Technical Document

Copying SimCorp Dimension

SimCorp Solutions
Based on version 19.01
December 2018

◫ SimCorp

If you have any comments to the contents of this document or suggestions for topics to be included in a future updating of this document, please do not hesitate to send them by mail to: SCDimension.doc@SimCorp.com.

Contents

1   How to read Copying SimCorp Dimension

When you use SimCorp Dimension, you must from time to time copy the production installation to a number of test installations. Due to the structure of SimCorp Dimension and the data quantity, it is important to trim the installation and to ensure data and program files correspond correctly. This manual provides useful hints about how to trim the installation and information about what to consider when you plan to copy a SimCorp Dimension installation.

Copying SimCorp Dimension, as described in this manual, covers hot cloning – meaning copying while the source installation is in use. However, most of topics covered in this manual are useful to consider when creating backups too – another way to create a copy of SimCorp Dimension.

The basis of this manual is an example covering the following components of a SimCorp Dimension installation:

- Program files
- SimCorp Dimension database
- MS SQL database used by Order Manager
- Data Warehouse

Note   This description of copying SimCorp Dimension does not include SimCorp Coric.

Find more documentation

For assistance on windows, window sections and fields in SimCorp Dimension beyond the tasks and reference sections in this manual, consult the Help (in SimCorp Dimension, press F1 for help on the active window or SHIFT+F1 for help on the active field).

Concepts and tasks in this user manual tie in with other functionality of SimCorp Dimension whose user manuals include:

- *System Administrator's Manual*
- *System Maintenance*
- *Communication Server*
- *Data Warehouse*
- *Data Cleanup*
- *Service Administration*
- *System options*
- *Data Cleanup*
- *Audit trail and four eyes principle*
- *Archiving*

- ***Front Office Implementation Guide***
- ***Installing and upgrading Help***

The technical environment and use of various parameter set up in SimCorp Dimension is presumed known to the reader.

Updates and release notes

This user manual is based on SimCorp Dimension version 19.01 and will be updated regularly, though not necessarily with every released version.

To learn about updates and changes in subsequent versions of SimCorp Dimension , consult the ***Release Notes*** document and ***System Administrator's Manual*** for each version.

Functionality, figures, and dates

Functionality described in this user manual can be restricted:

- Some functions are part of sales modules that are sold separately.
- Some functions are authorised to individual users only.

When in doubt, contact your SimCorp Dimension support.

Examples, figures, and dates in this user manual, including the screen-shots, are for illustrating purposes only. Unless specified, they do not represent recommended settings, actual setups, or available data.

Note that your regional and language settings can differ from those shown in this manual.

2 Hints to trim SimCorp Dimension to prepare for copying

When you want to copy SimCorp Dimension to, for example, a test installation you can, ease the copy process and lower the risk of mixing the source and target installations after the copy if you use configurations and maintenance tasks included in SimCorp Dimension. The following lists some of the tasks that you can go through to trim, and thereby ease, the copy process:

- Use Reference Files with configuration abbreviations below
- Follow preferred Communication Server setups below
- Clean up data and files at regular basis below
- Archive at a regular basis on the next page
- Clean up Audit at a regular basis on the next page

Use Reference Files with configuration abbreviations

SimCorp Dimension makes it possible for you, from a central place, to administer the layout of the file format and the directory used for a number of file references. With the **Reference Files** functionality, you can use abbreviations and configuration entries from the configuration file called Cnf.ini.

If you use entries from the Cnf.ini file, you can reduce your manual work after a restore of SimCorp Dimension to updating only the Cnf.ini file in those places where reference files are used. If you do not use the Cnf.ini entries, you will need to update each reference file to make sure source and target installations are not mixed.

The use of **Reference Files** is explained in the SimCorp Dimension *Setting up Reference Data* user manual. The Cnf.ini file is explained in details in the *System Administrator's Manual*.

Follow preferred Communication Server setups

Refer to the *Communication Server* user manual when you install and configure a **Communication server**. When you configure a communication server, ensure that every parameter you specify is installation-specific.

Clean up data and files at regular basis

When you use SimCorp Dimension, data will grow, especially database data but also size and amount of files will grow. SimCorp Dimension provides a number of cleanup procedures that you can use to clean up unused data and files. For more information, see the *Data Cleanup* user manual.

Note	Sometimes you can see files in the Netroot folder complex that starts with a <~>. These files, which are a result of Windows behaviour, are not used by SimCorp Dimension and can be deleted.

Archive at a regular basis

To shrink the SimCorp Dimension database, you can archive data. It is a good idea to make sure data are archived before copying the installation. For more information about archiving data in SimCorp Dimension, see the *Archiving* user manual.

Clean up Audit at a regular basis

If the SimCorp Dimension installation is configured to use audit data, you should decide whether to copy audit or not. If you need the audit tables to be part of the copy, it is recommended to clean up (archive) audit data before, if possible. For more information, see the *Audit Trail and Four Eyes Principle* user manual.

Share SimCorp Dimension Help between installations

The SimCorp Dimension help can be shared by several SimCorp Dimension installations of the same version. For more information, see the *Installing and upgrading Help* user manual.

3　Copying SimCorp Dimension

You can make a hot cloning of SimCorp Dimension which means that you can copy the program files and databases while they are running and in use. You can also make a copy of a SimCorp Dimension from a backup; as long as you restore all components from same point in time.

A SimCorp Dimension installation consist of a number of components, but the basis SimCorp Dimension installation consist of:

- Program files
- SimCorp Dimension database

If your installation contains additional modules to the basis SimCorp Dimension installation, you should also consider to copy those additional components, such as:

- MS SQL database used by Order Manager
- Data Warehouse
- APT XML server

To ease the copy process you can look through: Hints to trim SimCorp Dimension to prepare for copying to get inspiration to trim the installation.

The copy process of SimCorp Dimension consists of a copy from the source installation and a restore either in a new target installation or in an existing installation.

3.1　Copy SimCorp Dimension from the source installation

Perform the following tasks to make a copy of SimCorp Dimension installation:

- Consider what to copy
- Cleanup and trim the source SimCorp Dimension installation
- Copy program files
- Copy Oracle database
- Copy MS SQL database used by Order Manager
- Copy Data Warehouse

Consider what to copy

Depending on the purpose for the test installation, consider if you want to copy:

- Audit

  If the purpose is to test four eye principle you will need audit - else it might be excluded. Excluding audit can be made by using datapump.

- Data Warehouse

  If you want an exact copy from production this should be included, else it might be excluded from the copy. Afterwards you can prepare for a new Data Warehouse and generate new data to the Data Warehouse.

- Order Manager

  If the purpose is to test Order manager you will need to copy data to be used for Order manager, else it can be excluded.

Cleanup and trim the source SimCorp Dimension installation

It is obvious that the amount of data to copy influences the time it will take to copy and restore the installation. Therefore, you should consider how to trim the source installation before copying. For more information, see Hints to trim SimCorp Dimension to prepare for copying.

Copy program files

To make sure data in the database and the program files corresponds, you need to make sure the copy is made at the same point in time. Your Netroot program files can be copied by using a tool of your own choice.

SimCorp Dimension does not use files starting with <~>, therefore; you can delete those files or exclude them from the copy.

For the **Tmp**, **RConnect** , **Log** and **Patches** folders, you do not have to copy the content, you can restrict it to the folder structure on its own.

Copy Oracle database

SimCorp recommends using RMAN duplicates (either from the active database or from backup) or, if possible and appropriate, duplicates using a copy-on-write snapshot. For more information, see the Oracle documentation.

Copy MS SQL database used by Order Manager

To copy the MS SQL database used by Order Manager, refer to the Microsoft documentation.

Copy Data Warehouse

You use the same method as for the SimCorp Dimension database to copy the Data Warehouse tablespace, Oracle roles and so on. Consider if it is appropriate to re-load data to the Data Warehouse from SimCorp Dimension after a restore instead.

Note   It is recommended to copy the components in parallel. This way you will save time and ensure the consistency of the

---

installation.

Note   It is important that the program files in the source installation
are not updated during copy. Meaning that you must not
perform any patch apply, upgrade, and Installation file (Ins.ini)
file updates while the copy is executed.

3.2   Restore SimCorp Dimension

To restore SimCorp Dimension after a hot cloning or from a backup, you
must perform a number of tasks. The tasks to perform during restore of
data in the target installation will depend if the restore is performed in a
new target or in an existing target installation.

3.2.1   Restore in a new target installation

When you want to to restore a SimCorp Dimension installation into a new
target installation you must perform the following tasks:

- Prepare servers for database-, file-, MUCS-, MS SQL-, Datawarehouse server - etc.
- Restore program files and set file access permissions.
- Change/Copy Cnf.ini
- Restore Oracle database on page 12
- Restore MS SQL Database on page 12
- Change passwords of the three schema owners: sysowner, datowner and trdowner.
- Start/restart MUCS
- Run scd.exe jobs in right order
- Install/update local installations
- Update data inside SimCorp Dimension: System options, setups and references
- Install and start/restart service platform
- Verify the system is up and running
- Restore/update Data Warehouse database on page 17
- E-mail patch information to SimCorp and make sure the installation is registered in SimCorp

**Prepare servers for database-, file-, MUCS-, MS SQL-, Datawarehouse
server - etc.**

When you want to restore a SimCorp Dimension copy, you must prepare
hardware and other prerequisites necessary for the target installation. All
prerequisites for the SimCorp Dimension installation must match what is
required for a SimCorp Dimension installation as stated in *System
Administrator's Manual* for the version in question.

Restore program files and set file access permissions.
You can restore program files by using tools of your own choice.

For security reasons SimCorp recommends restricting access to the program file to only those that require access. Further, SimCorp recommends setting file system permissions strictly in accordance with minimum permission needed as stated in the *System Administrator's Manual* and that a role-based principle is applied, meaning, for example, that only users, who must apply patches, get modify permissions on the **bin** folder.

Change/Copy Cnf.ini
When you copy a SimCorp Dimension installation the first time, you must consider all parameters stated in the configuration file Cnf.ini. For more information about the configuration file, see the *System Administrator's Manual*. Next time you want to update the target installation, you can make a copy of the existing Cnf.ini file and reuse it afterwards. However, remember to look through the Cnf.ini file from the source installation to check out if there are new parameters to consider.

The Cnf.ini configuration file placed in the ..\Netroot\data folder contains parameter information that are unique for each installation. It is important that the Cnf.ini file is changed to reflect the new environment. Pay special attention to the following entries:

- state
- dbname
- dbconnect*
- mucs
- mucsfailover
- svcdirectoryservice
- om*
- netroot

Ensure also to run through the file to see if other entries has to be changed.

If the environment uses any database directory (cnf.ini parameters: archdir, exttabdir, and exttablogdir), you should ensure that the path of the database directory objects is correct. Further, if the Data Warehouse specific [lib] entries are used (exttabdir and exttablogdir), they should be updated to reflect the new UNC path.

Note   If there is any Data Warehouse schema that uses a remote database, the connect string of that database should be updated in the relevant user schema inside SimCorp Dimension in the **Database User Schemas Administration** window.

Restore Oracle database

Restore the Oracle database to the new target destination. Please see Oracle Documentation for further information.

Restore MS SQL Database

Restore the MS SQL Database to the new target destination. Please see the Microsoft documentation for further information on how to do this

Change passwords of the three schema owners: `sysowner`, `datowner` and `trdowner`.

For security reasons, you should change the passwords of the three schema owners: SCDAT, SCSYS, and SCTRD, but it is of course optional.

Start/restart MUCS

To be able to start SimCorp Dimension you need the MUCS to run. Start the MUCS - please see *System Administrator's Manual* for further information.

Run scd.exe jobs in right order

To update environment parameters, users and so on belonging to the installation you need to execute a number of jobs from, for example, a command prompt.

Next, a series of commands must be executed sequentially and in the exact specified order:

```
..\Bin\scd.exe -batch= -job=EXIT -WS=init.dws -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=SYNCDBVERS -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=SYNCDBUSERS -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=RESET_AFTER_COPY -datpwd=<SCDATPW>
```

The -batch= option is added to instruct the program that it is running in batch mode and suppress all message boxes. Be sure to react on the exit code from the commands, and halt further execution if a non-zero value is returned.

Note   It is important that the series of commands are executed sequentially and in the exact specified order as listed above.

Note   SYNCDBUSERS can be skipped if you have copied the SimCorp Dimension database by cloning.

Update data inside SimCorp Dimension: System options, setups and references

Depending on the setup of the test environment, it might be required to change some system options. The first time you restore a SimCorp Dimension installation into a target destination, you must run through system options and change all parameters needed to prevent the installation to corrupt the source installation. Following updates to the target installation might benefit from the Configuration transport functionality. For further information, see the *System Maintenance Manual* user manual.

If there is any Data Warehouse schema that uses a remote database, the connect string of that database should be updated in the relevant user schema in **Database User Schemas Administration**.

Note   There may be other windows in SimCorp Dimension with references to absolute paths as well, for instance in the **System Options** menu . Make sure that your new target installation does not reference any files in the source installation.

Order Manager

Installations with the SimCorp Dimension**ORDER MANAGER** (OM) module contain configuration information for servers in the OM environment. These values are stored in the database and must therefore be manually changed in the target installation.

Note   If parameters are not changed in the target installation, you could mistakenly be sending orders to brokers in the production system.
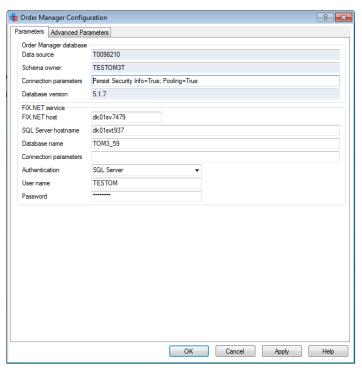

You can see the configuration parameters in the **Order Manager Configuration** window.

The **Order Manager Configuration** window contains information about the locations of all the Order Manager services with related ports and SQL Server connectivity information.

On the **Parameters** tab , ensure to check the following fields and change as necessary:

- **FIX.NET host**
- **SQL Server hostname**
- **Database name**
- **Authentication**
- **User name**
- **Password**

On the **Advanced Parameters** tab, check the following fields and change if necessary:

- **Ports** – All server/service and notification ports
- **Directories** > **Strategy Files** – Whilst an incorrect value against this parameter will not cause major problems, it is still recommended to change this to the correct location on the target environment.
- **Elvin host** Failure to change this value may result in inconsistent/incorrect behaviour within the **ORDER MANAGER** modules.

Note   Password can only be set by using the **Order Manager Configuration** window since the passwords is encrypted.

If the copy of SimCorp Dimension is made for other purposes than **ORDER MANAGER**, you can delete Order Manager Server Reference instead. This can be done by running the batch job **Delete Order Manager Service Reference** after restoring.

FIX Sessions

If FIX sessions have been defined in the production environment, then it will be necessary to check that the session information taken from production matches what is defined/expected in the test environment's FIX engine SQL Server database. Failure to do this could mean trades are sent to production platforms/brokers.

Note	It is important that Order Manager servers are NOT started before configuration details have been checked and any necessary changes made.

Steps required to check/configure the FIX session information are as follows:

- Make a note from production **Order Manager**, via the operations console, of **Sender & Target Comp ID** for each individual (direct or networked) FIX session.
- Compare with IDs from the target environment and note any differences for use later
- Refresh the target environment
- Amend the SQL statements (example below) to reflect the changes required
- Run the amended SQL against the target environment's **ORDER MANAGER** Oracle schema
- Repeat for each FIX session where differences were noted
- Start **ORDER MANAGER** servers

Example

Production FIX session details: -

`SenderCompID`: OMPROD

`TargetCompID`: BLPTSOX

Test FIX session details: -

`SenderCompID`: OMTEST

`TargetCompID`: BLPTSOXT

Example update scripts required to change production values to test:

```
-- Updates the SenderCompID value in XML
UPDATE OM3_FIXSESSIONS
SET XML = UpdateXml(XmlType(XML), '/*/@SID', 'OMTEST').getClobVal()
WHERE SID='OMPROD'
AND TID='BLPTSOX';
-- Updates the TargetCompID value in XML
UPDATE OM3_FIXSESSIONS
SET XML = UpdateXml(XmlType(XML), '/*/@TID', 'BLPTSOXT').getClobVal
()
WHERE SID='OMPROD'
AND TID='BLPTSOX';
-- Updates both Sender & Target CompID column values
UPDATE OM3_FIXSESSIONS
SET SID='OMTEST',
TID='BLPTSOXT'
WHERE SID='OMPROD'
AND TID='BLPTSOX';


COMMIT;
```

Install/update local installations

If you use local installation you must update the locally installed files of SimCorp Dimension to match what's now in the Netroot installation. Please refer to the white paper **Local Installation** at the Client Support portal for more information about local installation.

Install and start/restart service platform

If the target installation is going to use the Service Platform, you need to install Service Agents and so on. Please see the **Service Administration** user manual for further information.

When the basic Service Platform is installed, you will need to remove any .stop or .nostart files from the ..\Netroot\Maintenance\Lock folder to ensure that the Service Platform can start without problems. Restart all the service agents, and now the service platform will restart the system services. The following command will return exit code 0 once all system services are up and running, until then, a non-zero exit code is returned:

```
..\bin\scdsvcctl.exe platform verify
```

Verify the system is up and running

Once the environment has been refreshed a few checks can be made to ensure the copied installation is working. You can:

- Ping the MUCS and check the exit code:

```
..\bin\mucs.exe -pingquiet
```

```
..\bin\mucs.exe -pingquiet2
```

- Start a batch job (e.g. a simple one that sleeps for a short period) and check the exit code:

```
..\bin\scd.exe -batch=<dummy_batch_job>
```

See *System Administrator's Manual* for further information about the commands.

Optionally, you can close all blacklists because they might not apply in your test environment:

```
..\bin\scdsvcctl.exe blacklist closeall
```

The automation model is automatically unloaded as part of the `RESET_AFTER_COPY` job. Optionally, you can set the automation model to one matching the test environment:

```
..\bin\scdsvcctl.exe maint on
```

```
..\bin\scdsvcctl.exe aut load <model_name>
```

```
..\bin\scdsvcctl.exe aut start
```

```
..\bin\scdsvcctl.exe maint off
```

Please see: *Service Administration* user manual for further information.

Restore/update Data Warehouse database

If you like to use a Data Warehouse in a copy installation, you can either create a new data warehouse database and then re-load data to the data warehouse, or you can restore the data warehouse database by using Oracle features. Please see Oracle help for further information.

When the Data Warehouse destination is decided you must update the Cnf.ini file to match the new information.

E-mail patch information to SimCorp and make sure the installation is registered in SimCorp

To be able to patch up an installation, it is necessary to register the installation in SimCorp. All registered installations can receive a reduced patch file to apply.

To make sure you receive a correct patch file, you need to let your installation be registered in SimCorp. You can use the **E-mail patch information to SimCorp** task from inside SimCorp Dimension. This way you can receive a patch file containing the correct amount of updates. If the target installation is already registered in SimCorp, you should still e-mail the information to update the installation.

3.2.2 Restore in an existing target installation

When you want to restore a SimCorp Dimension installation into an existing target installation you must perform the following tasks:

- Export settings
- Change/Copy Cnf.ini
- Prevent users from logon during restore
- Shut down users already logged on
- Shut down Service platform
- Stop all service agents
- Shut down MUCS server
- Restore program files and set file access permissions.
- Remove file share if needed
- Change/Copy Cnf.ini
- Restore Oracle database on page 21
- Restore MS SQL Database on page 21
- Change passwords of the three schema owners: sysowner, datowner and trdowner.
- If file share was removed recreate it now
- Start/restart MUCS
- Run scd.exe jobs in right order
- Install/update local installations
- Import system setup if exported from previous installation
- Update data inside SimCorp Dimension: System options, setups and references
- Install and start/restart service platform
- Verify the system is up and running
- Restore/update Data Warehouse database on page 27
- E-mail patch information to SimCorp and make sure the installation is registered in SimCorp

Export settings

The first time you make a test installation you must change all installation specific system options and configurations. For following updates to the target installation you can minimise your effort if you use Configuration transport build into SimCorp Dimension. For more information, see the *System Maintenance* user manual. You can also use for example batch jobs from inside SimCorp Dimension to export data to be used after the restore. (For example users for the test installation only).

Change/Copy Cnf.ini

When you copy a SimCorp Dimension installation the first time, you must consider all parameters stated in the configuration file Cnf.ini. For more information about the configuration file, see the *System Administrator's Manual*. Next time you want to update the target installation, you can make a copy of the existing Cnf.ini file and reuse it afterwards. However, remember to look through the Cnf.ini file from the source installation to check out if there are new parameters to consider.

The Cnf.ini configuration file placed in the ..\Netroot\data folder contains parameter information that are unique for each installation. It is important that the Cnf.ini file is changed to reflect the new environment. Pay special attention to the following entries:

- state
- dbname
- dbconnect*
- mucs
- mucsfailover
- svcdirectoryservice
- om*
- netroot

Ensure also to run through the file to see if other entries has to be changed.

If the environment uses any database directory (cnf.ini parameters: archdir, exttabdir, and exttablogdir), you should ensure that the path of the database directory objects is correct. Further, if the Data Warehouse specific [lib] entries are used (exttabdir and exttablogdir), they should be updated to reflect the new UNC path.

Note   If there is any Data Warehouse schema that uses a remote database, the connect string of that database should be updated in the relevant user schema inside SimCorp Dimension in the **Database User Schemas Administration** window.

Prevent users from logon during restore

If you want to restore data to an existing installation you can prevent users from logging on to the system while the restore is in progress. You can block the system for logons using this command:

```
..\bin\scd.exe -type=* -blocklogon=on,"reason" -u=<userid>
```

By adding the user name to the command line, this specific user can still log on to the system while the block is in effect.

Shut down users already logged on
To be able to update an existing target installation you must shut down users already logged on to the SimCorp Dimension installation. The following command is an example of where you, shut down any users that are currently logged on after a 60 seconds grace period:

```
..\bin\scd.exe -type=* -u=<userid> -shutdown=[60]
```

Shut down Service platform
When you have shut down the users logged on to the target installation, you must stop the Service Platform too.

When block for logon is enabled, the service agents will not start up. you can shut down the Service platform by restarting it. The following commands can be used:

```
..\bin\ScdSvcCtl.exe maintenance on
```

```
..\bin\ScdSvcCtl.exe platform restart -
reason="shutdown for clone"
```

Maintenance on prevents service agents to start until the Service Platform is restarted. When you use the restart command the Service Platform will run an orchestrated restart when logon is allowed again. The user manual *Service Administration* user manual provides you with more detailed information about the Service platform .

If required you can forcefully stop all services running on the Service Platform by creating an empty file with the extension .stop in the **..\Netroot\Maintenance\Lock** folder. This will instantly kill all processes on the service platform. This approach is only recommended to be used in environments that are about to be deleted/updated. It is not recommended for production installations.

Stop all service agents
The service agent manages the application services available in SimCorp Dimension. You must stop all service agents before restoring data in the installation.

Shut down MUCS server
The MUCS server acts as a message server for the SimCorp Dimension sessions and must be shut down before Netroot files are being updated. For more information about the MUCS server see *System Administrator's Manual*.

Restore program files and set file access permissions.
You can restore program files by using tools of your own choice.

For security reasons SimCorp recommends restricting access to the program file to only those that require access. Further, SimCorp recommends setting file system permissions strictly in accordance with minimum permission needed as stated in the *System Administrator's Manual* and that a role-based principle is applied, meaning, for example, that only users, who must apply patches, get modify permissions on the **bin** folder.

Remove file share if needed

If a user is holding a file lock on a file in the installation, it might be beneficial to remove the file share in which the installation resides. This effectively removes any file locks held in the share. The file share can be recreated once the program files have been refreshed.

Change/Copy Cnf.ini

When you copy a SimCorp Dimension installation the first time, you must consider all parameters stated in the configuration file Cnf.ini. For more information about the configuration file, see the *System Administrator's Manual*. Next time you want to update the target installation, you can make a copy of the existing Cnf.ini file and reuse it afterwards. However, remember to look through the Cnf.ini file from the source installation to check out if there are new parameters to consider.

The Cnf.ini configuration file placed in the ..\Netroot\data folder contains parameter information that are unique for each installation. It is important that the Cnf.ini file is changed to reflect the new environment. Pay special attention to the following entries:

- state
- dbname
- dbconnect*
- mucs
- mucsfailover
- svcdirectoryservice
- om*
- netroot

Ensure also to run through the file to see if other entries has to be changed.

If the environment uses any database directory (cnf.ini parameters: archdir, exttabdir, and exttablogdir), you should ensure that the path of the database directory objects is correct. Further, if the Data Warehouse specific [lib] entries are used (exttabdir and exttablogdir), they should be updated to reflect the new UNC path.

Note   If there is any Data Warehouse schema that uses a remote database, the connect string of that database should be updated in the relevant user schema inside SimCorp Dimension in the **Database User Schemas Administration** window.

Restore Oracle database

Restore the Oracle database to the new target destination. Please see Oracle Documentation for further information.

Restore MS SQL Database

Restore the MS SQL Database to the new target destination. Please see the Microsoft documentation for further information on how to do this

Change passwords of the three schema owners: `sysowner`, `datowner` and `trdowner`.
For security reasons, you should change the passwords of the three schema owners: SCDAT, SCSYS, and SCTRD, but it is of course optional.

If file share was removed recreate it now
During restore of program files you might have removed file share to the installation. Please recreate it now.

Start/restart MUCS
To be able to start SimCorp Dimension you need the MUCS to run. Start the MUCS - please see *System Administrator's Manual* for further information.

Run scd.exe jobs in right order
To update environment parameters, users and so on belonging to the installation you need to execute a number of jobs from, for example, a command prompt.

Next, a series of commands must be executed sequentially and in the exact specified order:

```
..\Bin\scd.exe -batch= -job=EXIT -WS=init.dws -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=SYNCDBVERS -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=SYNCDBUSERS -datpwd=<SCDATPW>

..\Bin\scd.exe -batch= -job=RESET_AFTER_COPY -datpwd=<SCDATPW>
```

The -batch= option is added to instruct the program that it is running in batch mode and suppress all message boxes. Be sure to react on the exit code from the commands, and halt further execution if a non-zero value is returned.

Note   It is important that the series of commands are executed sequentially and in the exact specified order as listed above.

Note   SYNCDBUSERS can be skipped if you have copied the SimCorp Dimension database by cloning.

Install/update local installations
If you use local installation you must update the locally installed files of SimCorp Dimension to match what's now in the Netroot installation. Please refer to the white paper *Local Installation* at the Client Support portal for more information about local installation.

Import system setup if exported from previous installation
After the scd.exe jobs has finished you can import system setups from the previous target installation.

Update data inside SimCorp Dimension: System options, setups and references

Depending on the setup of the test environment, it might be required to change some system options. The first time you restore a SimCorp Dimension installation into a target destination, you must run through system options and change all parameters needed to prevent the installation to corrupt the source installation. Following updates to the target installation might benefit from the Configuration transport functionality. For further information, see the *System Maintenance Manual* user manual.

If there is any Data Warehouse schema that uses a remote database, the connect string of that database should be updated in the relevant user schema in **Database User Schemas Administration**.

| Note | There may be other windows in SimCorp Dimension with references to absolute paths as well, for instance in the **System Options** menu . Make sure that your new target installation does not reference any files in the source installation. |

Order Manager

Installations with the SimCorp Dimension**ORDER MANAGER** (OM) module contain configuration information for servers in the OM environment. These values are stored in the database and must therefore be manually changed in the target installation.

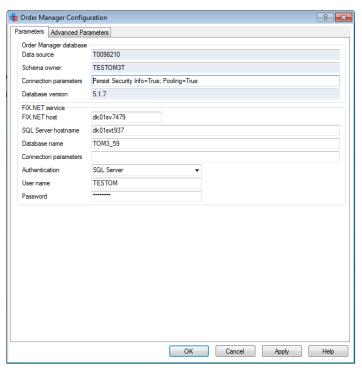| Note | If parameters are not changed in the target installation, you could mistakenly be sending orders to brokers in the production system. |

You can see the configuration parameters in the **Order Manager Configuration** window.

The **Order Manager Configuration** window contains information about the locations of all the Order Manager services with related ports and SQL Server connectivity information.

On the **Parameters** tab , ensure to check the following fields and change as necessary:

- **FIX.NET host**
- **SQL Server hostname**
- **Database name**
- **Authentication**
- **User name**
- **Password**

On the **Advanced Parameters** tab, check the following fields and change if necessary:

- **Ports** – All server/service and notification ports
- **Directories** > **Strategy Files** – Whilst an incorrect value against this parameter will not cause major problems, it is still recommended to change this to the correct location on the target environment.
- **Elvin host** Failure to change this value may result in inconsistent/incorrect behaviour within the **ORDER MANAGER** modules.

Note   Password can only be set by using the **Order Manager Configuration** window since the passwords is encrypted.

If the copy of SimCorp Dimension is made for other purposes than **ORDER MANAGER**, you can delete Order Manager Server Reference instead. This can be done by running the batch job **Delete Order Manager Service Reference** after restoring.

FIX Sessions

If FIX sessions have been defined in the production environment, then it will be necessary to check that the session information taken from production matches what is defined/expected in the test environment's FIX engine SQL Server database. Failure to do this could mean trades are sent to production platforms/brokers.

| **Note** | It is important that Order Manager servers are NOT started before configuration details have been checked and any necessary changes made. |

Steps required to check/configure the FIX session information are as follows:

- Make a note from production **Order Manager**, via the operations console, of **Sender & Target Comp ID** for each individual (direct or networked) FIX session.
- Compare with IDs from the target environment and note any differences for use later
- Refresh the target environment
- Amend the SQL statements (example below) to reflect the changes required
- Run the amended SQL against the target environment's **ORDER MANAGER** Oracle schema
- Repeat for each FIX session where differences were noted
- Start **ORDER MANAGER** servers

Example

Production FIX session details: -

`SenderCompID`: OMPROD

`TargetCompID`: BLPTSOX

Test FIX session details: -

`SenderCompID`: OMTEST

`TargetCompID`: BLPTSOXT

Example update scripts required to change production values to test:

```
-- Updates the SenderCompID value in XML
UPDATE OM3_FIXSESSIONS
SET XML = UpdateXml(XmlType(XML), '/*/@SID', 'OMTEST').getClobVal()
WHERE SID='OMPROD'
AND TID='BLPTSOX';
-- Updates the TargetCompID value in XML
UPDATE OM3_FIXSESSIONS
SET XML = UpdateXml(XmlType(XML), '/*/@TID', 'BLPTSOXT').getClobVal
()
WHERE SID='OMPROD'
AND TID='BLPTSOX';
-- Updates both Sender & Target CompID column values
UPDATE OM3_FIXSESSIONS
SET SID='OMTEST',
TID='BLPTSOXT'
WHERE SID='OMPROD'
AND TID='BLPTSOX';


COMMIT;
```

Install and start/restart service platform

If the target installation is going to use the Service Platform, you need to install Service Agents and so on. Please see the *Service Administration* user manual for further information.

When the basic Service Platform is installed, you will need to remove any .stop or .nostart files from the ..\Netroot\Maintenance\Lock folder to ensure that the Service Platform can start without problems. Restart all the service agents, and now the service platform will restart the system services. The following command will return exit code 0 once all system services are up and running, until then, a non-zero exit code is returned:

```
..\bin\scdsvcctl.exe platform verify
```

Verify the system is up and running

Once the environment has been refreshed a few checks can be made to ensure the copied installation is working. You can:

- Ping the MUCS and check the exit code:

```
..\bin\mucs.exe -pingquiet
```

```
..\bin\mucs.exe -pingquiet2
```

- Start a batch job (e.g. a simple one that sleeps for a short period) and check the exit code:

```
..\bin\scd.exe -batch=<dummy_batch_job>
```

See *System Administrator's Manual* for further information about the commands.

Optionally, you can close all blacklists because they might not apply in your test environment:

```
..\bin\scdsvcctl.exe blacklist closeall
```

The automation model is automatically unloaded as part of the `RESET_AFTER_COPY` job. Optionally, you can set the automation model to one matching the test environment:

```
..\bin\scdsvcctl.exe maint on
```

```
..\bin\scdsvcctl.exe aut load <model_name>
```

```
..\bin\scdsvcctl.exe aut start
```

```
..\bin\scdsvcctl.exe maint off
```

Please see: *Service Administration* user manual for further information.

Restore/update Data Warehouse database

If you like to use a Data Warehouse in a copy installation, you can either create a new data warehouse database and then re-load data to the data warehouse, or you can restore the data warehouse database by using Oracle features. Please see Oracle help for further information.

When the Data Warehouse destination is decided you must update the Cnf.ini file to match the new information.

E-mail patch information to SimCorp and make sure the installation is registered in SimCorp

To be able to patch up an installation, it is necessary to register the installation in SimCorp. All registered installations can receive a reduced patch file to apply.

To make sure you receive a correct patch file, you need to let your installation be registered in SimCorp. You can use the **E-mail patch information to SimCorp** task from inside SimCorp Dimension. This way you can receive a patch file containing the correct amount of updates. If the target installation is already registered in SimCorp, you should still e-mail the information to update the installation.

4   Known issues when copying SimCorp Dimension

From time to time SimCorp is involved in support-cases that relates from copying SimCorp Dimension. If the character of a solution is considered important to all SimCorp Dimension installations the topic will be listed here.

4.1   User Creation Fails When Password Verification Function Is Used

If an Oracle Password Verification Function is used, the flag Default password must be set in **System Security Options**. This will ensure that a prompt for password is shown when a user is created or has his password reset.

Special considerations should be taken when running `SYNCDBUSERS`.

4.2   User is holding a file lock in the installation.

From time to time Windows locks files used by SimCorp Dimension despite no users are using the installation. A way to overcome this obstacle to be able to update the files might be to remove the file share in which the installation resides. The share can be recrated again when the installation files are being refreshed.

ABOUT SIMCORP

SimCorp provides integrated, best-in-class investment management solutions to the world's leading asset managers, fund managers, asset servicers, pension and insurance funds, wealth managers and sovereign wealth funds. Whether deployed on premise or as an ASP solution, its core system, SimCorp Dimension, supports the entire investment value chain and range of instruments, all based on a market-leading IBOR. SimCorp invests more than 20% of its annual revenue in R&D, helping clients develop their business and stay ahead of ever-changing industry demands. Listed on NASDAQ Copenhagen, SimCorp is a global company, regionally covering all of Europe, North America, and Asia Pacific.

For more information, please visit **www.simcorp.com.**

ONE SYSTEM FOR A COMPLEX WORLD

SimCorp