

Software updates



Installation manual for system providers

11/5/2021

Product line neo, version 6.x

The described functions can be used with the following ASC products:

EVOIPneo

EVOLUTIONneo / XXL / eco

INSPIRATIONneo

Please note that you can always find the most up-to-date technical documentation and product updates in the partner area on our website at <http://www.asctechnologies.com>.

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General information

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2 Introduction

This document describes the preconditions and steps necessary to update the neo software.



It is not possible to update to the version neo Suite from current versions of the recording system. To transfer data from an older version to the version neo, you have to execute a migration.

For information about how to migrate data refer to the administration manual *Migration*.



Always eject media by using the function in the Drives module in the application System Configuration.

Once an neo software has been installed on the system, ejecting the medium via the Windows Explorer is not recognized properly. When ejecting the medium via the Windows Explorer, an update will not be completed and new media cannot be read in as a consequence.

This restriction applies to external drives as well.

Update of the neo software

The *neo* software can be updated to different degrees:

- **Hotfix, service pack or professional service**

A hotfix, service pack or professional service allows you to update an installed and licensed version of the *neo* software without having to update the license. This update removes errors and installs minor functional extensions.

Examples:

- Update from version 3.0.0-45.0 to version 3.0.0-45.4
- Update from version 3.0.0-45.4 to version 3.0.0-46.0

Information about which hotfixes, service packs or professional services are compatible with which versions can be found in the respective release announcement. Release announcements can be found on ASC XCHANGE (<https://www.asc.de/partner>) under *Technical Documents*.

- **Release, version or project version**

A release, a version or a project version allows updating an installed and licensed version to a more recent released full version or project version of the *neo* software. For this update of the *neo* software you have to update the existing license file, too (details can be found in the administration manual for system providers *License administration*). Releases, versions and project versions must be ordered at ASC subject to charges.

Examples:

- Update from version 3.0.0-45.4 to version 4.0.0-9.0 (change from release 3.0 to release 4.0)
- Update from version 3.0.0-45.4 to version 3.1.0-21.0
- Update from version 3.0.0-45.4 to project version 3.0.1-45.4

With the exception of the professional services, all updates are available on our FTP server. The links to the downloads can be found in the partner portal of our website under *Software Download*, see [chapter "Download and deployment", p. 7](#).

Professional services are made available individually to be installed according to your requirements.

3.1

Download and deployment

1. On our website <http://www.asctechnologies.com> in the partner area on ASC XCHANGE, you will find the released software packages to download.
2. In the area *Software Download*, open the required directory, e. g. *neo Suite > _Hotfixes*.
3. Download the ISO image or the ZIP file.
4. In the download area in the directory *Software Download > Tools*, you will find the script `checksumcheck.ps1` to check the integrity of the downloaded file. By means of this script, you can compare the checksum of the ISO image with the value in the md5 file and thus check it for completeness and functionality.
5. Download the script, too, and save it in the folder where the ISO image and the md5 file have been saved.
NOTICE! There must be no other files in the directory.
6. Right-click on the file `checksumcheck.ps1` and select the function *Execute with Powershell* in the context menu.
 - ⇒ Powershell will subsequently display the check result. If the check fails, download the ISO image again.
 - ⇒ If the result is correct, you can start the installation.



Use one of the following methods to provide the ISO image:

- Mount the ISO image as drive (context menu > menu item *Mount*).
- Burn a DVD with the ISO image.

3.2 Preconditions



During the update of the *neo* software, the function On-access Scanning of the virus scanner must have been disabled.



In multi-server systems with several Enterprise Cores, all further cores **must** have been shut down when updating the first core.



In multi-server systems, an update of the *neo* recording software must be planned in advance. In some cases, additional steps may be required which are not included in the following description. Contact your local ASC support or call ASC support at +49 700 27278776.

1. When updating to a new full version or a new project version, the license for the target version must have been installed in the system.
2. The source version required for the target version must have been installed.
NOTICE! A version matrix describing which source version is required for your software update can be found in the partner area of our website in the area *Documents > Technical Documents > Technical Bulletins > Version matrix neo*.
3. For updates **from versions < 4.1 to versions ≥ 4.1**, the following Java versions must be available: JRE 1.8 (32 Bit) and JDK 1.8 (64 Bit)
4. The operating system must have been installed and configured according to our specifications. To make sure that this is the case, check the installation manual *Configuration Microsoft Windows Server 2012 R2* or *Configuration Microsoft Windows Server 2016*.
5. **Media Foundation** must have been installed in order for POWERplay Web version 5.1 or higher to work properly on the server.



During a major software update or when said so in the release announcement, the parameters in the following table are mandatory settings in the central configuration file for PostgreSQL *postgresql.conf* to guarantee a smooth update process of a PostgreSQL database:

Parameter	Recommended value
shared_buffers	> 50 % free memory
work_mem	2047 MB
maintenance_work_mem	2047 MB
autovacuum	off

After a restart of the PostgreSQL service, you can undo the changes you have made.



For further information about the configuration of the configuration file *postgresql.conf* refer to the installation manual for system providers *Failover operation for PostgreSQL databases*.

3.3 Preparations

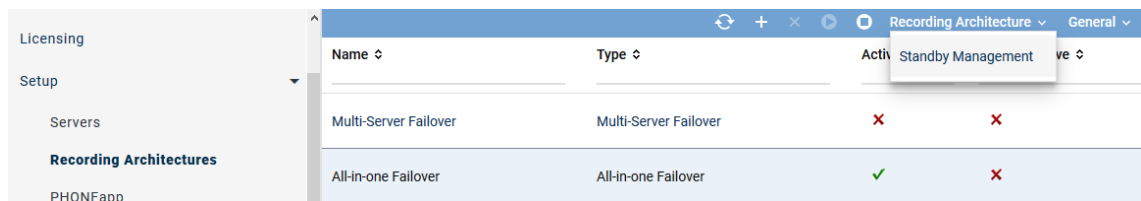
3.3.1 Set recording module to shutdown mode

To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not

accept new conversations for recording but just complete the recording of running ones. In a failover recording architecture, failover operation can be initiated manually once there are no more running recordings and the recording modules in shutdown mode can be updated. In a parallel or multi-server recording architecture, the recording modules in shutdown mode may also be updated once there are no more running recordings for these recording modules.

In the standby management of the Recording Architectures module of the application System Configuration, shutdown mode can be initiated; in addition, it shows how many conversations are currently still recorded

1. Open the Recording Architectures module by clicking on the menu item *Recording Architectures* in the navigation bar of the application System Configuration.
2. In the main view, select the recording architecture the standby management of which you would like to call up.
3. Click on the menu item *Recording Architectures* in the toolbar of the main view.




Name	Type	Active	Standby Management	Version
Multi-Server Failover	Multi-Server Failover	✗	✗	
All-in-one Failover	All-in-one Failover	✓	✗	

Fig. 1: Configure standby management



You can only edit the standby management if the corresponding architecture has been activated.

4. Click on the menu item *Standby Management*.
⇒ The window *Standby Management* appears:




Server Name	Status	Oldest Running Activity	Running Activities	Version
RC - REC-01 / REC-02				
REC-01	Active		Activities: 0	60.01.00
REC-02	In Standby		Activities: 0	
RIA - REC-01 / REC-02				
REC-01	Active		Activities: 0	60.01.00
REC-02	In Standby		Activities: 0	
RM - REC-01 / REC-02				
REC-01	Active		Activities: 0	60.00.00
REC-02	In Standby		Activities: 0	

Fig. 2: Select recording module

Here, you see the assignment of the deployed components.

In the column *Status*, you can see which component is currently active. In the column *Running Activities*, you see how many conversations are currently being recorded.

5. Select the recording module of the server you would like to update.

6. Click on the icon  (*Activate shutdown mode*) in the toolbar to set the recording module to shutdown mode.
- ⇒ The status of the server changes from *Active* to *Shutdown Mode*.
7. **NOTICE!** Make sure that the column *Running Activities* indicates *Activities: 0* to be recorded before shutting down the server.

ATTENTION!

The failover operation is **not** initiated automatically. The recording module of the standby server must be activated manually.



For further information about standby management refer to the administration manual for system providers *Configuration servers and recording architectures*.

3.3.2 Stop and restart ASC programs

1. Open the Windows Explorer.
2. Change to the directory *C:\Program Files (x86)\ASC\ASC Product Suite\scripts*.
3. Execute the file *stop all.bat* with a double-click.

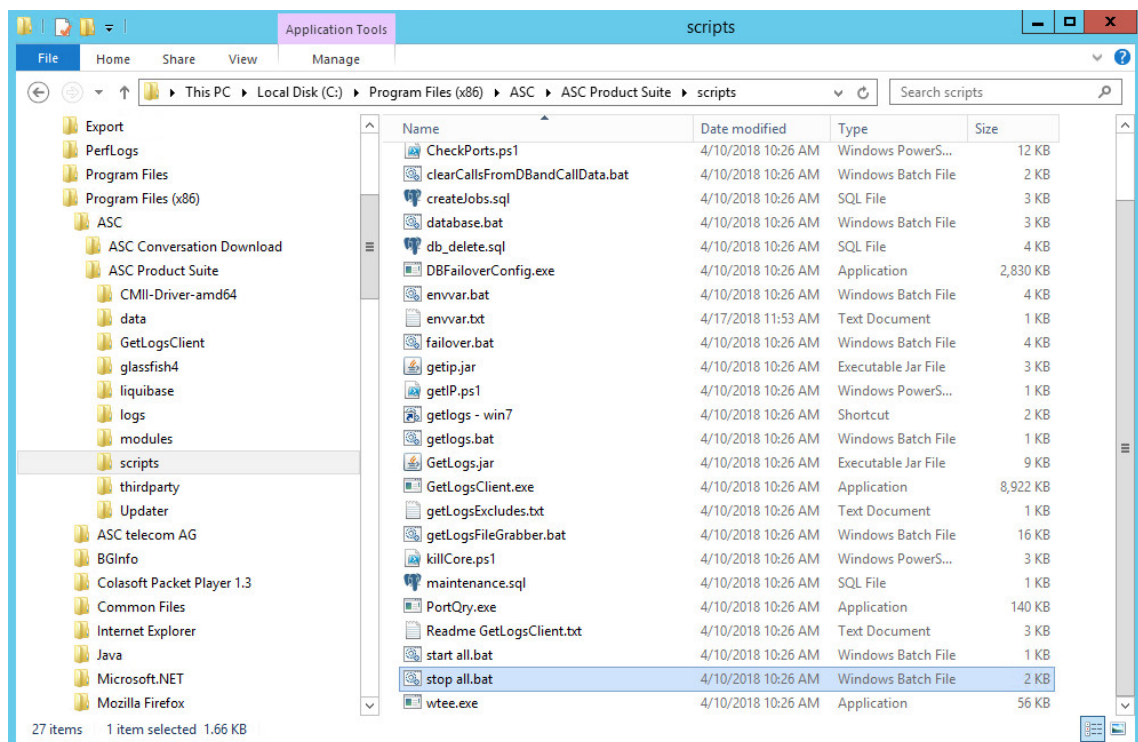


Fig. 3: Stop and restart ASC programs

⇒ All ASC programs are stopped.

To start the ASC programs again later, execute the file *start all.bat* with a double-click.

3.3.3 Carry out backup

In case of hardware servers:

1. Create an image of drive C:



Backing up drive C: is an individual process and depends on your environment and the selected backup solution. A description of the different backup and recovery scenarios can be found in the installation manual for system providers and tenants *Backup and disaster recovery*.

2. Create an image of the database drive.

In case of virtual servers:

1. Create a snapshot of the virtual system.

Snapshots of virtual systems serve to backup the status quo before maintenance or software updates. Using a snapshot only makes sense if it is up to date and created after business hours as all services must be stopped.



Do not try to create a snapshot while operating the system. You have to shut down all applications when creating a snapshot. After a successful check of the functionalities, delete the snapshots! Otherwise the snapshots affects the performance of the IO activities in this VM which may cause an unpredictable system behavior or even system failures.

2. Use the backup function of the database program to create at least one database backup.



Information about how to carry out a database backup can be found in the installation manual for system providers and tenants *Backup and disaster recovery*.

3.3.4

JAVA update

If you would like to update from **version < 4.1** to a **version ≥ 4.1**, install JRE und JDK 1.8.0 and execute the following 2 steps:

- Restart the server and wait until it has rebooted completely. Check the status via accessing the GUI.
- Check whether the environment variable `ASC_JAVA_HOME32` points to the recently installed versions JRE and JDK 1.8.0.
If this is not the case, adjust the settings manually as follows:

- Open the list of environment variables in the advanced system settings.
- Search for the entry `JAVA_HOME`.
- Change the entry so that it points to the installation directory of version JDK 1.8.0.
- Search for the entry `ASC_JAVA_HOME32`.
- Change the entry so that it points to the installation directory of version JRE 1.8.0.



When updating to a **version ≥ 6.0**, the Java Development Kit must have a version higher than jdk8u161.



After updating Java, ensure that the old Java version is uninstalled, that the environment variable `JAVA_HOME` points to the recently installed version, and that the system is rebooted.

3.4

Update All-in-one Basic with one server (default architecture 1)

The most basic system without redundancy consists of a single-server system with an All-in-one Basic Recording architecture with all components that are relevant for recording as well as with a database and an enterprise core installed on the same server.

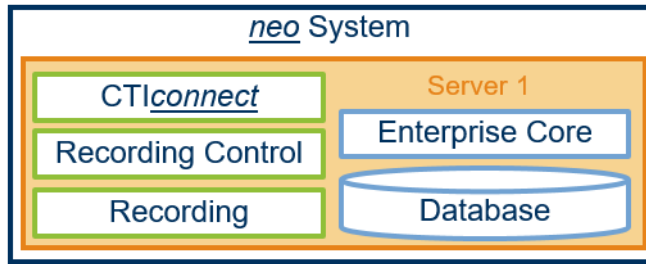


Fig. 4: Single-server system with all-in-one basic architecture

Effects

ATTENTION!

During an update, all functions, which includes recording and the access to the GUI, are cancelled.

Install Windows update



When restarting a server, the server is shut down and all neo functions are stopped. No calls are recorded during this period.

Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Measures to create a backup:

1. Stop ASC programs, see [chapter "Stop and restart ASC programs", p. 10](#).
2. Create backup, see [chapter "Carry out backup", p. 10](#).
3. Start up ASC programs, control access via GUI

Update measures:

4. Close applications
5. Start update procedure,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
6. Restart server after the update
7. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities", p. 39](#)

3.5 Update All-in-one Basic with 2 servers (default architecture 2)

The system consists of 2 servers.

- On server 1, the recording components of an all-in-one architecture have been installed.
- On server 2, the Enterprise Core and the database have been installed.

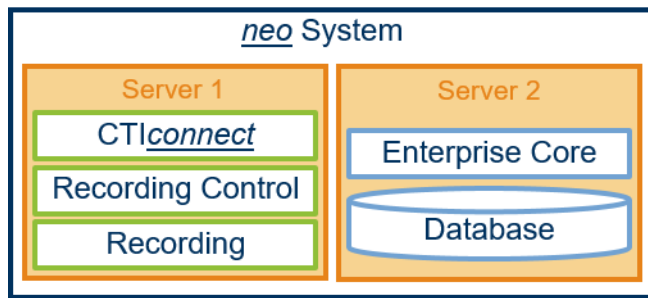


Fig. 5: All-in-one Basic architecture with separate EC and DB - 2 servers

Effects

ATTENTION!

During an update of the Enterprise Core and the database, access to the GUI is not possible. Recording continues.

During an update of the recording components, recording is cancelled.

3.5.1 Install Windows update

1. Run the Windows update on server 2 with the Enterprise Core and the database first.

NOTICE! While server 2 is being restarted, access to the GUI is not possible but recording continues on server 1.

2. After that, run the Windows update on server 1 with the recording components.

NOTICE! During the restart, recording is not possible.

3.5.2 Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Server 2

Measures to create a backup on server 2 with the EC and the DB

1. Shut down server 2 with the EC and the DB
2. Create backup, see [chapter "Carry out backup", p. 10](#).
3. Start server 2 with the EC and the DB

Measures to update the neo software on server 2

1. Start update on server 2,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 2 after the update

Server 1

Measures to create a backup on server 1 with the recording components

1. Shut down server 1 with the recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#).
3. Start server 1 with the recording components

Measures to update the neo software on server 1

1. Start update on server 1,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 1 after the update
3. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities", p. 39](#)

3.6

Update All-in-one Failover with 2 servers (default architecture 3)

The system consists of 2 servers.

- On server 1, the standby recording components as well as the Enterprise Core and the database have been installed.
- On server 2, the primary recording components have been installed.

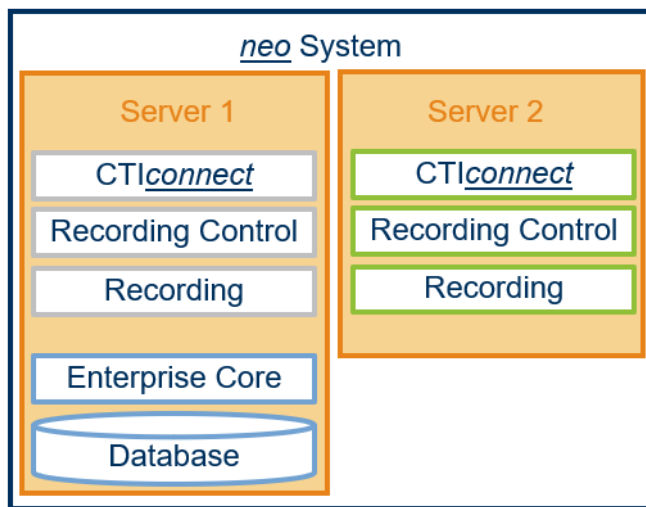


Fig. 6: All-in-one Failover system

For failover systems with a redundant database on two servers, a waiting period has been configured. During this period, recording is not switched to the failover systems. As the Enterprise Core and the database have been installed on one server, this period has to cover at least an entire restart of the server. For the scheduled restart and the updates of the server, the order to shut down the services should be observed. Before stopping the database, the Enterprise Core must be stopped, too.

Effects

ATTENTION!

During an update of server 1 with the Enterprise Core and the update of server 4 with the primary database, access to the GUI is not possible. Recording continues.

During an update of server 1 with the primary recording components, the current recordings are cancelled. Recording is switched to the standby recording components. Server 2 will record new calls.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.6.1 Install Windows update

1. Run the Windows update on server 1 first where the Enterprise Core, the database, and the failover recording components have been installed.

NOTICE! When server 1 is restarted, access to the GUI is not be possible but recording continues on the primary recording server 2.

2. After that, run the Windows update on the server 2 with the primary recording components.

NOTICE! After a restart, recording is switched to failover operation on the standby recording components. Current recordings are cancelled. New calls are recorded on server 1.

3. Reset failover operation after a successful update, see [chapter "Reset the failover operation", p. 16](#).

3.6.2 Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Server 1

Measures to create a backup on server 1 with the EC and the DB

1. Shut down server 1 with the EC, the DB, and the failover recording components.
2. Create backup, see [chapter "Carry out backup", p. 10](#).
3. Start server 1 with the EC, the DB, and the failover recording components.

Measures to update the neo software on server 1

1. Start update on server 1,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 1 after the update

Server 2

Measures to create a backup on server 2 with the recording components

1. Set recording module of server 2 to shutdown mode, see [chapter "Set recording module to shutdown mode", p. 8](#) to make sure that there are no active calls to be recorded for this server.
2. Shut down server 2 with the primary recording components
⇒ *Recording is switched to the failover recording components on server 1*
3. Create backup, see [chapter "Carry out backup", p. 10](#).
4. Start server 2 with the primary recording components

Measures to update the neo software on server 2

1. Start update on server 2,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 2 after the update
3. Reset failover operation to the primary recording components on server 2

4. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities", p. 39](#)

3.6.3 Reset the failover operation



For information about the resetting failover operation refer to the administration manual for system providers *Configuration servers and recording architectures*.

3.7 Update All-in-one Failover with 4 servers plus screen (default architecture 3 plus screen)

The system consists of 4 servers.

- On Server 1, the standby recording components as well as the Enterprise Core and the database have been installed.
- On Server 2, the primary recording components have been installed.
- On Server 3, the primary screen recording components have been installed.
- On Server 4, the screen failover recording components have been installed.

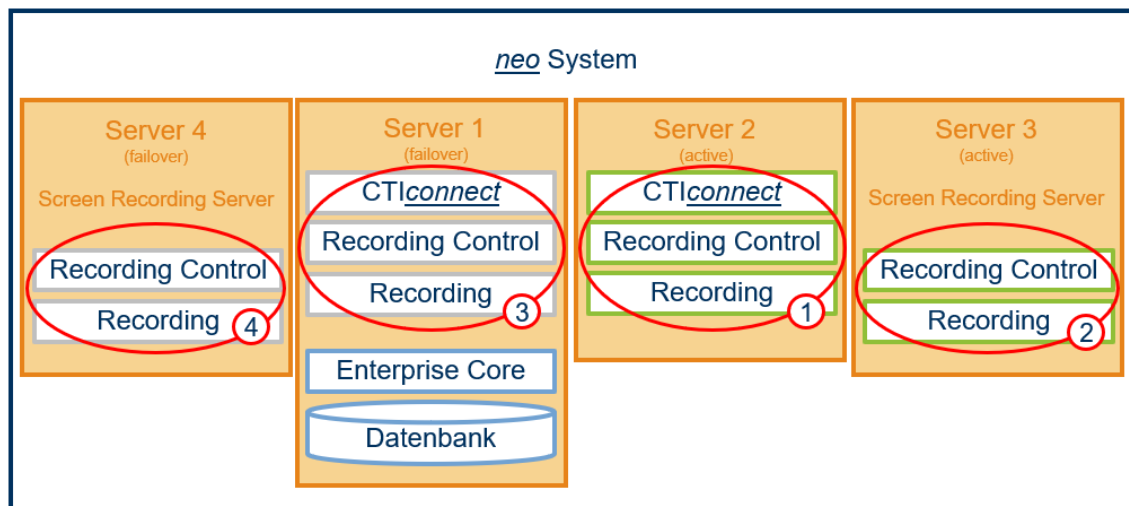


Fig. 7: All-in-one Failover with 4 servers

Effects

ATTENTION!

During an update of server 1 with the Enterprise Core and the database, access to the GUI is not possible. Recording continues.

During an update of servers 2 and 3 with the primary recording components, the current recordings are cancelled. Recording is switched to the standby recording components. Servers 1 and 4 will record new calls.

When returning to the primary recording components from the standby ones, the recordings which are currently being made by the standby recording components are cancelled and recording does not continue before failover operation on servers 2 and 3 with the primary recording components has been reset.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.7.1 Install Windows update

1. Run the Windows update on server 4 first where the screen failover recording components have been installed.
2. After that, run the Windows update on server 1 where the Enterprise Core, the database, and the audio failover recording components have been installed.



While server 1 is being restarted, access to the GUI is not be possible but recording continues on the primary servers 2 and 3.

3. After that, run the Windows update on servers 2 and 3 with the primary recording components.



Upon starting the update of servers 2 and 3, recording is switched to failover operation on the standby recording components. Current recordings are cancelled. Server 1 and 4 will record new calls.

4. Reset failover operation after a successful update, see [chapter "Reset the failover operation", p. 18](#).

3.7.2 Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Server 4

1. Shut down server 4 with the screen failover recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#)
3. Start update procedure on server 4,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
4. Restart server 4 after the update procedure

Server 1

Measures to create a backup on server 1 with the **EC** and the **DB**

1. Shut down server 1 with the **EC**, the **DB**, and the failover recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#)
3. Start server 1 with the **EC**, the **DB**, and the failover recording components

Measures to update the **neo** software on server 1

1. Start update on server 1,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 1 after the update

Server 2

Measures to create a backup on servers 2 and 3 with the recording components

1. Set recording module to shutdown mode, see [chapter "Set recording module to shutdown mode", p. 8](#) to make sure that there are no active calls to be recorded for this server.
2. Shut down server 2 and 3 with the primary recording components
⇒ Recording is switched to the failover recording components on servers 1 and 4.

3. Create backup, see [chapter "Carry out backup", p. 10](#)
4. Start server 2 and 3 with the primary recording components

Measures to update the neo software on servers 2 and 3

1. Start update procedure on servers 2 and 3, see [chapter "Start update via the ASC Updater Tool", p. 29](#) or [chapter "Start update from medium", p. 31](#)
2. Restart servers 2 and 3 after the update procedure
3. Reset failover operation to the primary recording components on servers 2 and 3
4. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities", p. 39](#).

3.7.3 Reset the failover operation



For information about the resetting failover operation refer to the administration manual for system providers *Configuration servers and recording architectures*.

3.8 Update All-in-one Failover with 4 servers (default architecture 3a)

The system consists of 4 servers.

- On Server 1, the primary recording components as well as the Enterprise Core have been installed.
- On Server 2, the standby recording components as well as the Enterprise Core have been installed.
- On server 3 a standby database has been installed.
- On server 4 an active database is running.

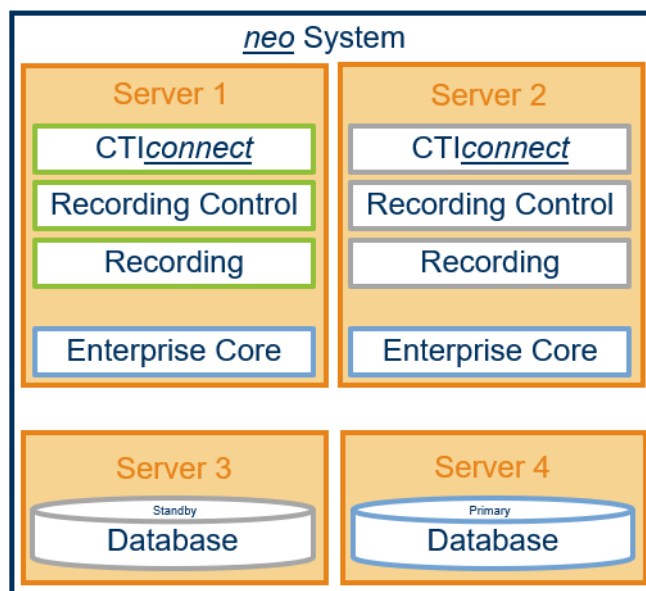


Fig. 8: All-in-one Failover system

For failover systems with a redundant database on two servers, a waiting period has been configured. During this period, recording is not switched to the failover systems. As the Enterprise Core and the database have been installed on one server, this period has to cover at least an entire restart of the server. For the scheduled restart and the updates of the server, the order to shut down the services should be observed. Before stopping the database, the Enterprise Core must be stopped, too.

Effects

ATTENTION!

During an update of server 1 with the Enterprise Core and the update of server 4 with the primary database, access to the GUI is not possible. Recording continues.

During an update of server 1 with the primary recording components, the current recordings are cancelled. Recording is switched to the standby recording components. Server 2 will record new calls.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.8.1

Install Windows update

1. Run the Windows update on server 3 with the standby database first.
2. Shut down the server and do not restart it before the update on server 4 with the primary database has been completed.
3. Now, run the Windows update on server 4 with the primary database.
4. Start server 4.
5. Start server 3 and check the replication of the database.



During an update of the server with the primary database, access to the GUI is not possible. Recording continues.

6. Now, run the Windows update on server 2. During this time, only server 1 is recording calls.



During an update of the server 2, access to the GUI is only possible via server 1. Recording continues on server 1.

7. Now, run the Windows update on server 1. During this time, only server 2 is recording calls.



Upon starting the update, recording is switched to failover operation on the standby recording components. Current recordings are cancelled. Server 2 will record new calls.



During an update of the server 1, access to the GUI is only possible via server 2. Recording continues on server 2.

8. Reset failover operation after a successful update, see [chapter "Reset the failover operation", p. 20](#)

3.8.2

Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

1. Shut down **server 3** with the standby database
 - Create backup, see [chapter "Carry out backup", p. 10](#)
2. Shut down **server 2** with the failover recording components
 - Create backup, see [chapter "Carry out backup", p. 10](#)

3. **Server 1**
 - Subsequently stop and deactivate the services *ASC ServiceMan* and *Enterprise Core*.
4. Shut down **server 4** with the primary database
 - Create backup, see [chapter "Carry out backup"](#), p. 10
 - Start server
 - Start update procedure
 see [chapter "Start update via the ASC Updater Tool"](#), p. 29
 or [chapter "Start update from medium"](#), p. 31



Do not reboot!

5. Start **server 3** with the standby database
 - Start update procedure
 see [chapter "Start update via the ASC Updater Tool"](#), p. 29
 or [chapter "Start update from medium"](#), p. 31



Do not reboot!

6. Start **server 2** with the recording components
 - Start update procedure
 see [chapter "Start update via the ASC Updater Tool"](#), p. 29
 or [chapter "Start update from medium"](#), p. 31



Subsequently reboot.

7. Shut down **server 1** with the recording components



Upon shutting down server 1, recording is switched to failover operation on the standby recording components of server 2. Current recordings are cancelled. Server 2 will record new calls.

- Create backup, see [chapter "Carry out backup"](#), p. 10
 - Start server
 - Delete the content of the folder *C:\Program Files (x86)\ASC\ASC Product Suite\glassfish5\glassfish\domains\enterprisecore\applications\EnterpriseCoreXXX*
 - Activate the option *Automatic* for the services *ASC ServiceMan* and *Enterprise Core*.
 - Start update procedure
- see
- [chapter "Start update via the ASC Updater Tool"](#)
- , p. 29
-
- or
- [chapter "Start update from medium"](#)
- , p. 31



Subsequently reboot.

Reset failover operation after the successful update, see [chapter "Reset the failover operation"](#), p. 20.

Check functionalities: make test conversations, check replay, see [chapter "Check functionalities"](#), p. 39.

3.8.3 Reset the failover operation



For information about the resetting failover operation refer to the administration manual for system providers *Configuration servers and recording architectures*.

3.9 Update All-in-one Failover with 6 servers (default architecture 3a plus)

The system consists of 6 servers.

- On Server 1, the primary recording components as well as the Enterprise Core have been installed.
- On Server 2, the standby recording components as well as the Enterprise Core have been installed.
- On server 3 a standby database has been installed.
- On server 4 an active database is running.
- On Server 5, the screen failover recording components have been installed.
- On Server 6, the primary screen recording components have been installed.

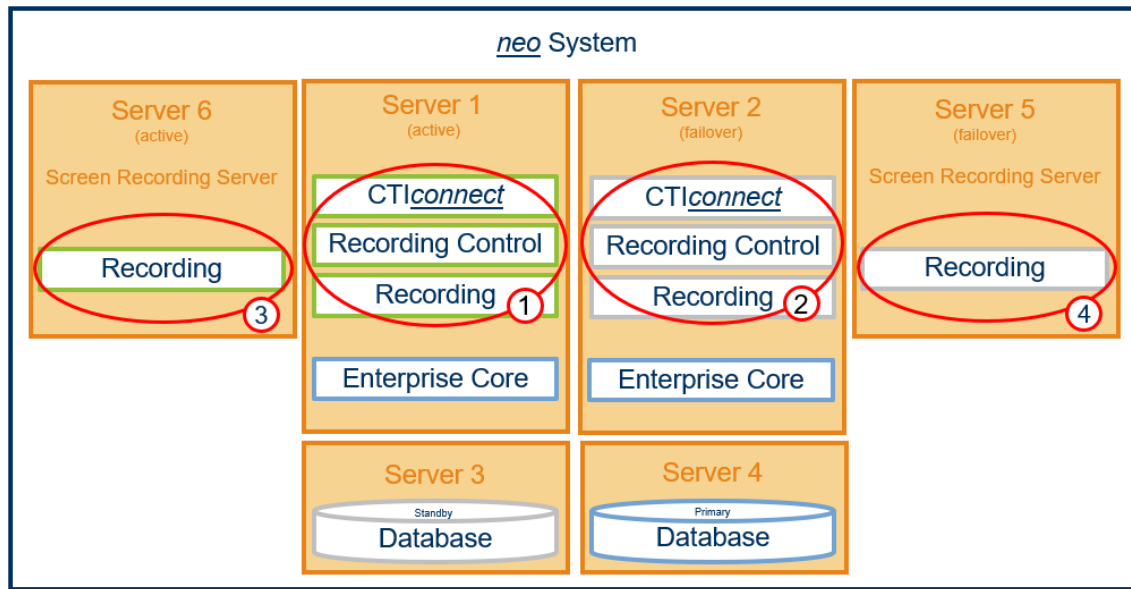


Fig. 9: All-in-one-Failover system with 6 servers

For failover systems with a redundant database on two servers, a waiting period has been configured. During this period, recording is not switched to the failover systems. As the Enterprise Core and the database have been installed on one server, this period has to cover at least an entire restart of the server. For the scheduled restart and the updates of the server, the order to shut down the services should be observed. Before stopping the database, the Enterprise Core must be stopped, too.



For more information about configuring of a failover concept and a resetting failover operation refer to the administration manual for system providers *Failover operation for PostgreSQL databases*.

ATTENTION!


During an update of server 1 with the Enterprise Core and the update of server 4 with the primary database, access to the GUI is not possible. Recording continues.

During an update of servers 1 and 6 with the primary recording components, the current recordings are cancelled. Recording is switched to the failover recording components. Servers 2 and 5 will record new calls.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

See also

 Set recording module to shutdown mode [► 8]

3.9.1 Install Windows update

1. Run the Windows update on **server 3** with the standby database first.
2. Shut down the server and do not restart it before the update on server 4 with the primary database has been completed.
3. Now, run the Windows update on **server 4** with the primary database.
4. Start server 3.
5. Start server 4 and check the replication of the database.



During an update of the server with the primary database, access to the GUI is not possible. Recording continues.

6. Now, run the Windows update on **server 5** with the failover screen recording components.
7. Now, run the Windows update on **server 2**.



During an update of the server 2, access to the GUI is only possible via server 1. Recording continues on servers 1 and 6.

8. Now, run the Windows update on **server 1**. During this time, only servers 2 and 5 are recording calls.



Upon starting the update, recording is switched to failover operation on the standby recording components. Current recordings are cancelled. Servers 2 and 5 will record new calls.



During an update of the server 1, access to the GUI is only possible via server 2. Recording continues on servers 2 and 5.

9. Reset failover operation after a successful update, see [chapter "Reset the failover operation", p. 20](#).

3.9.2 Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

1. Shut down **server 3** with the standby database
 - Create backup, see [chapter "Carry out backup", p. 10](#)
2. Shut down **server 2** and **server 5** with the failover recording components
 - Create backup, see [chapter "Carry out backup", p. 10](#)
3. **Server 1**
 - Subsequently stop and deactivate the services *ASC ServiceMan* and *Enterprise Core*.
4. Shut down **server 4** with the primary database
 - Create backup, see [chapter "Carry out backup", p. 10](#)
 - Start server
 - Start update procedure

see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)



Do not reboot!

5. Start **server 3** with the standby database
 - Start update procedure
 - see [chapter "Start update via the ASC Updater Tool"](#), p. 29
 - or [chapter "Start update from medium"](#), p. 31



Do not reboot!

6. **Server 2 and server 5**
 - Start update procedure,
 - see [chapter "Start update via the ASC Updater Tool"](#), p. 29
 - or [chapter "Start update from medium"](#), p. 31



Subsequently reboot.

7. Shut down **server 1** and **server 6** with the recording components



Upon shutting down server 1, recording is switched to failover operation on the standby recording components of servers 2 and 5. Current recordings are cancelled. Servers 2 and 5 will record new calls.

- Create backup, see [chapter "Carry out backup"](#), p. 10
- Start server 1
- Delete the content of the folder *C:\Program Files (x86)\ASC\ASC Product Suite\glassfish5\glassfish\domains\enterprisecore\applications\EnterpriseCoreXXX*
- Activate the option *Automatic* for the services *ASC ServiceMan* and *Enterprise Core*.
- Start update procedure
- see [chapter "Start update via the ASC Updater Tool"](#), p. 29
- or [chapter "Start update from medium"](#), p. 31



Subsequently reboot.

Update server 6

Reset failover operation after the successful update, see [chapter "Reset the failover operation"](#), p. 20.

Check functionalities: make test conversations, check replay, see [chapter "Check functionalities"](#), p. 39.

3.10

Update active-active Recording (default architecture 3b)

The system consists of 2 servers.

- On Server 1, the recording components are active; in addition the Enterprise Core and the database have been installed there.
- On server 2, the recording components are active.

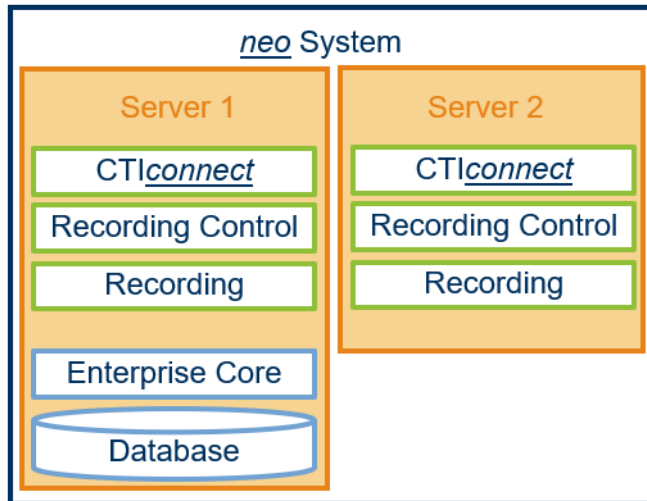


Fig. 10: Active-active Recording

Effects

ATTENTION!

During an update of server 1 with the Enterprise Core and the database, access to the GUI is not possible. Recording continues.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.10.1

Install Windows update

1. Run the Windows update on **server 2** with the recording components first.
2. After that, run the Windows update on **server 1** where the Enterprise Core, the database, and the recording components have been installed.



While server 1 is being restarted, access to the GUI is not be possible but recording continues on recording server 2.

3.10.2

Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Server 1

Measures to create a backup on server 1 with the EC and the DB

1. Shut down server 1 with the **EC**, the **DB**, and the recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#)
3. Start server 1 with the **EC**, the **DB**, and the recording components

Measures to update the neo software on server 1

1. Start update on server 1,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
2. Restart server 1 after the update

Server 2

Measures to create a backup on server 2 with the recording components

1. Set recording module of server 2 to shutdown mode, see [chapter "Set recording module to shutdown mode"](#), p. 8 to make sure that there are no active calls to be recorded for this server.
2. Shut down server 2 with the recording components
3. Create backup, see [chapter "Carry out backup"](#), p. 10
4. Start server 2 with the recording components

Measures to update the neo software on server 2

1. Start update procedure on server 2,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
2. Restart server 2 after the update procedure
3. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities"](#), p. 39.

3.11 Update All-in-one Parallel Recording (default architecture 4)

The system consists of 3 servers.

- On servers 1 and 3, the recording components are active.
- On server 2, the Enterprise Core and the database have been installed.

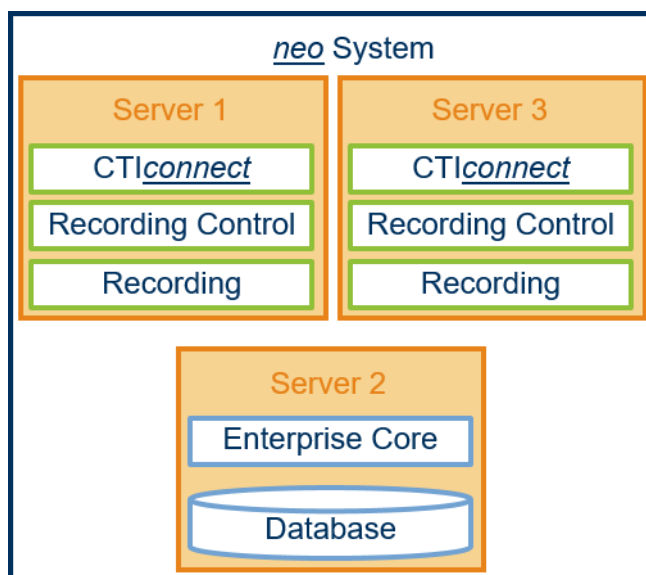


Fig. 11: All-in-one Parallel Recording

Effects

ATTENTION!

During an update of server 2 with the Enterprise Core and the database, access to the GUI is not possible. Recording continues.



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.11.1

Install Windows update

1. Run the Windows update on **server 2** where the Enterprise Core and the database have been installed first.



While server 2 is being restarted, access to the GUI is not be possible but recording continues on the recording servers 1 and 3.

2. After that, run the Windows update on **server 1** with the recording components.
3. Set **server 3** to shutdown mode, see [chapter "Set recording module to shutdown mode", p. 8](#)
4. After that, run the Windows update on **server 3**.

3.11.2

Update neo software



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

Server 2

Measures to create a backup on server 2 with the EC and the DB

1. Shut down server 2 with the EC, the DB, and the recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#)
3. Start server 2 with the EC, the DB, and the recording components

Measures to update the neo software on server 2

1. Start update on server 2,
see [chapter "Start update via the ASC Updater Tool", p. 29](#)
or [chapter "Start update from medium", p. 31](#)
2. Restart server 2 after the update

Server 1

Measures to create a backup on server 1 with the recording components

1. Shut down server 1 with the recording components
2. Create backup, see [chapter "Carry out backup", p. 10](#)
3. Start server 1 with the recording components

Measures to update the neo software on server 1

1. Start update procedure on server 1,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
2. Restart server 1 after the update procedure

Server 3

Measures to create a backup on server 3 with the recording components

1. Set recording module of server 3 to shutdown mode, see [chapter "Set recording module to shutdown mode"](#), p. 8 to make sure that there are no active calls to be recorded for this server.
2. Shut down server 3 with the recording components
3. Create backup, see [chapter "Carry out backup"](#), p. 10
4. Start server 3 with the recording components

Measures to update the neo software on server 3

1. Start update procedure on server 3,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
2. Restart server 3 after the update procedure
3. Check functionalities: make test conversations, check replay, see [chapter "Check functionalities"](#), p. 39.

3.12 Update All-in-one Parallel Recording (default architecture 4a)

The system consists of 4 servers.

- On server 1 and server 2, the recording components of an *All-In-One Parallel architecture* with one Enterprise Core each are active.
- On server 3 an active database is running.
- On server 4 a standby database has been installed.

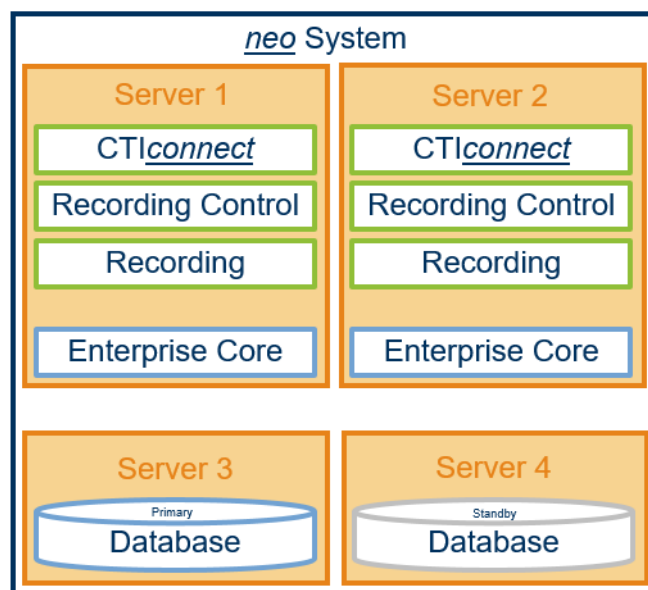


Fig. 12: All-in-one Parallel Recording with redundant database - 4 servers



To avoid having to cancel the recording of running conversations for the purpose of a software update, there is the possibility for failover, multi-server, and parallel architectures to set one or several selected recording modules to shutdown mode so that these recording modules will not accept new conversations for recording but just complete the recording of running ones. See [chapter "Set recording module to shutdown mode", p. 8](#).

3.12.1 Install Windows update

1. Run the Windows update on **server 4** with the standby database first.
2. Shut down the server and do not restart it before the update on server 3 with the primary database has been completed.
3. Now, run the Windows update on **server 3** with the primary database.
4. Start the server 3
5. Start server 4 and check the replication of the database.

NOTICE! During an update of the server with the primary database, access to the GUI is not possible. Recording continues.

6. Now, run the Windows update on **server 1**. During this time, only server 2 is recording calls.

NOTICE! During an update of server 1, access to the GUI is only possible via server 2. Recording continues exclusively on server 2.

7. Now, run the Windows update on **server 2**. During this time, only server 1 is recording calls.

NOTICE! During an update of server 2, access to the GUI is only possible via server 1. Recording continues exclusively on server 1.

3.12.2 Update neo software

To avoid losing recordings during an update, observe the following order when updating.



It is recommended to backup the system before an update, see [chapter "Carry out backup", p. 10](#).

1. Shut down **server 4** with the standby database
 - Create backup, see [chapter "Carry out backup", p. 10](#).
2. Shut down **server 1** with the recording components
 - Set recording module to shutdown mode, see [chapter "Set recording module to shutdown mode", p. 8](#) to make sure that there are no active calls to be recorded for this server.
 - Create backup, see [chapter "Carry out backup", p. 10](#).
3. **Server 2** with the recording components
 - Subsequently stop and deactivate the services *ASC ServiceMan* and *ASC Application-Service*.
4. Shut down **server 3** with the primary database

- Create backup, see [chapter "Carry out backup"](#), p. 10.
 - Start
 - Start update procedure,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
NOTICE! Do not initiate a restart!
5. Start **server 4** with the standby database
- Start update procedure,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
NOTICE! Do not initiate a restart!
6. Start **server 1** with the recording components
- Start update procedure,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
NOTICE! Initiate restart subsequently!
7. Shut down **server 2** with the recording components
- Create backup, see [chapter "Carry out backup"](#), p. 10.
 - Start
 - Delete the content of the folder *C:\Program Files (x86)\ASC\ASC Product Suite\glassfish5\glassfish\domains\enterprisecore\applications\EnterpriseCoreXXX*
 - Activate the option *Automatic* for the services *ASC ServiceMan* and *ASC ApplicationService*.
 - Start update procedure,
see [chapter "Start update via the ASC Updater Tool"](#), p. 29
or [chapter "Start update from medium"](#), p. 31
NOTICE! Initiate restart subsequently!



Check the functionalities once all components have been updated. Make some test calls and check whether recordings can be replayed, see [chapter "Check functionalities"](#), p. 39.

3.13

Start update via the ASC Updater Tool

1. Open the Windows Explorer.
2. Change to the installation directory of the ASC software, e. g. *C:\Program Files (x86)\ASC\ASC Product Suite*.
3. Change to the directory *Updater*.
4. Start the ASC Updater Tool by going to the context menu of the file *updater.exe* and selecting the menu item *Run as administrator*.

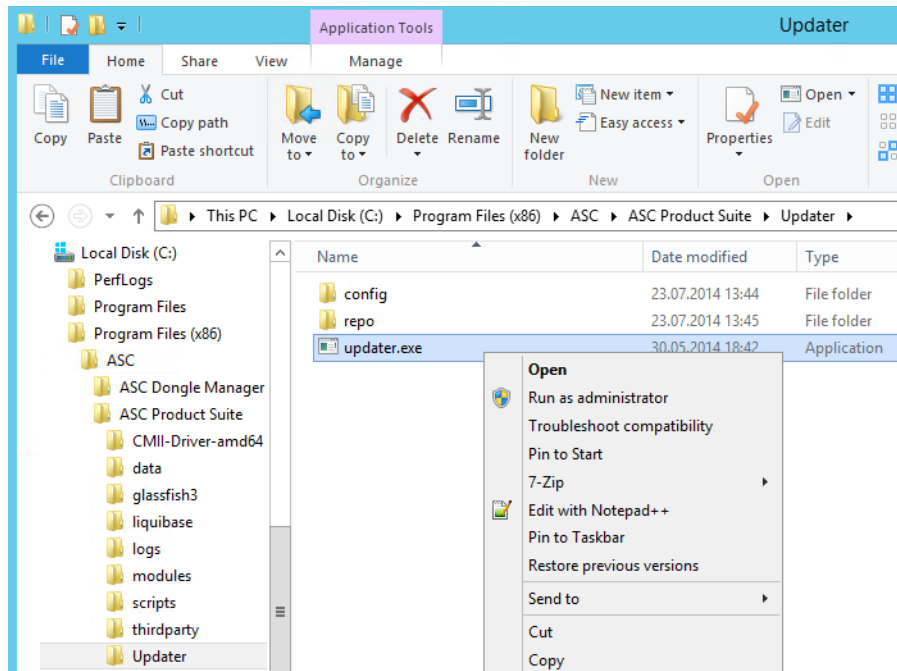


Fig. 13: Open updater.exe

- ⇒ The window *ASC Updater* appears.
- ⇒ The window *Select Update Source* appears.

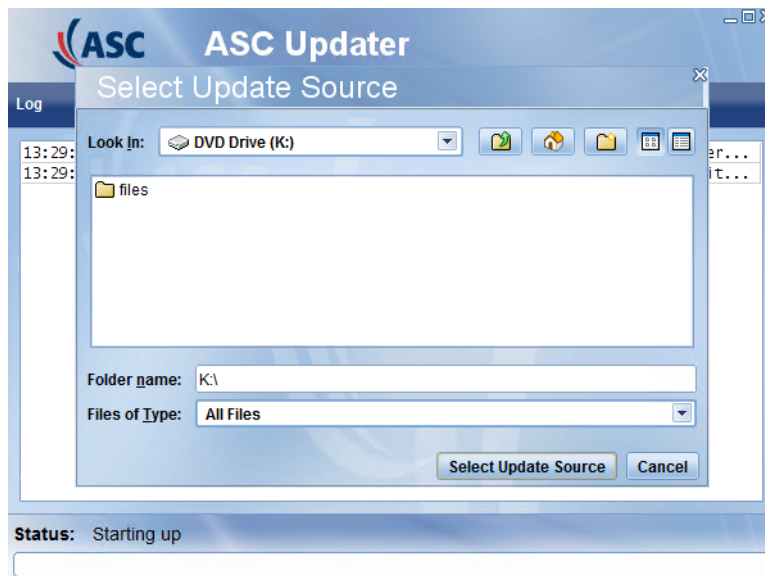


Fig. 14: ASC Updater Tool - select source

5. Select the drive or the directory in which the ASC installation medium is displayed.
NOTICE! Select only the respective drive or directory. Do not select any sub-folder. The required files are selected automatically.
6. Click on the button *Select Update Source* to start the installation routine.
NOTICE! If the installation routine requires updating the ASC Updater tool, then the ASC Updater is closed, updated automatically, and then started again. Click once again on the button *Select Update Source* to continue the installation routine.
7. The installation routine is carried through automatically.
⇒ After the installation, the installation report appears. This report displays the result of the software update.



Fig. 15: Installation report of the update

- Click on the button *Close* to close the window.
- Reboot the recording server to finish the installation.
- In the administrative program of the services, check whether the ASC services could be started after the update and are running.
- If problems occurred during the installation or if the installation has been canceled, check the Updater log files. The log files are stored in the installation directory in the subdirectory *\logs\updater*, e. g. *C:\Program Files (x86)\ASC\ASC Product Suite\logs\updater*.

3.14 Start update from medium

- Open the Windows Explorer.
- Select the drive or the directory in which the ASC installation medium is displayed.
- Start the file *update.bat* by selecting the menu item *Run as administrator* in the context menu of the file.

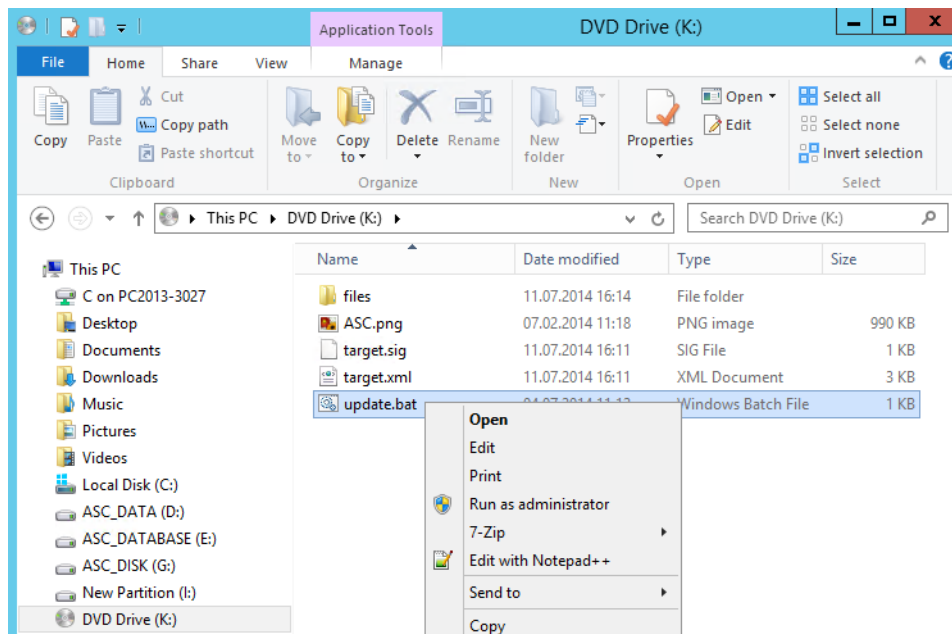


Fig. 16: Start the file *update.bat*

⇒ The window *ASC Updater* appears.

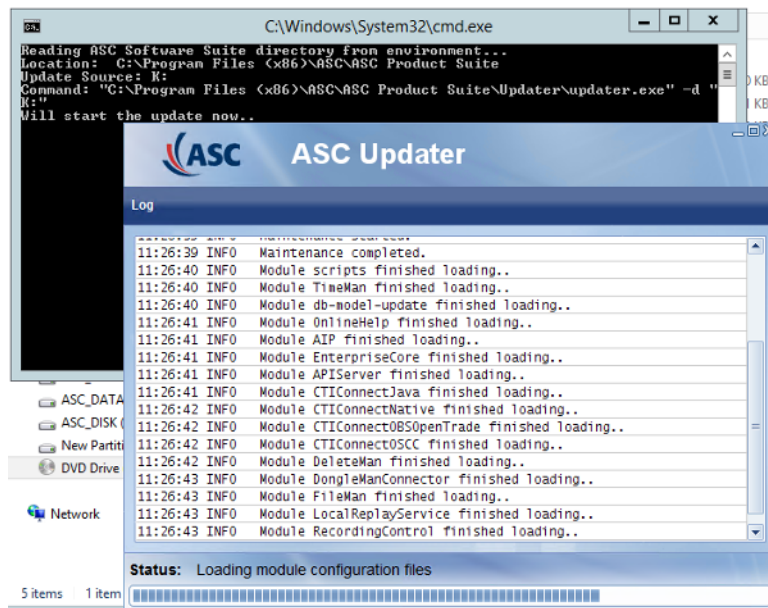


Fig. 17: ASC Updater Tool - installation routine

4. The installation routine is carried through automatically.
 - ⇒ After the installation, the installation report appears. This report displays the result of the software update.



Fig. 18: Installation report of the update

5. Click on the button *Close* to close the window.
6. Reboot the recording server to finish the installation.
7. In the administrative program of the services, check whether the ASC services could be started after the update and are running.
8. If problems occurred during the installation or if the installation has been canceled, check the Updater log files. The log files are stored in the installation directory in the subdirectory *logs\updater*, e. g. *C:\Program Files (x86)\ASC\ASC Product Suite\logs\updater*.

3.15 Subsequent action

After updating the software, you have to update the configuration of the PBX integration(s) and check the general functionality of the recording system.



When using *CTIconnect*, check the integration's connection data after updates and ensure that the current grammar is used in the *CTIconnect* module.



If you have updated **from a version < 4.1 to a version ≥ 4.1** and JRE and JDK 1.7.0 continue to be installed, uninstall these versions.



When updating *neo* versions 5.2 and lower in recording solutions with Mitel MiVoice MX-ONE (CSTA 3), the integration must be configured and activated again after every update. For further information refer to the administration manual for system providers *EVOIPneo active for Mitel MiVoice MX-ONE (CSTA3)*.



For information about starting and using the application System Configuration refer to the user manual *System Configuration - General information*.



For information about starting and using the application System Monitoring refer to the user manual *System Monitoring*.

3.15.1 Configure servers

3.15.1.1 Tab Usage

Following the software update from version 5.0 to a higher version, you have to configure the purpose of usage of the server again as the GUI has changed and certain functionalities have been distributed.

1. Open the Servers module by clicking on the menu item *Servers* in the navigation bar of the application System Configuration.
2. In the detail view, click on the tab *Usage* to configure the purpose of usage.

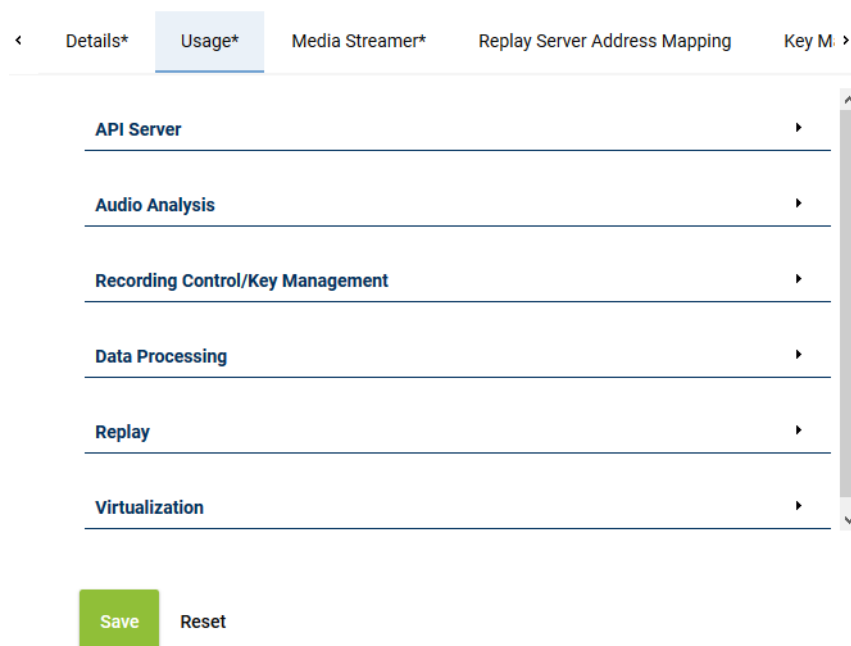


Fig. 19: Servers - tab Usage



For information about the configuration of servers and recording architectures refer to the administration manual for system providers *Configuration servers and recording architectures*.

3.15.1.1.1 Configure API server

Group field API Server

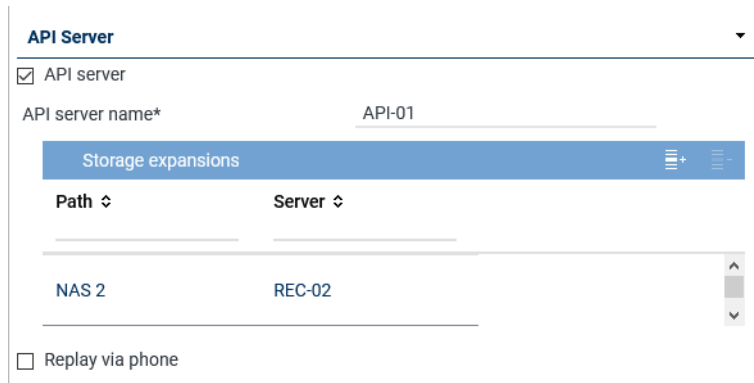




Fig. 20: Group field API Server

The API server is a service in the *neo* software. It contains the interface for the client applications. Once the service has been started, the client applications can communicate with the *neo* system via this interface by means of defined commands.

The API server is responsible for replay via the web browser, too. The API server has to be started before the replay server can be activated and the API server assigned for replay via the web applications.

Parameter	Value/Description
API server	<p>Tick the check box to start the API server.</p> <p><input checked="" type="checkbox"/> = Function has been activated. You have to complete the entry field <i>API server</i>.</p> <p><input type="checkbox"/> = Function has not been activated.</p> <p>In order to be able to reach the API server from a public network and with configured port forwarding, too, you have to adjust the settings in the tab <i>Applet Address Mapping</i>.</p>
API server name	<p>Enter the name which is supposed to denote the server in the system.</p> <p>As the API server can be used system-wide and by different tenants, you have to enter a kind of alias here. When selecting the API server, this alias is displayed on the client computers instead of the real server name or the IP address.</p>
List Storage expansions	<p>Here, you can add storage expansions for replay. If a recording which is supposed to be replayed cannot be found on the server, the search is continued on the storage expansions which have been entered here. That way, even recordings can be replayed which have not been transferred to the server.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> By clicking on the icon  (<i>Add</i>) you can add the storage expansions. By clicking on the icon  (<i>Remove</i>), you can remove the storage expansions from the list. <p>If you use several recording servers in your system for which storage expansions have been configured, you can add any storage expansion of any recording server on every API server of the system.</p>

Parameter	Value/Description
Replay via phone	<p>Activate this function if you would like to use the functions <i>Replay via phone</i> or <i>Last Call Repeat</i>.</p> <p><input checked="" type="checkbox"/> = Function has been activated. <input type="checkbox"/> = Function has not been activated.</p> <p>NOTICE! The function <i>Replay via phone</i> has been implemented in the following <i>neo</i> components:</p> <ul style="list-style-type: none"> • Application POWER<i>play</i> Pro • Application POWER<i>play</i> Instant • Replay module <p>In order to enable a client to use the functionality <i>Replay via phone</i>, you have to assign this client an identifier either in the Employees module or in the Phones module which allows the system to clearly identify the phone.</p> <p>NOTICE! In the tab <i>Media Streamer</i>, you have to assign this function to a PBX. To be able to do so, at least 1 PBX must have been configured in the system.</p>

Click on the button Save in the detail view.

3.15.1.1.2 Configure replay

Group field Replay

1. Open the group field *Replay*.

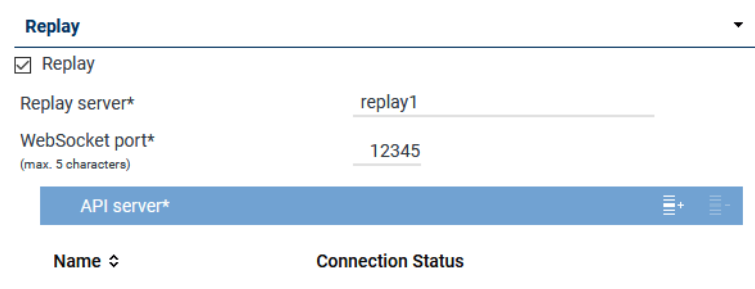




Fig. 21: Group field Replay

<i>Replay</i>	<p>Select whether the server is supposed to serve as replay server.</p> <p>A replay server can replay recordings via the integrated <i>Replay Feature</i>. Only data which has either been recorded directly on this server or which has been transferred to this server for data storage or only for replay purposes can be replayed. The client computers of the system can connect to a replay server for replay purposes.</p> <p><input checked="" type="checkbox"/> = Function has been activated. You have to complete the entry field <i>Replay server</i>. <input type="checkbox"/> = Function has not been activated.</p>
<i>Replay server</i>	<p>Enter the name which is supposed to denote the server as the replay server in the system.</p>

	As the replay server can be used system-wide and by different tenants, you have to enter a kind of alias here. When selecting the replay server, this alias is displayed on the client computers instead of the real server name or the IP address.
<i>WebSocket port (maximum of 5 characters)</i>	<p>Enter the port via which the data to be replayed in POWERplay Web are supposed to be transmitted.</p> <p>In order to be able to reach the replay server from a public network and with configured port forwarding, you have to adjust the settings in the tab <i>Applet Address Mapping</i>.</p> <p>Keep in mind that the indicated port must have been opened.</p>
List API server	<p>Here, you can add API servers for replay. If a recording which is supposed to be replayed cannot be found on the server, the search is continued on the storage expansions which have been entered here. That way, even recordings can be replayed which have not been transferred to the server.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> • By clicking on the icon  (<i>Add</i>) you can add the API server. • By clicking on the icon  (<i>Remove</i>), you can remove selected API servers from the list.

3.15.1.1.3 Reconfigure data transfer



You only have to execute this step when using the option *Transfer data for data storage* and if you have **updated from a version < 4.2 to a version ≥ 4.2**. In all other update scenarios, you can skip this chapter.

1. Start the application System Configuration.
2. Open the Servers module by going to the menu item *Setup* in the navigation bar and clicking on the sub-menu item *Servers*.
3. In the main view, select the server on which you have activated the option *Transfer data for data storage*.
4. Click on the tab *Usage* in the detail view.
5. Open the group field *Data Processing*.

[Details*](#)
[Usage](#)
[Media Streamer](#)
[Replay Server Address Mapping](#)
[Key Man >](#)

Data Processing

☒ Data storage

☐ Transfer data for replay

Target Server

Name ↕	IP Address ↕
WIN-PP28N16CIDB	192.168.169.143

☒ Transfer data for data storage

Target Server


Name ↕	IP Address ↕
WIN-PP28N16CIDB	192.168.169.143

☐ Activate period of time
 from 12:48:06
 to 12:48:06

Fig. 22: Transfer data for data storage

- ⇒ The option *Transfer data for data storage* has been activated.
- ⇒ One or several target servers have been entered.
- ⇒ No data is transferred, though.


NOTICE! If no data is transferred, the following error is displayed in the application System Monitoring: CON_TRANSFER_PROCESSING_014.

6. Deactivate the option *Transfer data for data storage*.
7. In the detail view, click on the button **Save** to save the change.
 - ⇒ All target servers are removed from the list.
8. Activate the option *Transfer data for data storage* again.
9. Use the function  (*Add*) to enter all servers again to which the recorded data is supposed to be transferred for data storage.
10. In the detail view, click on the button **Save** to save the change.
11. Open the application System Monitoring and make sure that all data transfer jobs work properly.

3.15.2 Create new version of archiving job



After a software update from version 5.1 to a higher version, you have to create new versions of existing archiving jobs and select whether recordings without compression are supposed to be archived, too.

1. Open the Archiving module by going to the navigation bar of the application System Configuration and clicking on the menu item Conversations module and then on the submenu item Archiving module.
2. In the main view, select the archiving job that you want to create a new version of and click on the icon  (*Create*).
3. Select the option *Create New Version* and adjust the required settings in the detail view; then open the tab *Criteria* and select in the group field *Dependencies* whether recordings are supposed to be archived without compression, too.

Dependencies ▼

Archive even if only meta data is available ☐

Archive also without compression ☐ 0 Day(s)
 0 Hour(s)
 0 Minute(s)

Delay ☐ Day(s)
 Hour(s)
 Minute(s)

Fig. 23: Archiving module, tab Criteria, group field Dependencies

4. Save the settings by clicking on the button **Save**.



For more information about creating archiving jobs refer to the administration manual for tenants *System Configuration - Archiving of recordings*.

3.15.3 New installation of Dongle Manager

When updating the *neo* software, the application Dongle Manager must also be updated to the corresponding version - if used.

To do so, uninstall the old version of the Dongle Manager and install the application in the corresponding new version again.



For information about the installation of the application Dongle Manager refer to the installation manual *Installation Dongle Manager*.

3.15.4 Installation of Solr for full-text search



After a software update of *neo* version 6.5 or higher and the subsequent installation of Solr for full-text search, each previously created analysis engine or previously created project must be saved again without changes to ensure proper language mapping in the *neo* database.

1. Start the application System Configuration.
2. Log in as 1st-tenant-admin.
3. Select the menu item *Applications*.
4. Click on *Audio Analysis* in the main view.
5. In the detail view in the group field *Analysis Engines/Projects*, select the respective analysis engine/project and click on the button *Add* to open it.
 - ⇒ The window *Analysis Engine/Project* opens.

Analysis Machine/Project		✕	
Stream audio data from*	Audio-Analysis	+	-
Target directory*	EML_NEO	+	-
Engine ID*	http://192.168.171.1:8080/eml-stt/jo		
Project name*	EML_TLU_DE		
Queue name*	eml-transcribe		
Language*	English (US) ▼		
Available licenses	40		
Assigned licenses*	40		

Fig. 24: Analysis engine/Project (example)

6. Click on the button OK.
7. Click on the button Save to apply the settings.

3.15.5 Check functionalities

To make sure that the recording system works properly after the software update, you should carry out several function tests.

1. Open the application System Monitoring and check the following issue:
 - General system status
 - Job executions
2. Make test conversations and check whether the conversations are handled correctly (e. g. recording, archiving, compression, transfer, ...).
3. Log in to all applications of the recording system to make sure that all applications work.
4. Check that new recordings can be replayed.
 - If the functionalities have been checked successfully, delete the snapshot you have created of the respective server.
 - If the functionality check was negative, reinstall the snapshot and contact your local ASC support or call ASC support at +49 700 27278776.

4 Update PostgreSQL database

The procedure described in the following to update a major version of a PostgreSQL database with database backup and database restore refers to a stand-alone Postgres installation **without** replication.



Before an update make sure to check, whether the *neo* version supports the required PostgreSQL version. If the required PostgreSQL version is not supported, it is mandatory to update *neo* to the respective version before updating the PostgreSQL version. Do not update without prior consent of ASC.

Overview

1. Ensure that a complete and operative backup of the database exists.
2. Backup of database and configuration of source version
3. Uninstallation of source version
4. Installation of target version
5. Configuration of target version
6. Restore of database

Backup of database and configuration of source version

1. Stop service ASC ServiceMan
2. Shutdown cores
3. Shutdown PGAgent database server
4. Create directory *D:\PGUpgrade on DB server* (alternatively also on another drive)
5. Call up *PGAdmin* for source version



For more information about the backup and restore of a PostgreSQL database refer to the administration manual *Backup and disaster recovery*.

Preparation

In advance, take the following preparative measures and ensure that the following information is available:

1. Ensure that the latest version of the JDBC driver (postgres-42.x or higher) is used in the *neo*. The JDBC driver for the core is located in: *C:\Program Files (x86)\ASC\ASC Product Suite\#GLASSFISH_4#\glassfish\domains\enterprisecore\lib*. Exemplary file: *postgresql-42.2.1.jre6.jar*.
2. Determine drive and path of the data directory of the PostgreSQL database from file *setup.xml*: `<ascdatabase>: #POSTGRES_DATA#`
3. Determine the drive where the PostgreSQL database is located: `#POSTGRES_DRIVE#`
4. Create the directory `#POSTGRES_DATA#\PGUpgrade: #PG_UPGRADE_BACKUP#` (in our case *D:\PGUpgrade on DB server* (alternatively also on another drive)
5. Determine the current password of the postgres user in plaintext: `#POSTGRES_PASSWORD#`
6. Determine the current user: `#CURRENT_USER#`
7. Create the file *C:\Users\#CURRENTUSER#\AppData\Roaming\postgresql\pgpass.conf* with the following content:
 - `localhost:5432:*.postgres:#POSTGRES_PASSWORD#`
 - `127.0.0.1:5432:*.postgres:#POSTGRES_PASSWORD#`



The information in hashtags (#*INFORMATION*;) must be understood as placeholders and be replaced with customer-specific information.

Backup of configuration files of the PostgreSQL database

- Copy the following files into the directory #PG_UPGRADE_BACKUP#:
 - #POSTGRES_DATA#\pg_hba.conf
 - #POSTGRES_DATA#\postgresql.conf
 - #POSTGRES_DATA#\recovery.conf (if available)
- Back up the backup settings of the PGAgent job by executing the following commands:
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY (SELECT * FROM pgagent.pga_job) TO '#PG_UPGRADE_BACKUP#/pga_job.csv'"
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY (SELECT * FROM pgagent.pga_jobstep) TO '#PG_UPGRADE_BACKUP#/pga_jobstep.csv'"
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY (SELECT * FROM pgagent.pga_schedule) TO '#PG_UPGRADE_BACKUP#/pga_schedule.csv'"

Backup of the database

- Execute the following command:
 - pg_dump -h localhost -p 5432 -U postgres -w -F c -b -v -f "%ASC_ASCDATA%/Database-Backup/Upgrade_Backup_asc_rs.compressed" asc_rs >> "%ASC_LOG_PATH%/Postgres/Upgrade_Backup_asc_rs.log" 2>&1
- Check the file %ASC_LOG_PATH%/Postgres/Upgrade_Backup_asc_rs.log for possible errors.

Uninstallation of source version

- Uninstall the *PostgreSQL Scheduling Agent* (PGAgent).
- Uninstall the source version of the *postgresql-x64-X.Y - PostgreSQL Server X.Y* (X.Y denotes the source version). To do so, open the control panel, select the respective version with a right-click, and subsequently click on *Uninstall*.
- Delete the content of the data directory of the PostgreSQL database: #POSTGRES_DATA# **NOTICE!** Only delete the content and **not** the directory itself.

Installation of target version

- Install the target version of the PostgreSQL database with the following parameters:

Parameter	Value
Data directory	#POSTGRES_DATA#
Port	5432
Password postgres user	#POSTGRES_PASSWORD#

- Update the environment variable %ASC_PGPATH%.
- Change the path specification so that it leads to the installation directory.
- Install the *PostgreSQL Scheduling Agent* (PGAgent) by means of the service Stack Builder and follow the prompts of the installation wizard.



PGAgent 12 (version 4.x) is currently not supported.

Configuration of target version

1. In the file *pg_hba.conf*, apply all uncommented settings from file *#PG_UPGRADE_BACKUP#\pg_hba.conf*.
NOTICE! Potential duplicates must be ignored.
2. In the file *postgresql.conf*, apply the following parameters from file *#PG_UPGRADE_BACKUP#\postgresql.conf*.

CONNECTIONS AND AUTHENTICATION

max_connections

RESOURCE USAGE (except WAL)

shared_buffers

work_mem

maintenance_work_mem

WRITE AHEAD LOG

checkpoint_timeout

max_wal_size

min_wal_size

checkpoint_completion_target

QUERY TUNING

effective_cache_size

ERROR REPORTING AND LOGGING

logging_collector

log_directory

log_min_messages

client_min_messages

log_timezone

CLIENT CONNECTION DEFAULTS

timezone

CUSTOMIZED OPTIONS

ascneo.participantCallActivityTTL

3. Reboot the Postgres service so that the changes in the configuration become active.
4. Create pgAgent jobs by executing the following commands:
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "TRUNCATE pgagent.pga_job CASCADE"
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY pgagent.pga_job FROM '#PG_UPGRADE_BACKUP#/pga_job.csv'"
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY pgagent.pga_jobstep FROM '#PG_UPGRADE_BACKUP#/pga_jobstep.csv'"
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "COPY pgagent.pga_schedule FROM '#PG_UPGRADE_BACKUP#/pga_schedule.csv'"
5. Create the user *asc_ro* by executing the following command:
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "CREATE ROLE asc_ro LOGIN ENCRYPTED PASSWORD 'md515fe8b86a3c6e5bbbedee052d8d44b325' NOSUPERUSER INHERIT NOCREATEDB NOCREATEROLE NOREPLICATION"

Restore of database

1. Create the database *asc_rs* by executing the following command:
 - "%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "CREATE DATABASE asc_rs WITH OWNER = postgres ENCODING = 'UTF8' TABLESPACE = pg_default CONNECTION LIMIT = -1"

2. Restore the database by executing the following command:
 - `"%ASC_PGPATH%"pg_restore -h 127.0.0.1 -p 5432 -U postgres -w -d "asc_rs" --verbose
"%ASC_ASCDATA%/DatabaseBackup/Upgrade_Backup_asc_rs.compressed" >>
"%ASC_LOG_PATH%/Postgres/Upgrade_Restore_asc_rs.log" 2>&1`
3. Start the Enterprise Core.
4. Start the service ASC ServiceMan.

Simultaneous update of neo, operating system, and database - overview

In single-server and multi-server systems, it is possible to update the deployed server and - in the course of this - update the neo software, the operating system, and optionally the database at the same time.

This allows continuing to operate the existing system until the new system is ready and then to switch to the new system with minimum downtime.

Example: A system with neo 4.0 with PostgreSQL 9.3.4 and Windows 2012 is supposed to be updated to neo 6.3 with PostgreSQL 9.5.8 and Windows 2016.

For this purpose, a recovery installation of the neo recording software is carried out on a new hardware server or on a new virtual machine. Upon having restored the data directory, the backup of the database and of the call pool of the source system on the new system, the ASC Updater is executed with the command line parameter "-isolate" in so-called isolation mode when using a multi-server system.

Isolation mode ensures that the ASC Updater blocks all outbound connections with the exception of MSSQL and PostgreSQL while Windows firewall is active ("ASC_BLOCK_ALL_OUTBOUND"). Only the following ports remain open:

- TCP 389, 636 (LDAP),
- TCP 1433 MS SQL (for the external database),
- TCP 3389 RDP (remote access),
- TCP 5432 PostgreSQL (for the external database) and
- UDP 123 NTP

Once the backup has been transferred successfully to the new hardware server/to the new virtual machine, the ASC Updater may be started with the command line parameter `--open` to unblock the connections and open the firewall.



For information about carrying out a recovery installation refer to the installation manual for system providers and tenants *Backup and disaster recovery*.

5.1

Simultaneous update - process steps

1. Go to the server(s) with the Enterprise Core to stop the neo system there.

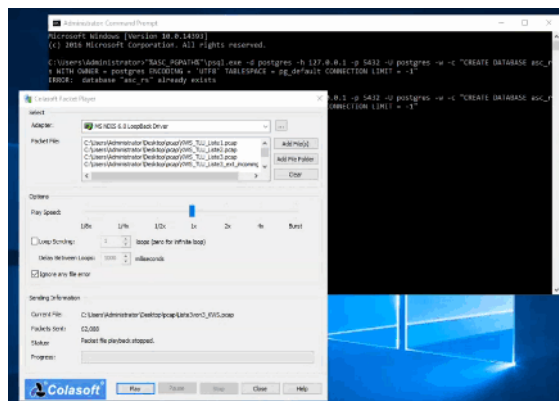


Fig. 25: Open system

2. Go to the folder `C:\Program Files (x86)\ASC\ASC Product Suite\scripts\` and stop the system with the command `stop.all`.

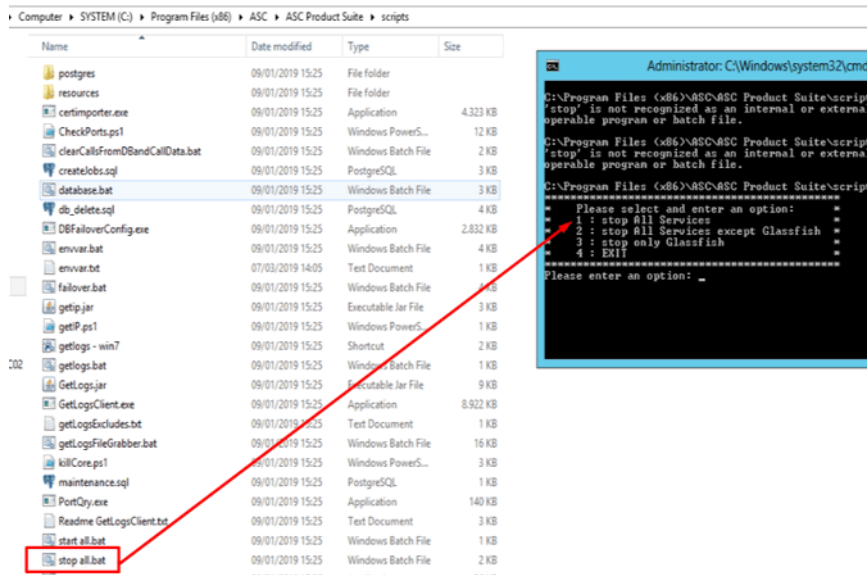


Fig. 26: Stop neo

⇒ neo is shut down.

3. Go to the folder `C:\Program Files (x86)\ASC\ASC Product Suite\scripts` and open the CMD.
4. Enter the command `database.bat backup` and press the [Enter] key.

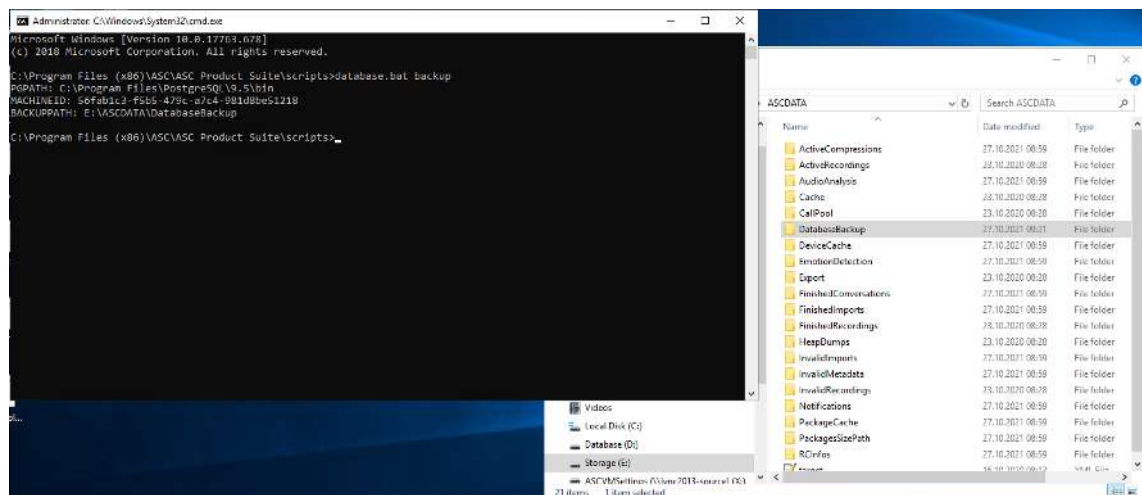


Fig. 27: Database backup

5.
 - ⇒ The database backup is created.



For a minimum downtime, you could start the old neo system at this point again if you would like to carry out a trial run of the new installation.

6. Determine the Machine ID.
7. To do so, open the CMD via the Windows search.

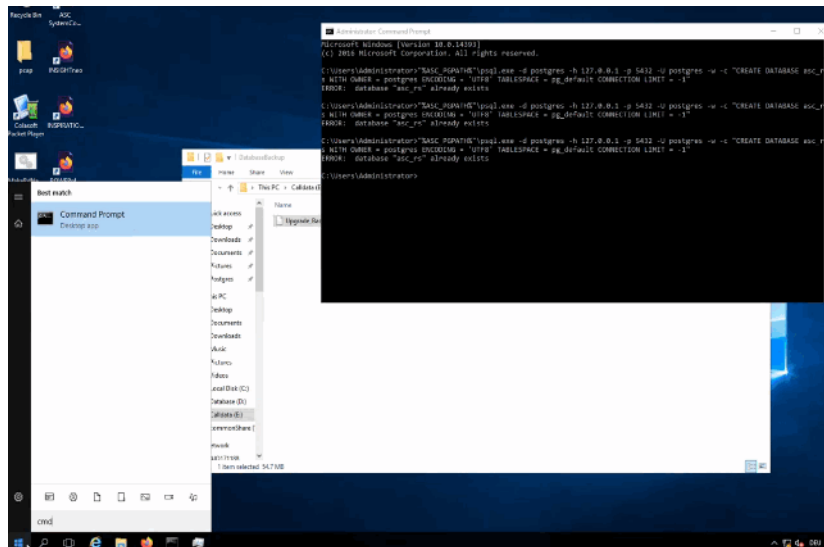


Fig. 28: Open CMD

8. Enter the command `C:\Users\Administrators\regedit` to open the registry.

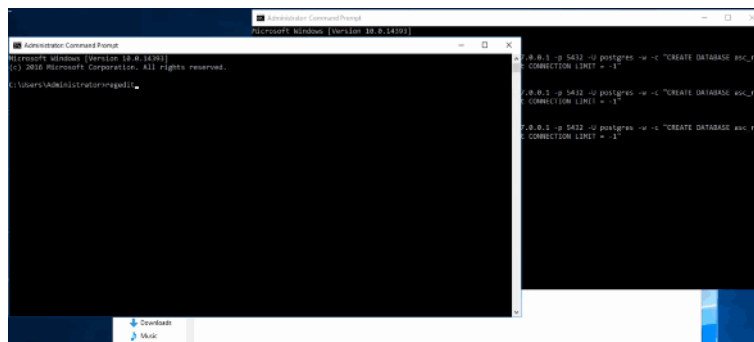


Fig. 29: Open registry

9. In the Registry Editor, open the folder *Common* in *HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ASC\Common* and make a note of the Machine ID.

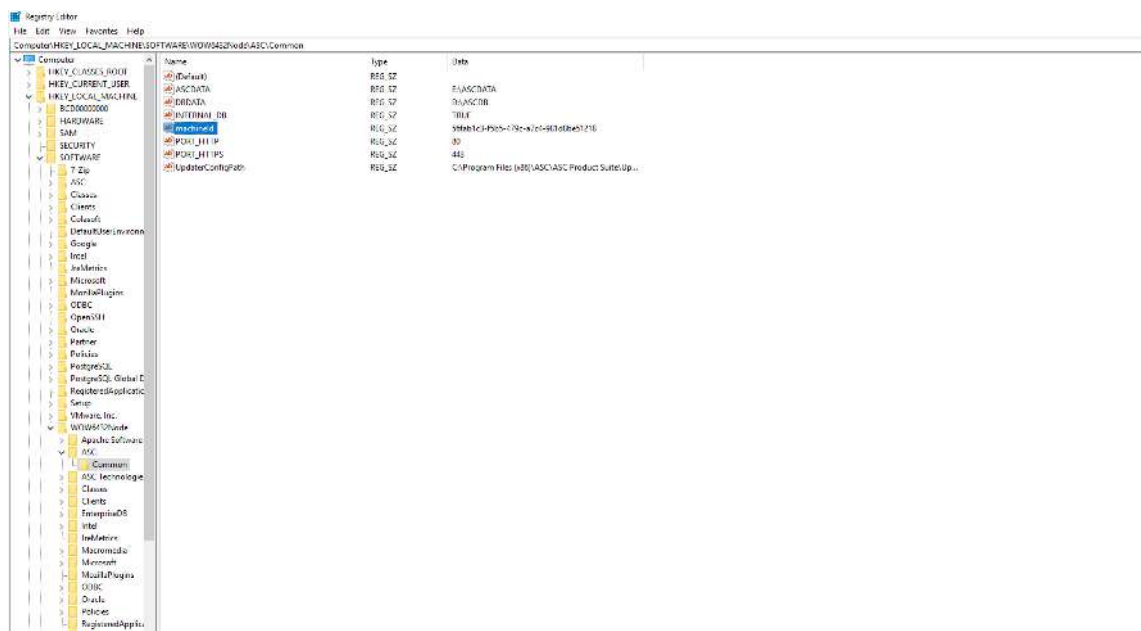


Fig. 30: Read out Machine ID

10. Copy the calldata partition *ASCDATA* to the new server.

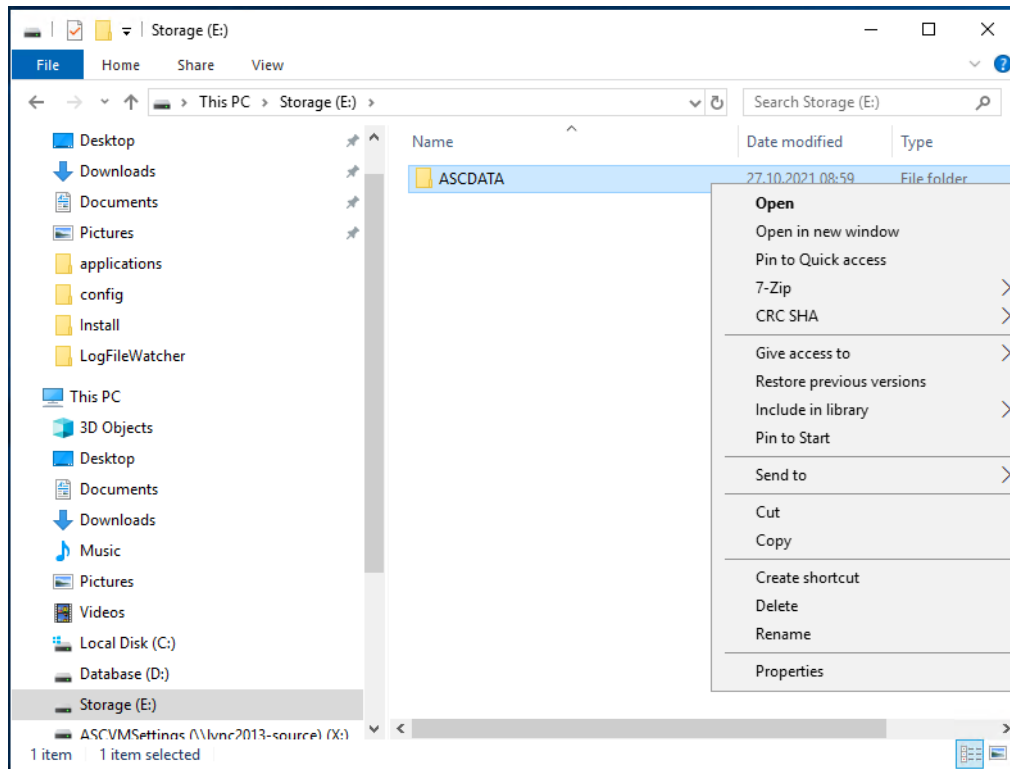


Fig. 31: Copy ASCDATA

11. Copy the data directory in *C:\Program Files (x86)\ASC\ASC Product Suite\data* and back it up or copy it directly to the new server.

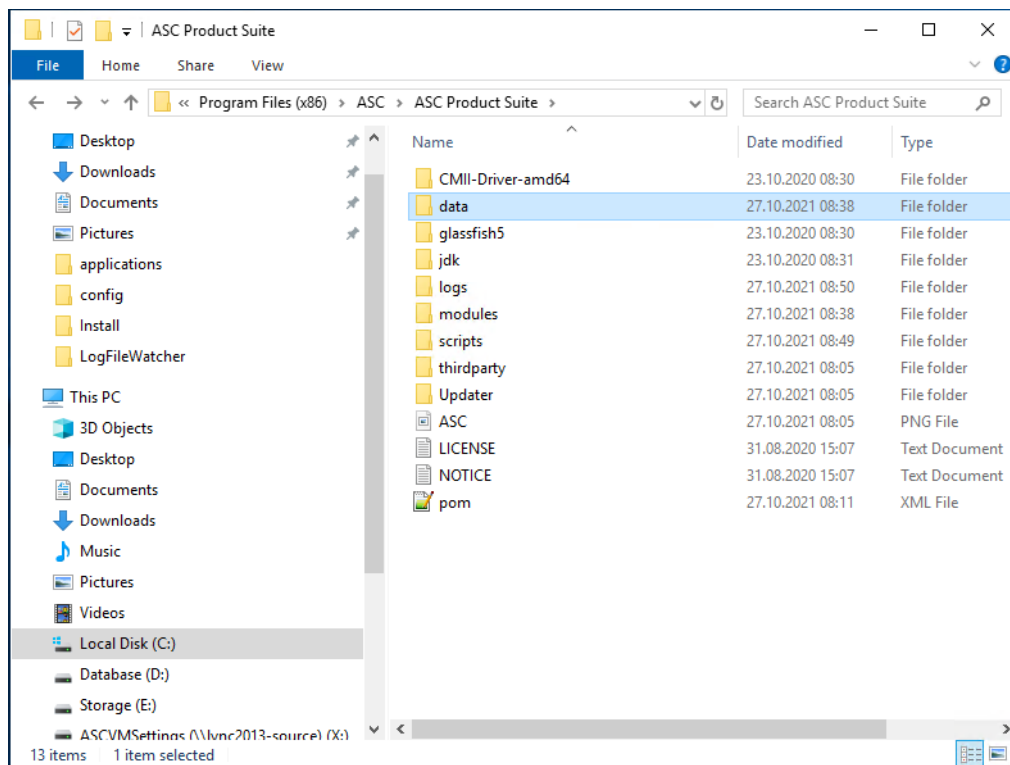


Fig. 32: Copy data directory

12. Open the neo setup on the new system.

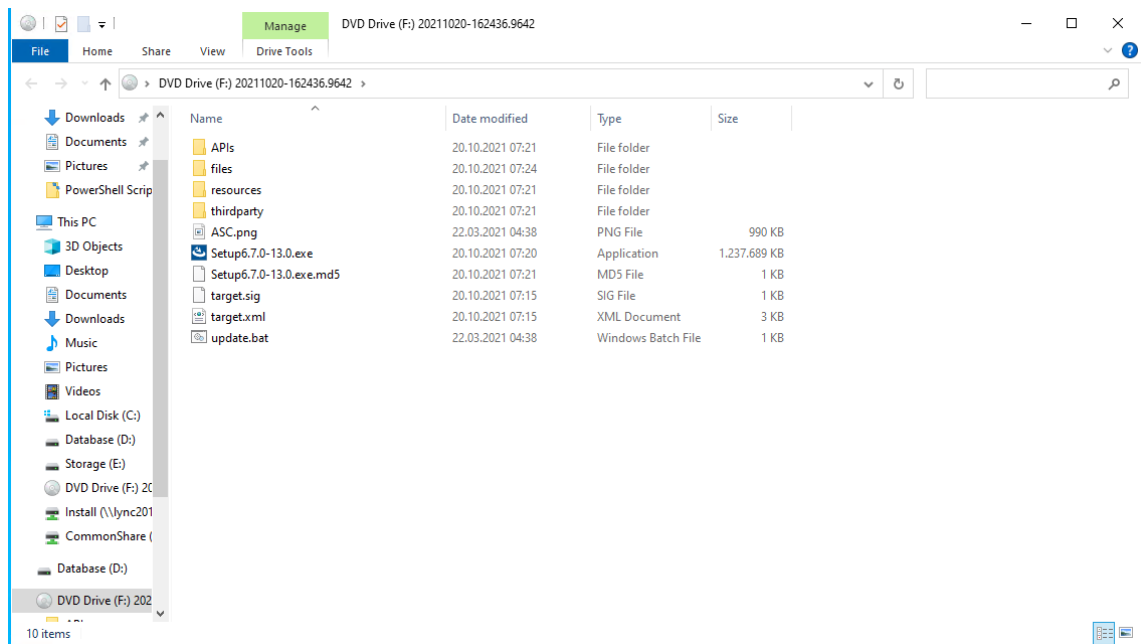


Fig. 33: Open neo setup

13. Enter CMD in the setup folder to open the *CMD* directly on the respective drive.

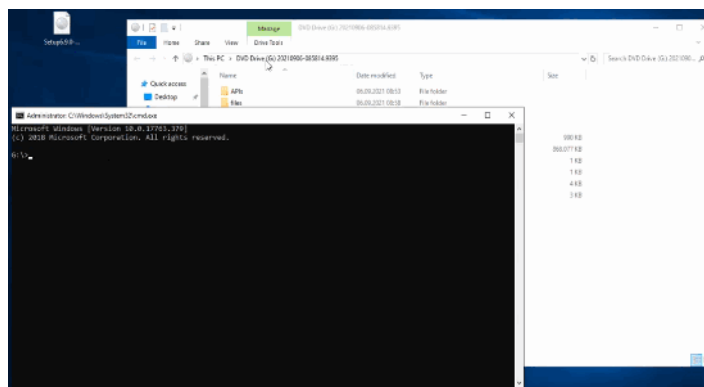


Fig. 34: Open CMD

14. Call up the setup with your respective version with the command *setupx.x.x-x.x.x.exe /asc recovery_mode*.

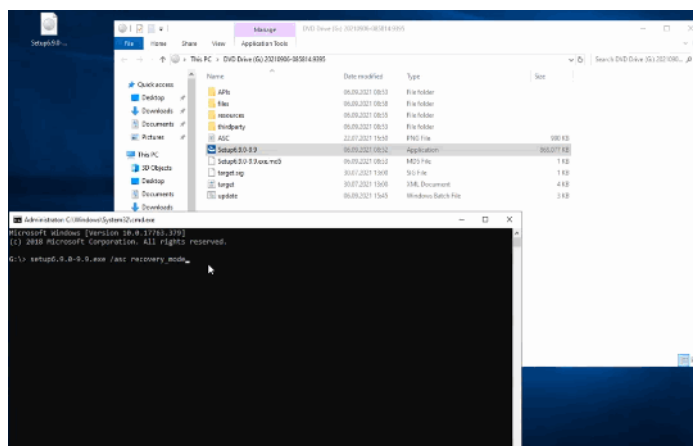


Fig. 35: Recovery mode

15. Follow the installation routine in the following windows.

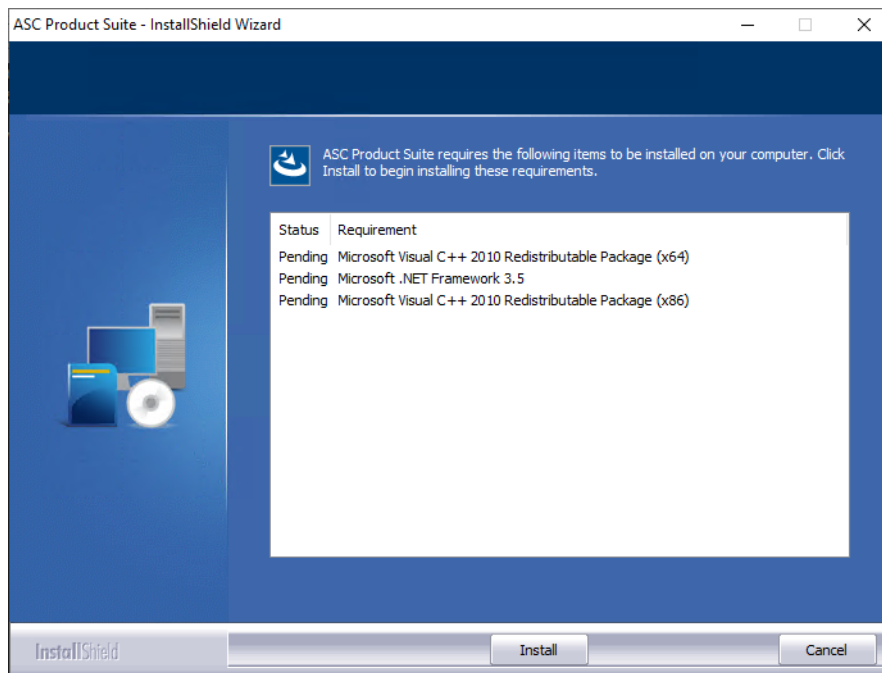


Fig. 36: Installation wizard

- During the installation routine, you will be prompted to enter the Machine ID. Enter the Machine ID you have determined before and confirm the entry by clicking on the button *NEXT*.

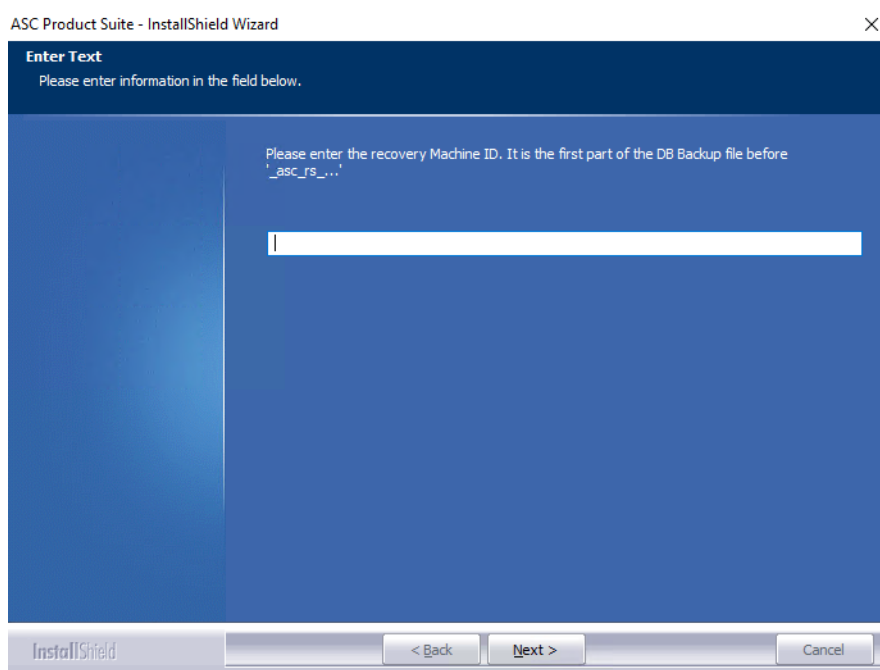


Fig. 37: Enter Machine ID

- Confirm the security prompt.

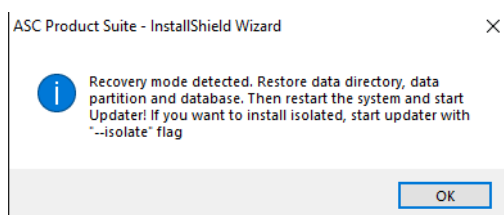


Fig. 38: Security prompt

- Do **not** restart the system yet but confirm the entries by clicking on the button *Finish*.

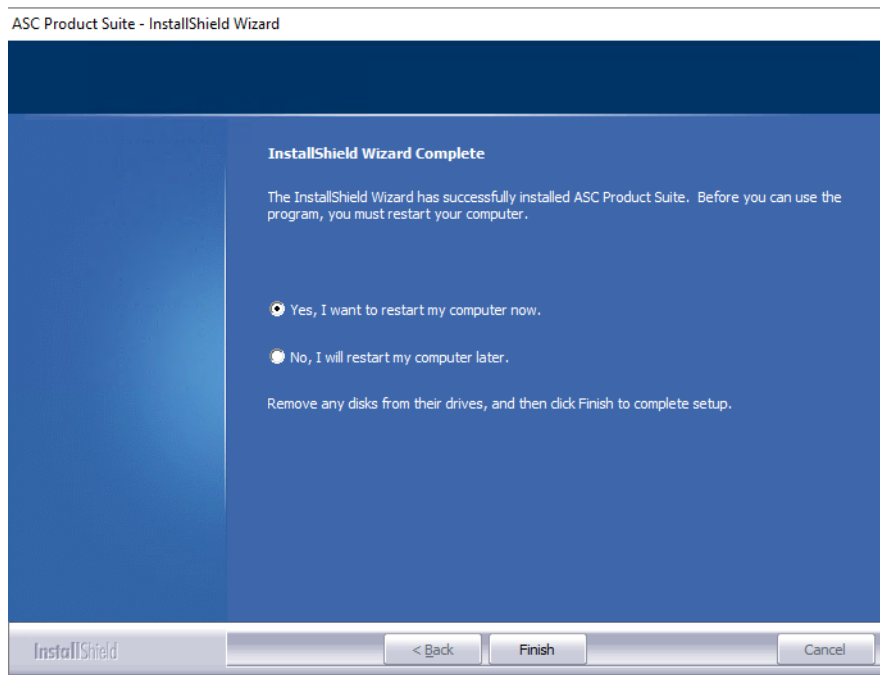


Fig. 39: Restart later

19. If you have not copied the data directory directly to the new server in a previous step, restore the data directory you have backed up before on the new system now by replacing the folder `\Program Files (x86)\ASC\ASC Product Suite\data` on the new system.

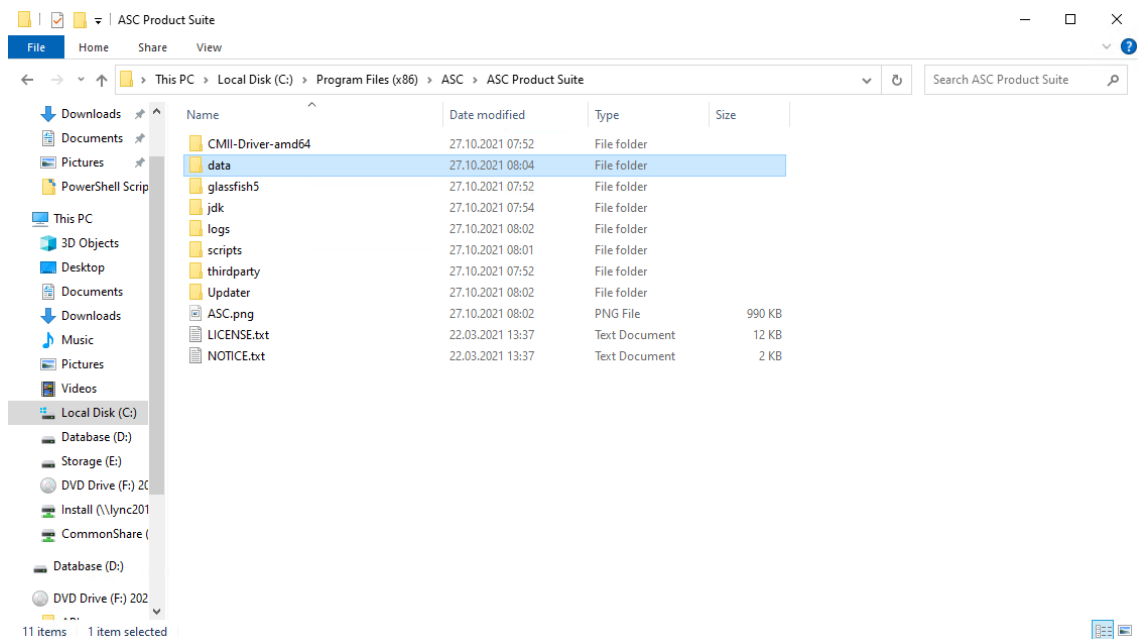
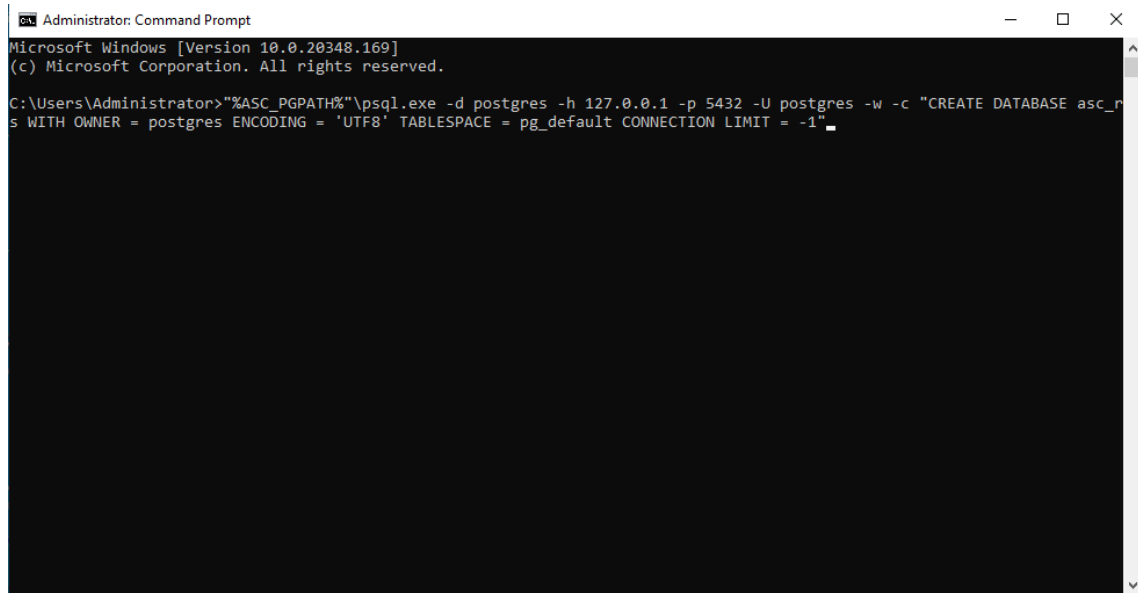


Fig. 40: Restore calldata directory

20. Open the CMD and carry out the command `"%ASC_PGPATH%"psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "CREATE DATABASE asc_rs WITH OWNER = postgres ENCODING = 'UTF8' TABLESPACE = pg_default CONNECTION LIMIT = -1"` to create the database `asc_rs`.

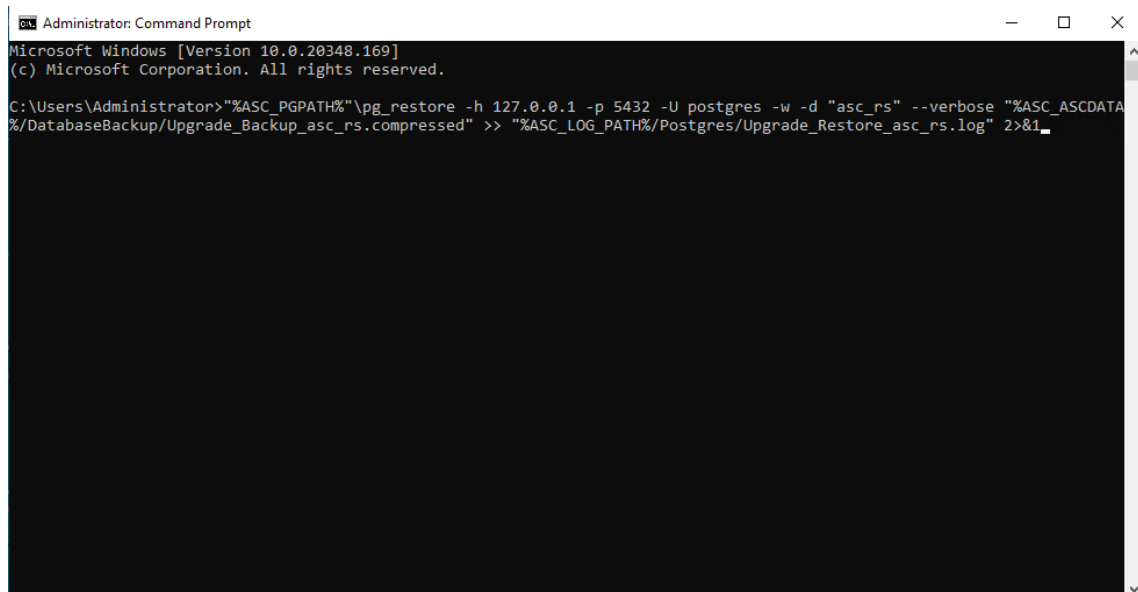


```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>"%ASC_PGPATH%\psql.exe -d postgres -h 127.0.0.1 -p 5432 -U postgres -w -c "CREATE DATABASE asc_rs WITH OWNER = postgres ENCODING = 'UTF8' TABLESPACE = pg_default CONNECTION LIMIT = -1"
```

Fig. 41: Create database

21. Subsequently carry out the command `"%ASC_PGPATH%\pg_restore -h 127.0.0.1 -p 5432 -U postgres -w -d "asc_rs" --verbose "%ASC_ASCDATA%/DatabaseBackup/Upgrade_Backup_asc_rs.compressed" >> "%ASC_LOG_PATH%/Postgres/Upgrade_Restore_asc_rs.log" 2>&1` to restore the database.



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>"%ASC_PGPATH%\pg_restore -h 127.0.0.1 -p 5432 -U postgres -w -d "asc_rs" --verbose "%ASC_ASCDATA%/DatabaseBackup/Upgrade_Backup_asc_rs.compressed" >> "%ASC_LOG_PATH%/Postgres/Upgrade_Restore_asc_rs.log" 2>&1
```

Fig. 42: Database restore

22. Restart the system
23. Open the folder `C:\Program Files (x86)\ASC\ASC Product Suite\Updater\` and call up the CMD.

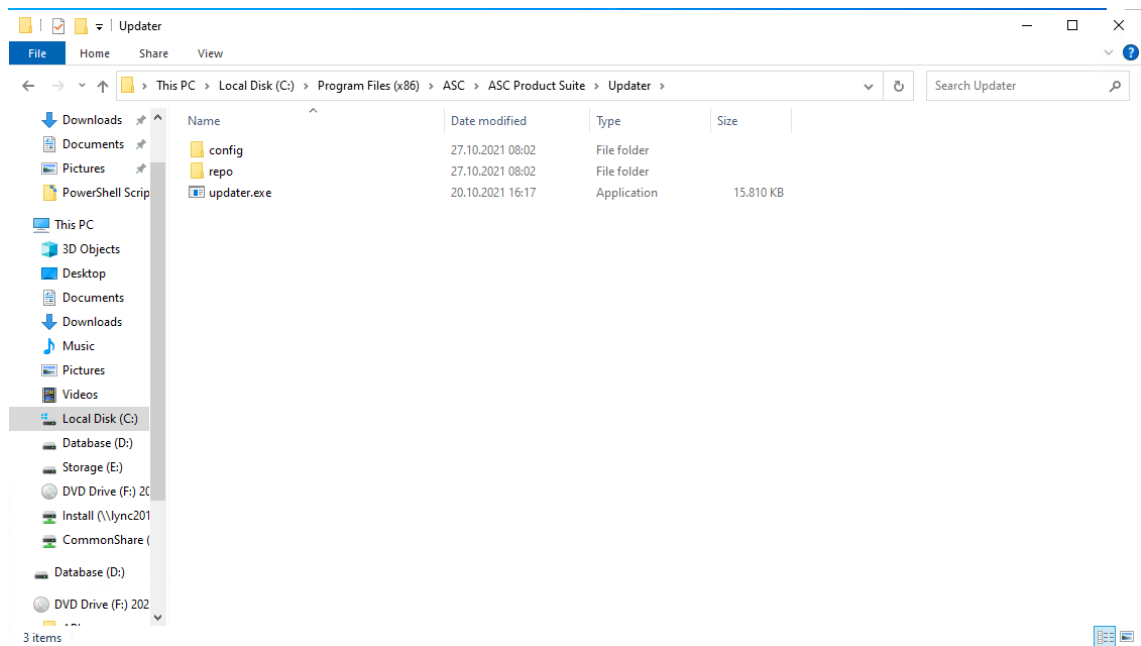


Fig. 43: Updater CDM

24. Enter the command *updater.exe* with the command line parameter *—isolate* and press *Enter*.
⇒ The Updater is started.
25. Select the update source and confirm the entry by clicking on the button *Select Update Source*.

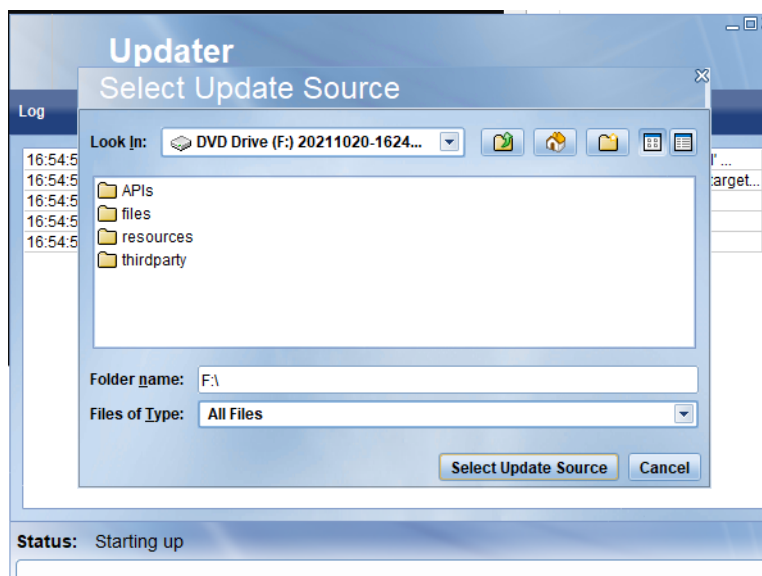


Fig. 44: Select update source

- ⇒ Once the update has been completed successfully, a success notification appears.

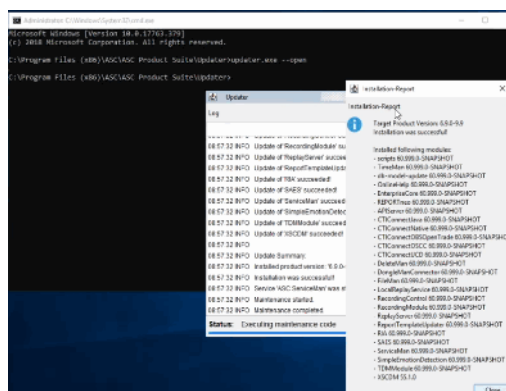


Fig. 45: Success notification

26. To restart, click on the button **Close**.
 27. To avoid interferences, first verify the operability of the new system and then shut down the old system before executing the *updater.exe* again with the command line parameter — *open* to open the ports again.
- To be able to use an encrypted connection, you must import the respective certificated to the Truststore again. To do so, proceed like in a new installation. Use ASC's Certificate Import Tool.
28. Open the Windows Explorer.
 29. Change to folder *C:\Program Files (x86)\ASC\ASC Product Suite\scripts*.
 30. Execute the file *certimporter.exe* as administrator and generate the certificate on the recording server again.
 31. If you would like to use external certificates, import the required certificates with Certificate Import Tool.

6 Update of 3rd-party components

In order not to interfere with the functionality of the recording system, make sure to observe the following specifications by all means when updating 3rd-party components:

Observe the following rules by all means when updating 3rd-party components:

- Do not update **operating systems** unless during the installation of hotfixes. New service packs and versions must have been released for installation by ASC.
- **JAVA** may be updated as long as the released basic version (e. g. JRE 1.8.0_x) remains.
- **MSSQL** may be updated as long as the released basic version remains.
- **Other 3rd-party components** (e. g. PostgreSQL, Glassfish) must **not** be updated without prior consent of ASC. Safety-relevant updates of these products are provided by ASC.



Recommendation:

Deactivate the automatic update functions of 3rd-party components and install the required updates manually.



Before a Windows update, all ASC programs must be stopped. Once the update process has been finished, the programs can be started again, see [chapter "Stop and restart ASC programs", p. 10](#).



For further information about released versions supported by the recording system refer to the installation manual *Installation requirements*.

6.1 Updating the EML speech analysis software

6.1.1 Update of EML speech analysis software to version 1.3.1.4

To update the EML Transcription Server to version 1.3.1.4 proceed as follows:

1. Secure the folder `C:\ProgramData\EML\TranscriptionServer\streaming_config` in case streaming has been configured and is used.
2. Note down the current EML login data (user name and password) from the file `%ProgramData%\EML\TranscriptionServer*transcription-server.raw.txt*`.
3. Uninstall the old version of the EML Transcription Server.
4. Delete the following directories:
`C:\Program Files\EML\TranscriptionServer\wildfly`
`C:\ProgramData\EML\TranscriptionServer\lucene`
5. Install the new version of the EML Transcription Server.
6. Copy the streaming configuration file that you have secured before back to `C:\ProgramData\EML\TranscriptionServer\streaming_config` and replace the file existing there that way.
7. In the file `service_config.bat` in `C:\Program Files\EML\TranscriptionServer\wildfly\bin\service` adjust the user name and the password according to your user-specific requirements, e. g.:
 - `set "EMLDBUSER=pgeml"`
 - `set "EMLDBPW=pgeml"`
 - `set "EMLLOGLVL=INFO"`
8. Install the service by means of `service_install.bat` under `C:\Program Files\EML\TranscriptionServer\wildfly\bin\service`.
9. Check that the web monitor is running and that it can be reached with the user name and the corresponding password.

6.1.2 Update of EML speech analysis software to version 1.4.1 or higher

To update the EML Transcription Server to version 1.4.1 proceed as follows:

1. Secure the folder *C:\ProgramData\EML\TranscriptionServer\streaming_config* in case streaming has been configured and is used.
2. Before the update, stop the Windows Service *Wildfly*.
3. Install the new version of the EML Transcription Server.
4. Copy the streaming configuration file that you have secured before back to *C:\ProgramData\EML\TranscriptionServer\streaming_config* and replace the file existing there that way.
5. Install the service by means of *service_install.bat* under *C:\Program Files\EML\TranscriptionServer\wildfly\bin\service*.
6. Check that the web monitor is running and that it can be reached with the user name and the corresponding password.



From version 1.4.1 of EML Transcription Servers, the configuration of the database connection is located in directory *C:\Program Files\EML\TranscriptionServer\wildfly\bin\stand-alone.conf.bat*.



For version 1.5 or higher, securing the streaming configuration is no longer required.

6.1.3 Exchanging Transcription Decoder in neo 6.6 or higher



The file *decoder.properties* in the path *C:\Program Files\EML\emlDecoder* is secured automatically by the setup.msi file and restored in its original path. For additional backup purposes, the file may be secured manually before, too.

6.2 Update from Oracle JDK to OpenJDK

Systems using Oracle Java can be migrated from Oracle JDK to OpenJDK with an update to *neo* 6.6.0-14.0 or higher by means of an Oracle script.



For new installations of *neo* 6.6.0-4.0 or higher, OpenJDK is installed by default.

Proceed as follows:

- ✓ Successful update to *neo* 6.6.0-14.0 or higher
- 1. Make sure that the *neo* Iso file of the version used for the update has been mounted.
- 2. Go to the folder *C:\Program Files (x86)\ASC\ASC Product Suite\scripts*.
- 3. Right-click on the file *updateOpenJDK.ps1* and open it with *Run with PowerShell*.
- 4. Confirm the prompt regarding the change of the execution policy with *y*.
 - ⇒ All services are stopped and Java is updated.
- 5. Initiate a reboot by confirming the configuration in the PowerShell script with *y*.

Checklists for problems in *neo* projects which can be ascribed to insufficient/unreliable performance of the Windows server

1. Have the servers/VMs been dimensioned according to the specifications in chapter *Sizing guide* in the installation manual *Installation requirements*?
2. Has the Microsoft Windows operating system been configured according to the specifications in the installation manual *Configuration Windows Server 2012 R2*, *Configuration Windows Server 2016* or *Configuration Windows Server 2019*? Especially according to chapter *Configure energy scheme* and *Deactivate file indexing*? Under no circumstances must file access auditing for call data, database, and *neo* log file directories have been activated in Microsoft Windows. See also <https://docs.microsoft.com/de-de/windows-server/identity/solution-guides/scenario--file-access-auditing>.
3. If a virus scanner is used: Has the virus scanner been configured according to the specifications in chapter *Virus protection* in the installation manual *Installation requirements*?

The customer confirms that the framework conditions mentioned above are observed. Should ASC note during troubleshooting that these framework conditions have not been observed, we reserve the right to charge the resulting expenses for troubleshooting.

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Glossary

DB

Database

EC

Enterprise Core

PBX

Private Branch Exchange
