003 and cannot be installed on these platforms.