

# **Universal Archiving Module**

## **Installation Guide**

## Sisukord

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# 1. General requirements

The UAM is a desktop solution that must be installed on each computer separately.

Before that, MS SQL Express Server (ver. 2005 or higher) together with SQL Server Management Studio, NET Framework (ver. 4 or higher) and Java (ver. 1.5 or higher) must be installed.

## 2. Installing Microsoft SQL Express Server

Below is a short description of the installation process for MS SQL 2016 Express. This is a standard installation, and you can find detailed information about it at the vendor's website,

<http://www.microsoft.com>. For example, for the 64-bit version of SQL Server 2016 Express visit [https://download.microsoft.com/download/9/0/7/907AD35F-9F9C-43A5-9789-52470555DB90/ENU/SQLEXPRADV\\_x64\\_ENU.exe](https://download.microsoft.com/download/9/0/7/907AD35F-9F9C-43A5-9789-52470555DB90/ENU/SQLEXPRADV_x64_ENU.exe) (accessed at 22.03.2018).

First, download the installation package for Microsoft SQL Server 2016 Express Edition from the vendor's website.

Then start the installation and select "New SQL Server stand-alone installation or add features to an existing installation" (Figure 1)

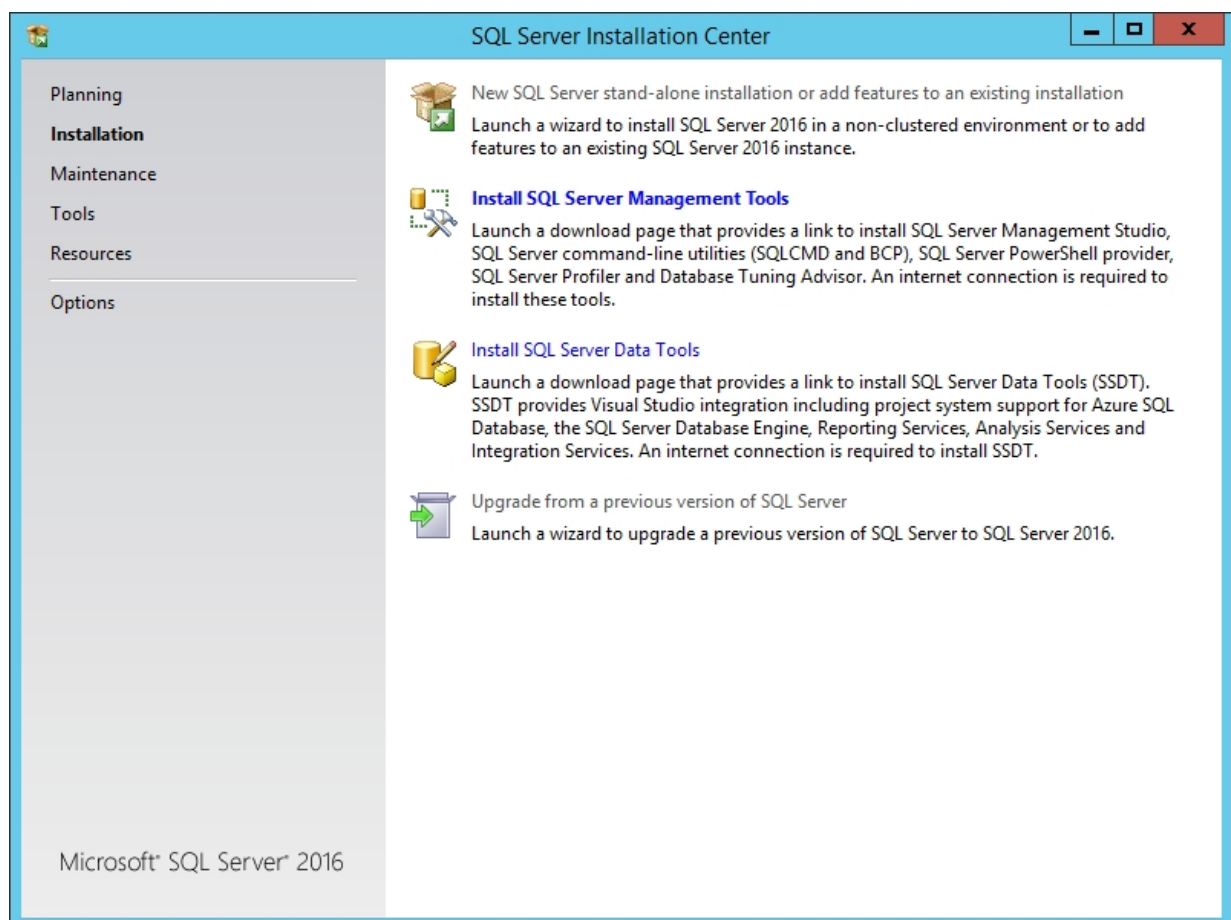


Figure 1.

You will see the text of the license agreement (Figure 2). Read the text, check the box “I accept the licensing terms” and click Next.

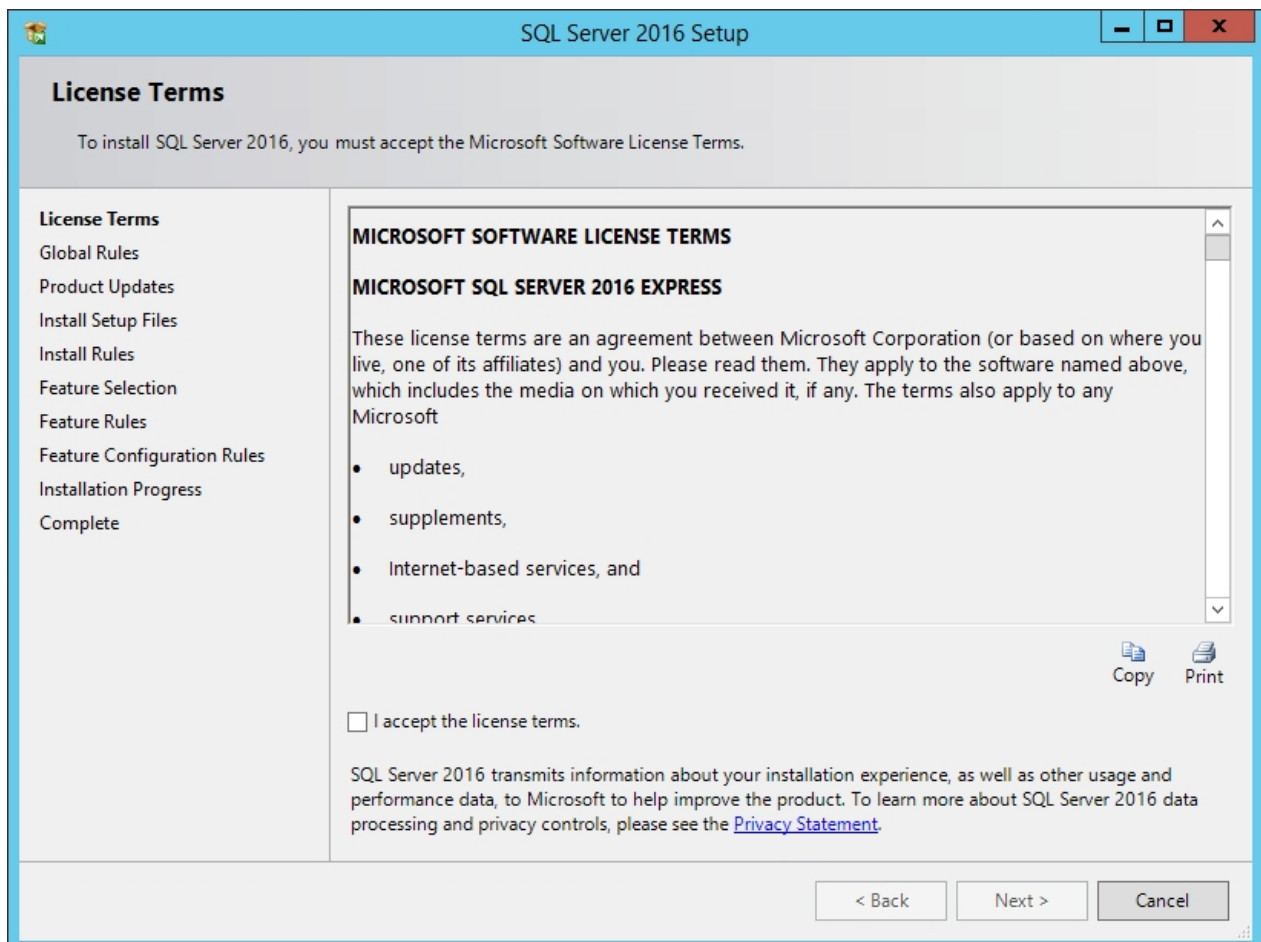


Figure 2.

The System Configuration Check will start. This will confirm that the computer matches the software's requirements (Figure 3).

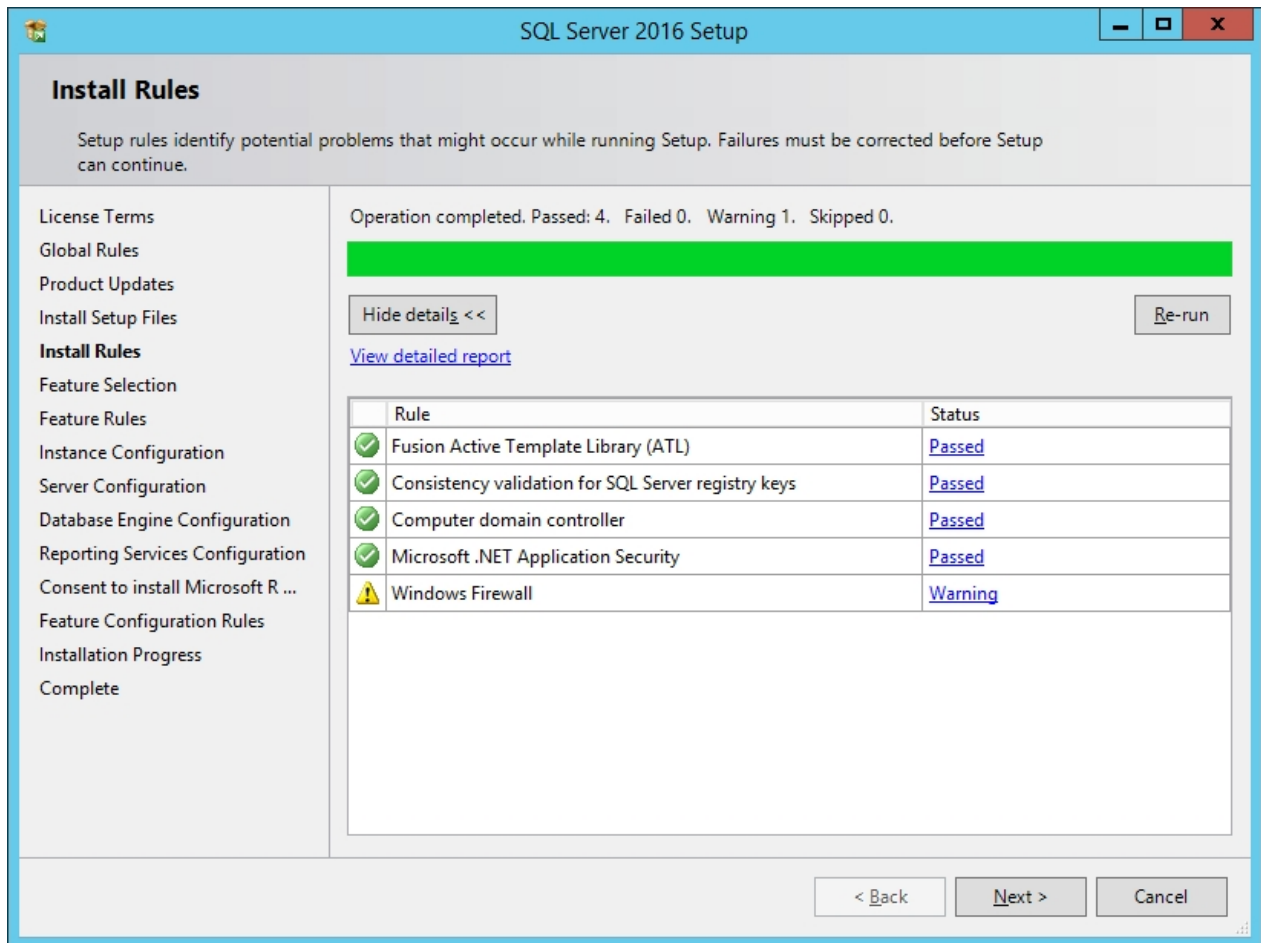


Figure 3.

If no errors are found, click Next.

On the next screen, remove "R Services (In-Database)" and click Next (Figure 4).

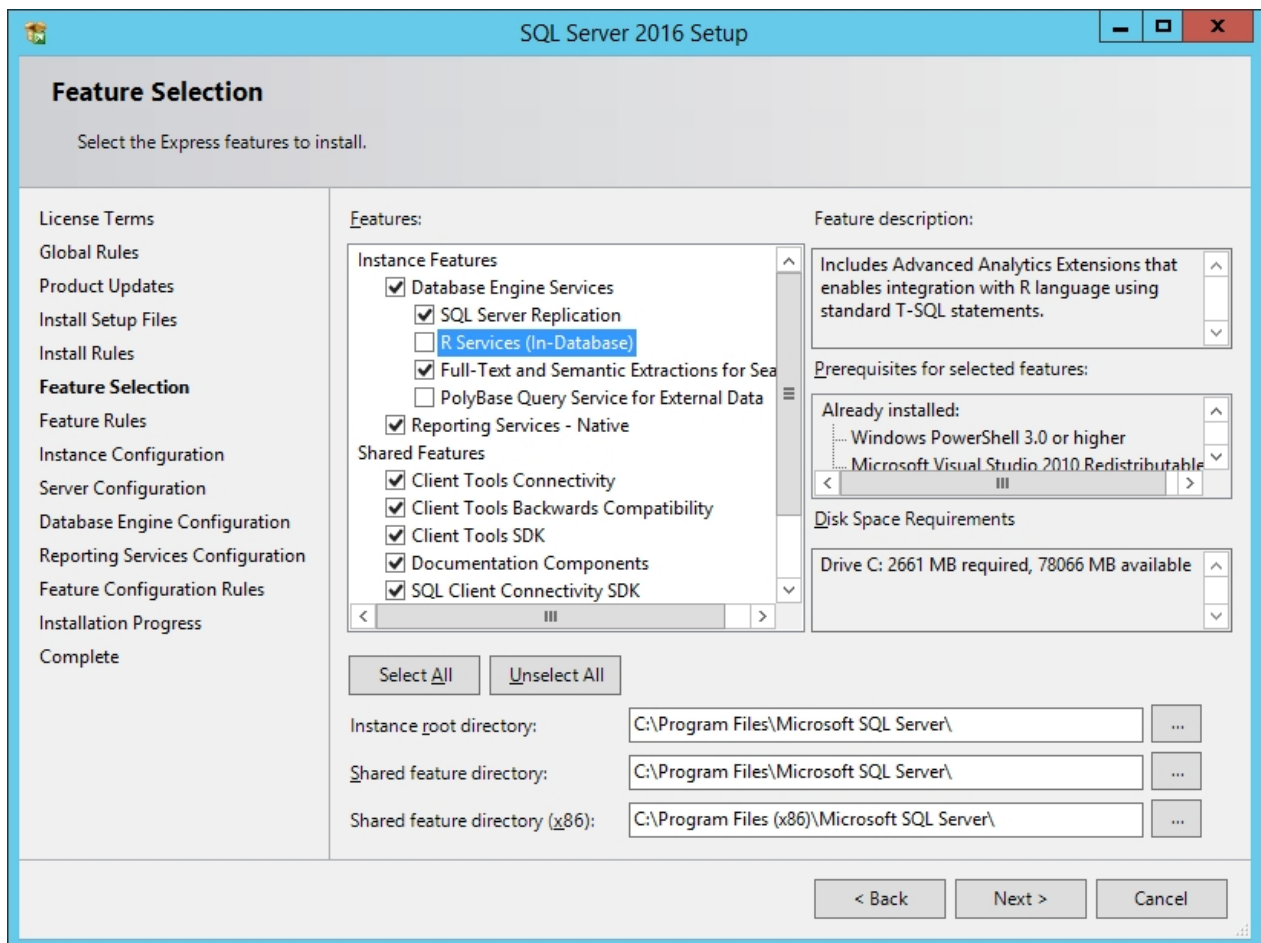


Figure 4.

Next you will see a prompt for the name of the server (Instance Name). If you select Named Instance, you can change the default name (this may be necessary if you will be installing multiple SQL servers). If you are happy with the default name, simply click Next (Figure 5).

**SQL Server 2016 Setup**

**Instance Configuration**

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

License Terms  
Global Rules  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
**Instance Configuration**  
Server Configuration  
Database Engine Configuration  
Reporting Services Configuration  
Consent to install Microsoft R ...  
Feature Configuration Rules  
Installation Progress  
Complete

☐ Default instance

☒ Named instance:

Instance ID:

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL13.SQLEXPRESS

Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS13.SQLEXPRESS

Installed instances:

| Instance Name | Instance ID | Features | Edition | Version |
|---------------|-------------|----------|---------|---------|
|---------------|-------------|----------|---------|---------|

< Back   Next >   Cancel

Figure 5.

Click Next (Figure 6).

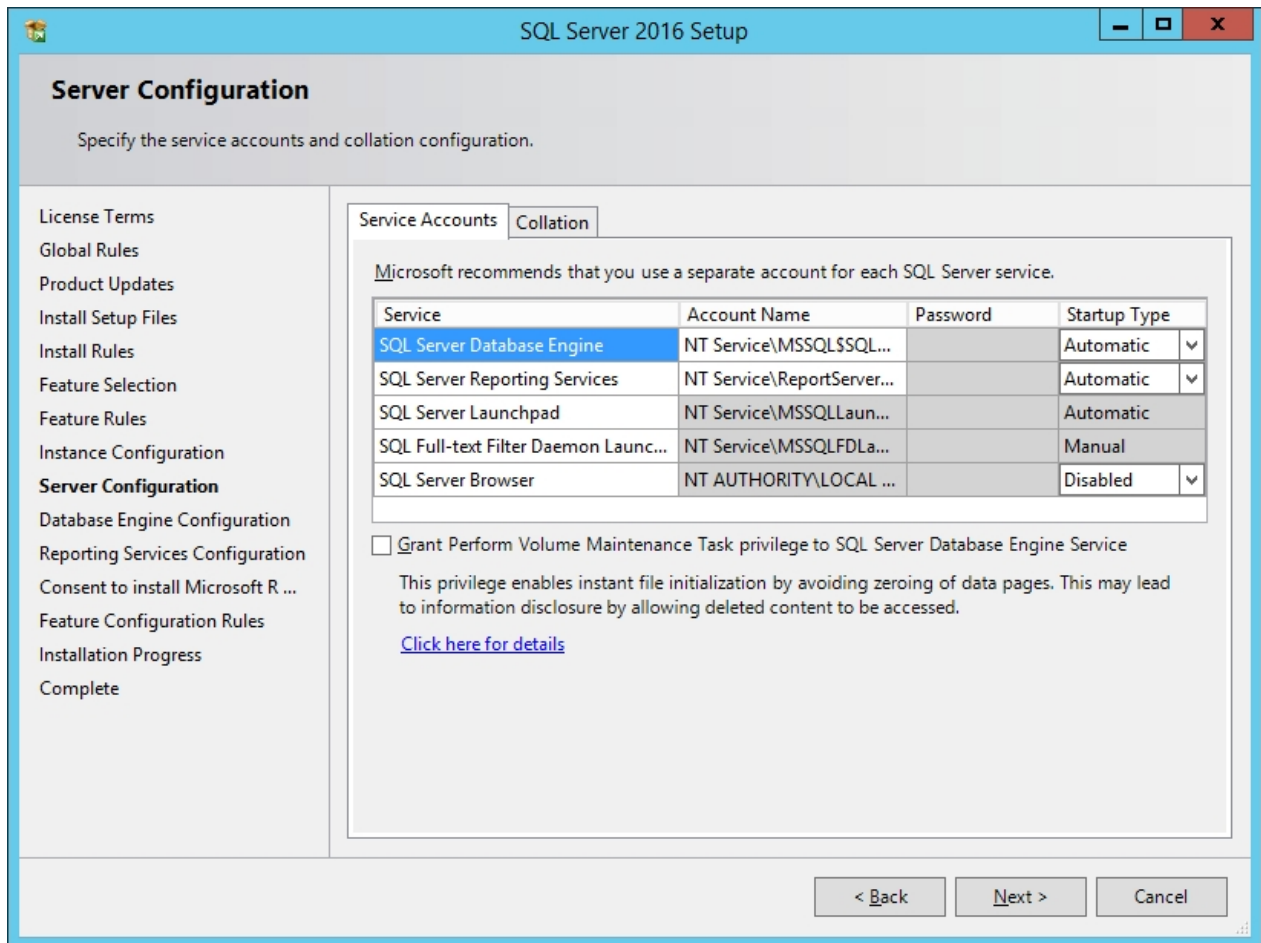


Figure 6.

Select "Windows authentication mode" and click Next (Figure 7).

The screenshot shows the 'SQL Server 2016 Setup' window, specifically the 'Database Engine Configuration' step. The window has a blue title bar and a sidebar on the left with a list of installation steps: License Terms, Global Rules, Product Updates, Install Setup Files, Install Rules, Feature Selection, Feature Rules, Instance Configuration, Server Configuration, Database Engine Configuration (highlighted), Reporting Services Configuration, Consent to install Microsoft R..., Feature Configuration Rules, Installation Progress, and Complete. The main area is titled 'Database Engine Configuration' and contains the instruction: 'Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.' Below this is a tabbed interface with five tabs: 'Server Configuration' (selected), 'Data Directories', 'TempDB', 'User Instances', and 'FILESTREAM'. The 'Server Configuration' tab contains the following elements: a label 'Specify the authentication mode and administrators for the Database Engine.', an 'Authentication Mode' section with two radio buttons ('Windows authentication mode' is selected), a password field for the 'SQL Server system administrator (sa) account' with 'Enter password:' and 'Confirm password:' labels, a 'Specify SQL Server administrators' section with a list box containing 'LINNUPESA\edison (edison)' and buttons 'Add Current User', 'Add...', and 'Remove', and a note box stating 'SQL Server administrators have unrestricted access to the Database Engine.' At the bottom right are three buttons: '< Back', 'Next >', and 'Cancel'.

SQL Server 2016 Setup

### Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.

License Terms  
Global Rules  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
Server Configuration  
**Database Engine Configuration**  
Reporting Services Configuration  
Consent to install Microsoft R ...  
Feature Configuration Rules  
Installation Progress  
Complete

Server Configuration | Data Directories | TempDB | User Instances | FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode

☒ Windows authentication mode  
☐ Mixed Mode (SQL Server authentication and Windows authentication)

Specify the password for the SQL Server system administrator (sa) account.

Enter password:   
Confirm password:

Specify SQL Server administrators

LINNUPESA\edison (edison)

Add Current User | Add... | Remove

SQL Server administrators have unrestricted access to the Database Engine.

< Back | Next > | Cancel

Figure 7.

Click Next (Figure 8).

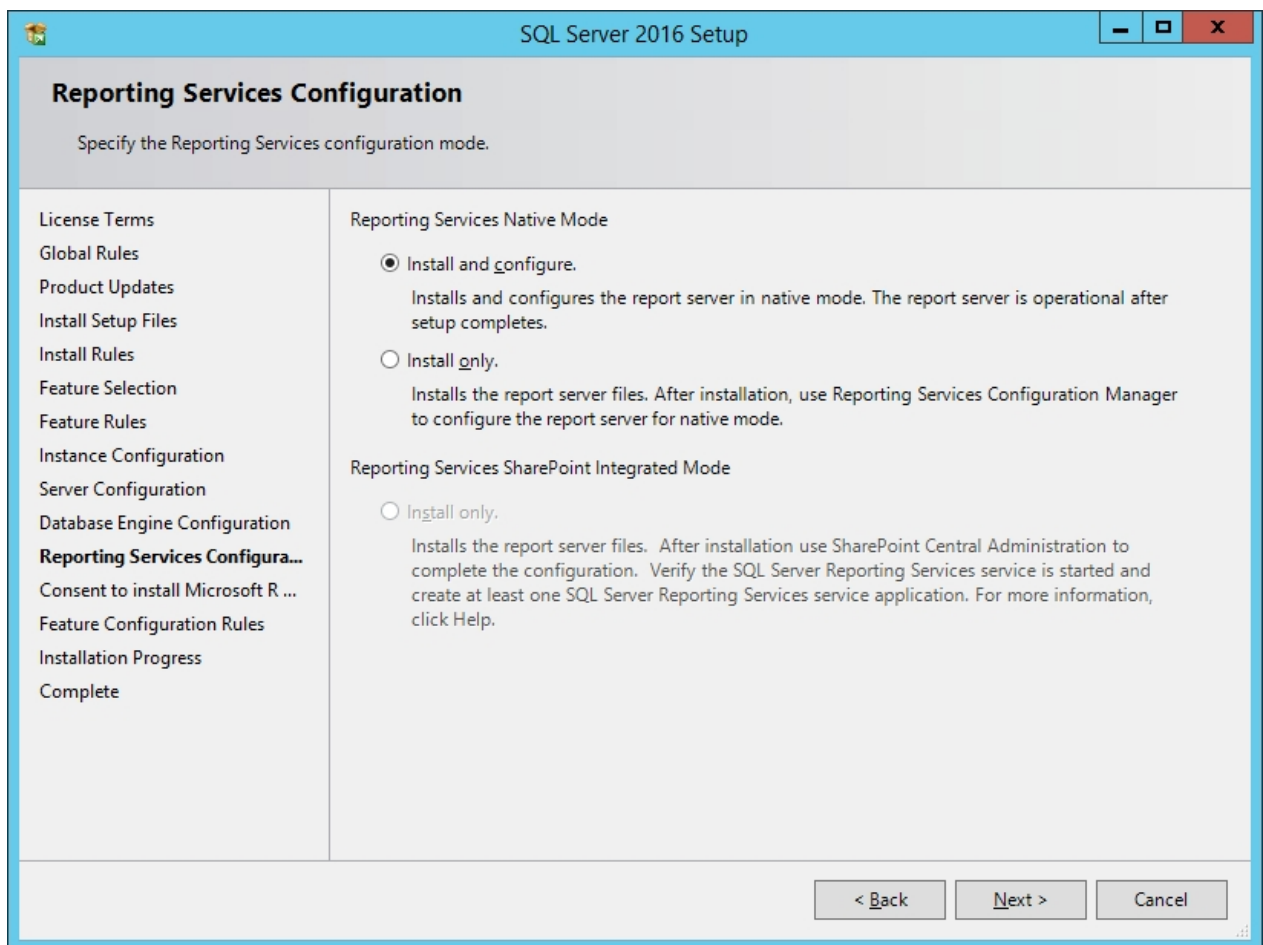


Figure 8.

Click Next (Figure 9).

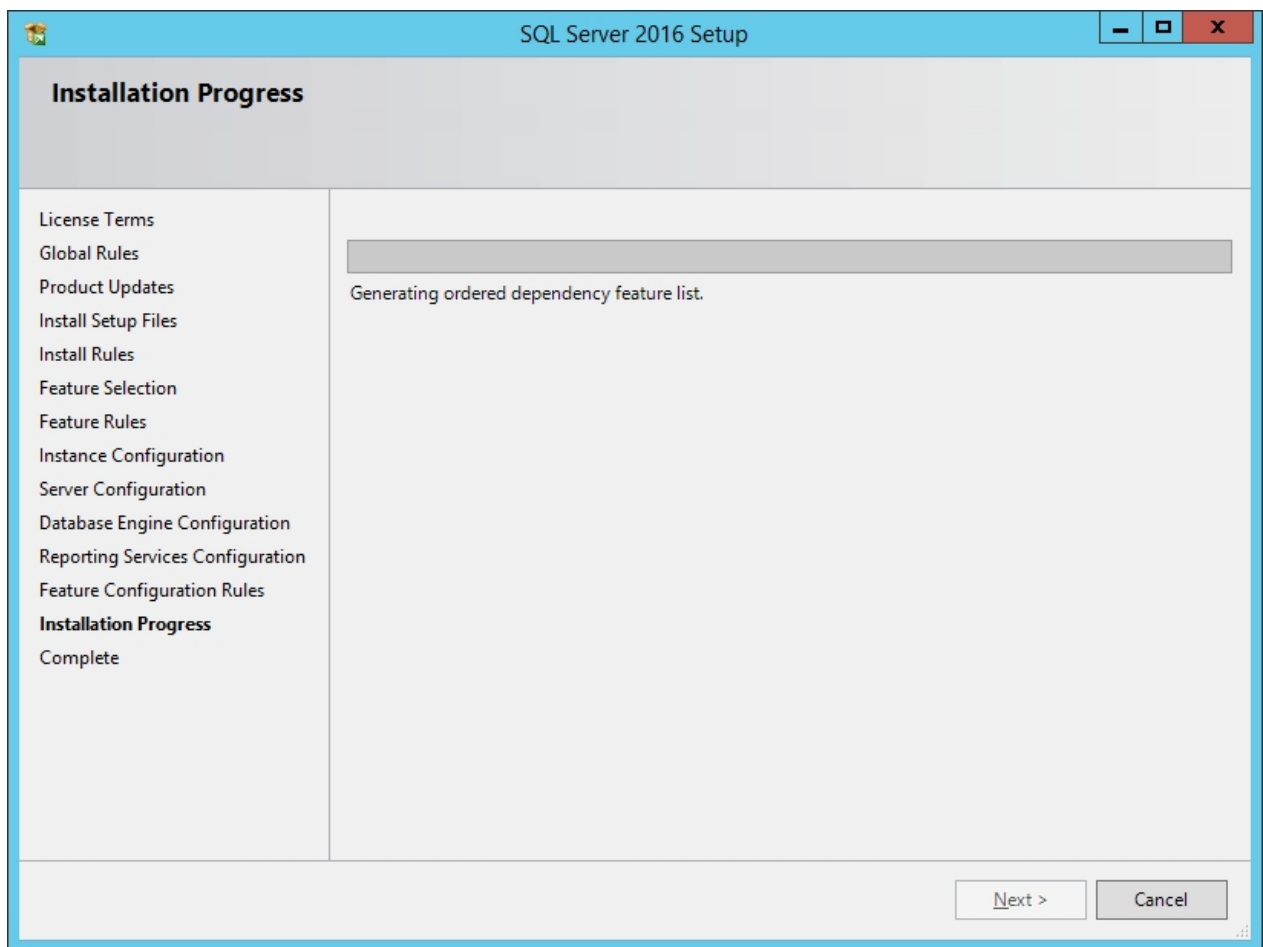


Figure 9.

After installation, the “SQL Server 2016 Setup” window is displayed. Click Close (Figure 10).

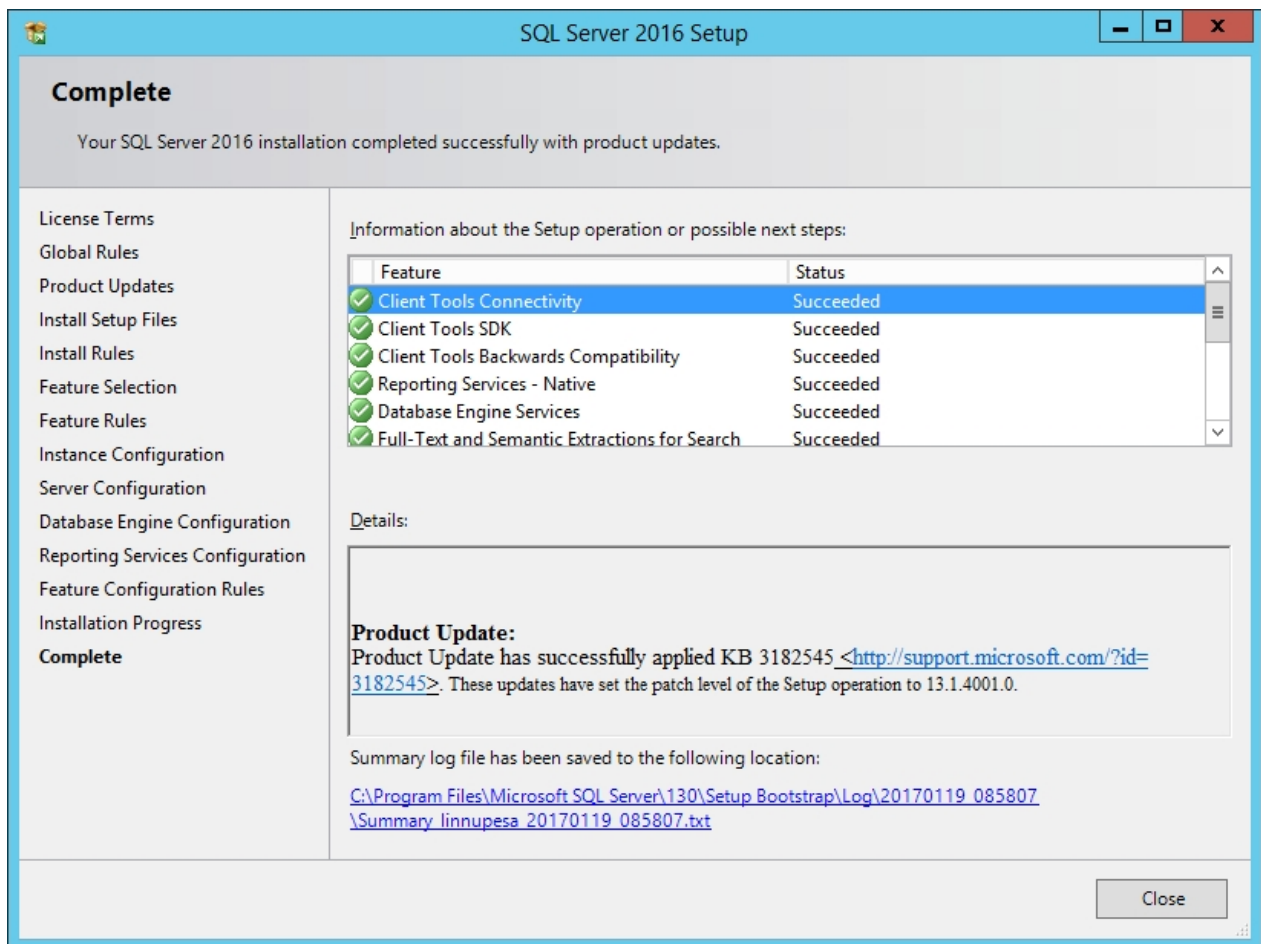


Figure 10.

SQL Express Server has installed.

Next, the SQL Server Management Studio has to be installed.

### 3. Installing Microsoft SQL Server Management Studio

Download the SQL Server Management Studio from the website (Figure 11).

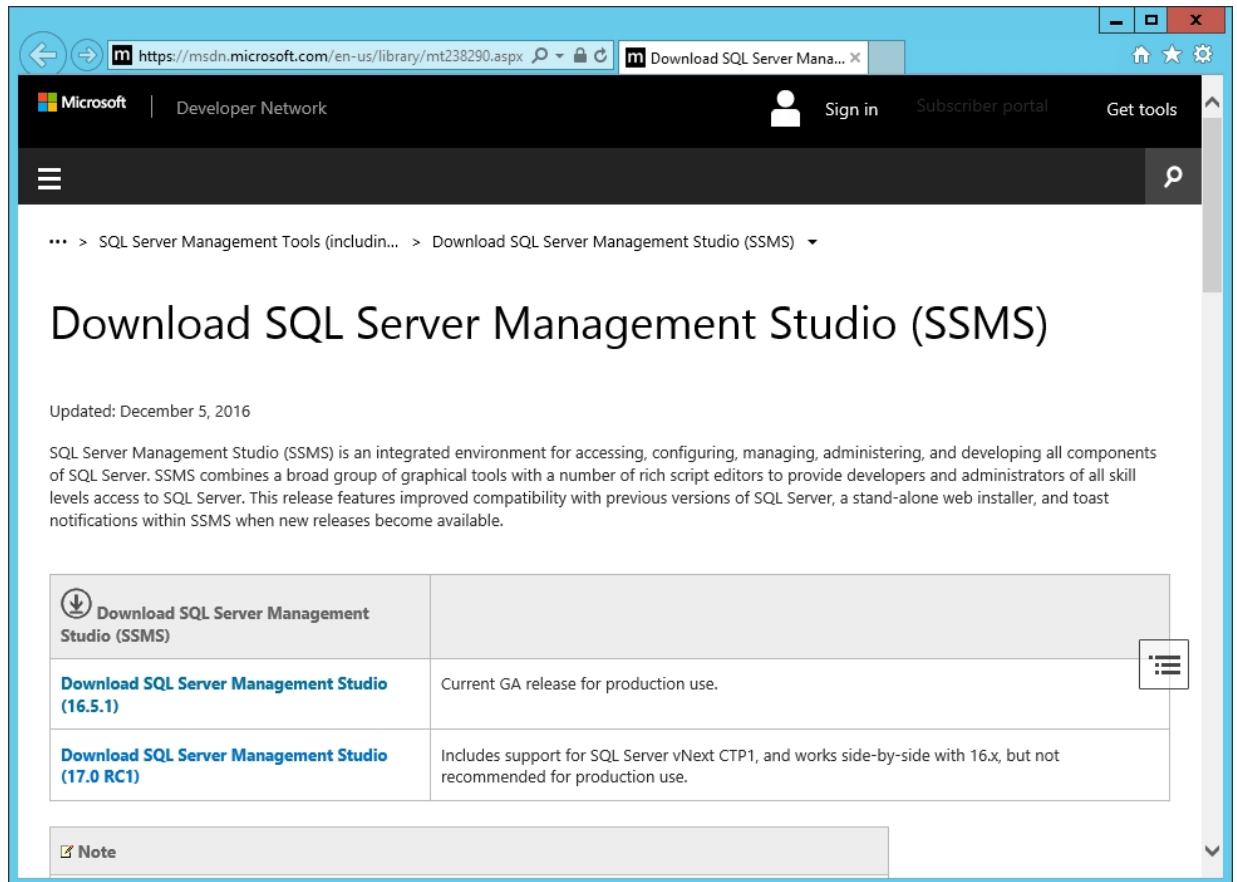


Figure 11.

Run it and select Install (Figure 12).

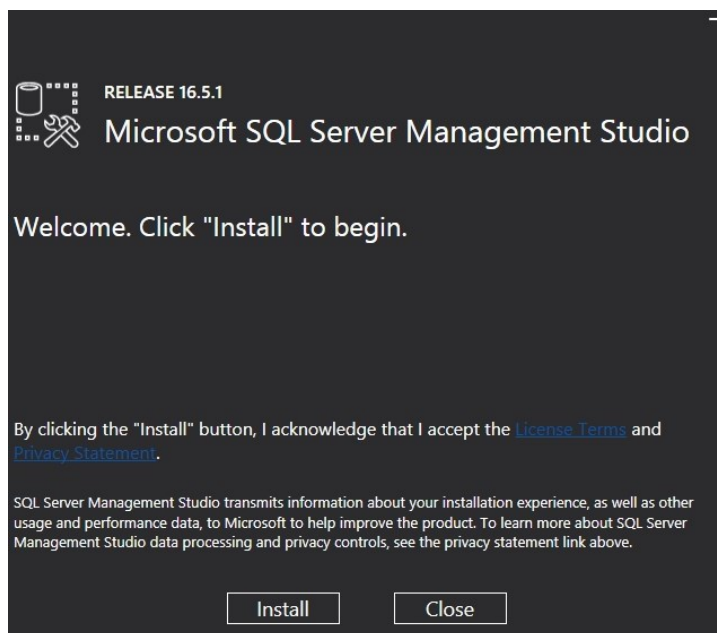


Figure 12.

Select Close.

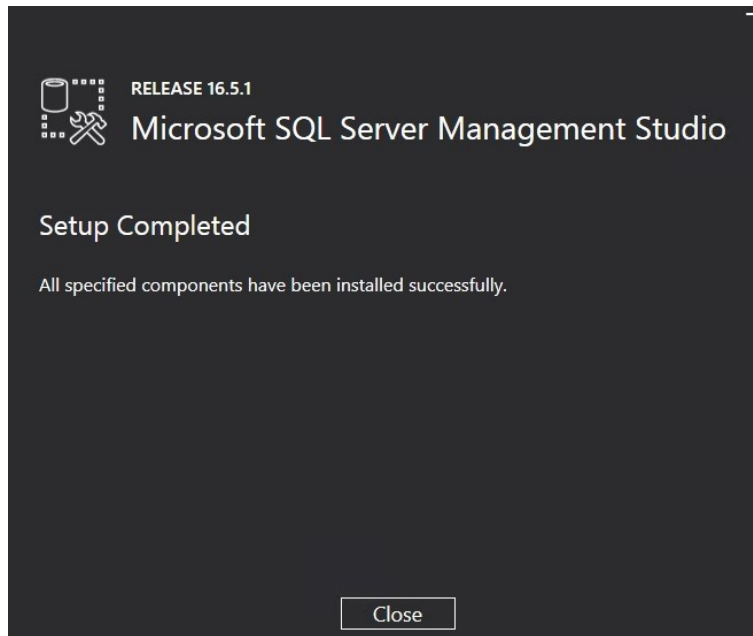


Figure 13.

SQL Management Studio has properly installed.

Next, the access rights to the server have to be configured. Open SQL Server Management Studio (Figure 14) and log in.

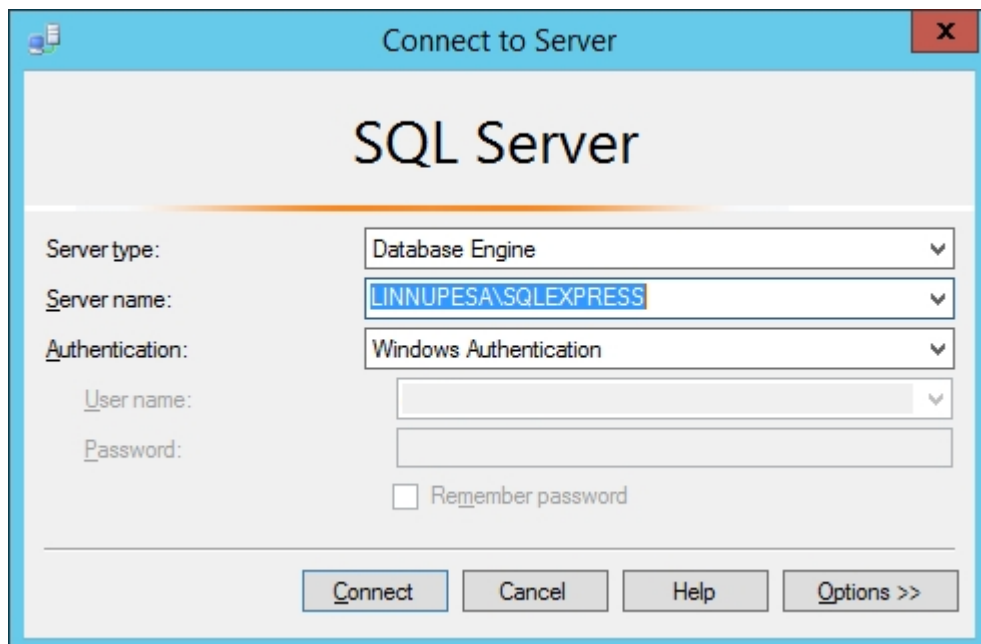


Figure 14.



Select Server Roles, check sysadmin and click OK (Figure 16).

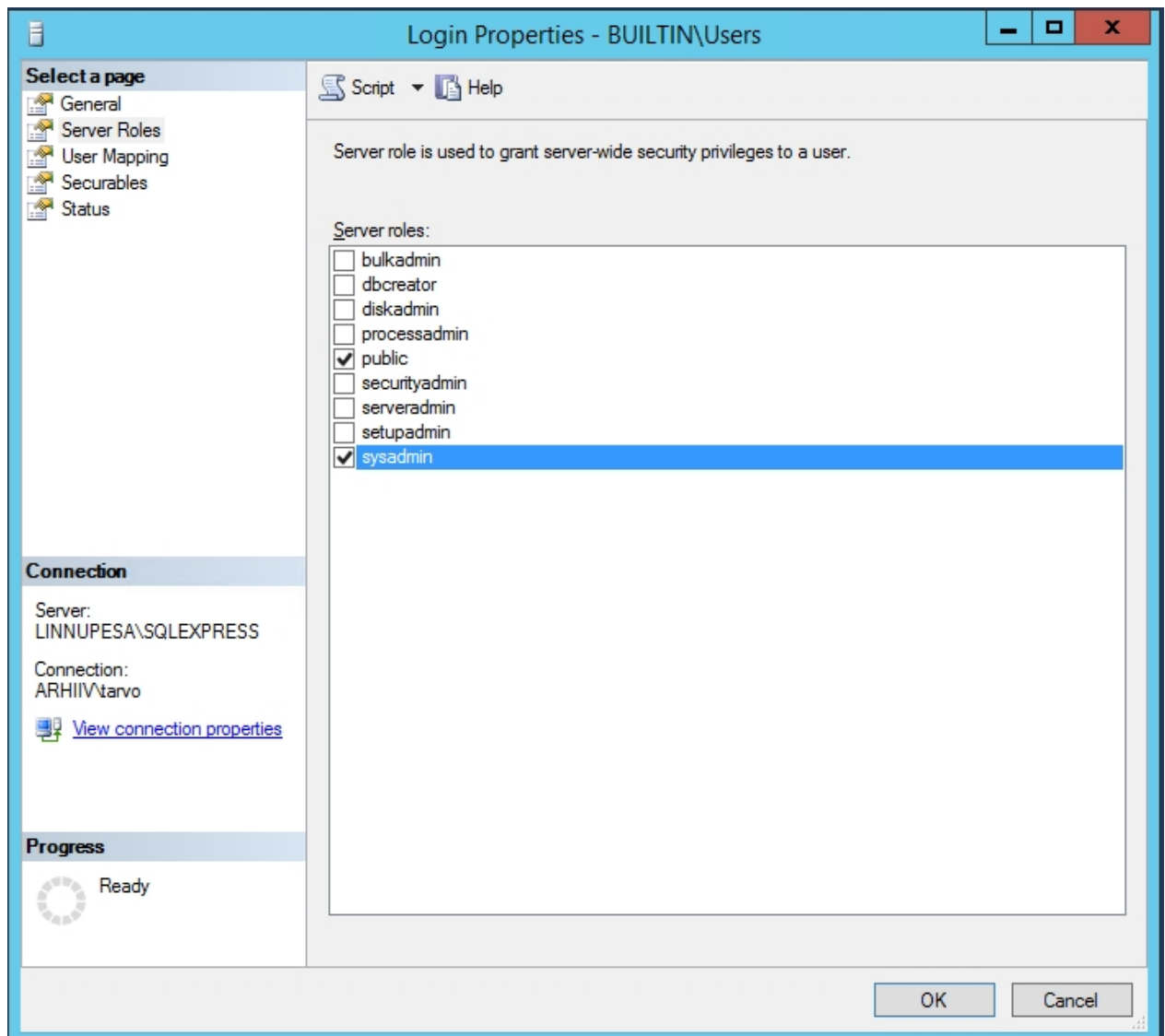


Figure 16.

Check the status of Remote Access and TCP/IP.

1. Allow Remote Access by
  - opening SQL Management Studio;
  - right clicking and selecting Properties;
  - selecting Connections and Allow remote connections to this server.
2. Allow TCP/IP by
  - opening Start -> Programs -> Microsoft SQL Server -> SQL Server Configuration Manager -> SQL Server Network Configuration;
  - selecting Protocols for SQLEXPRESS;
  - right clicking on TCP/IP and selecting Enable.

SQL Express Server has properly configured.

Next step is UAM installation.

## 4. Installing UAM

Download UAM installer<sup>1</sup> and run it.

Click Next (Figure 17).

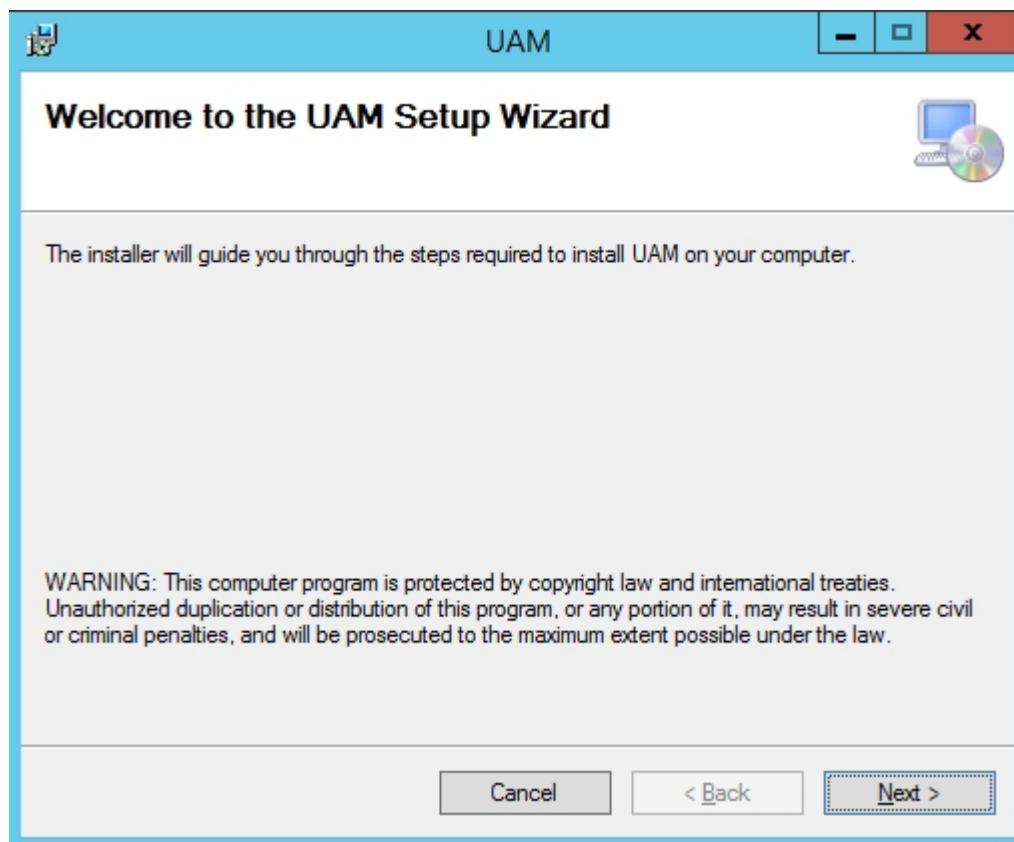


Figure 17.

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<sup>1</sup> Available at <http://www.ra.ee/en/information-management/universal-archiving-module/>.

Choose the destination for installation (Figure 18) and click Next.

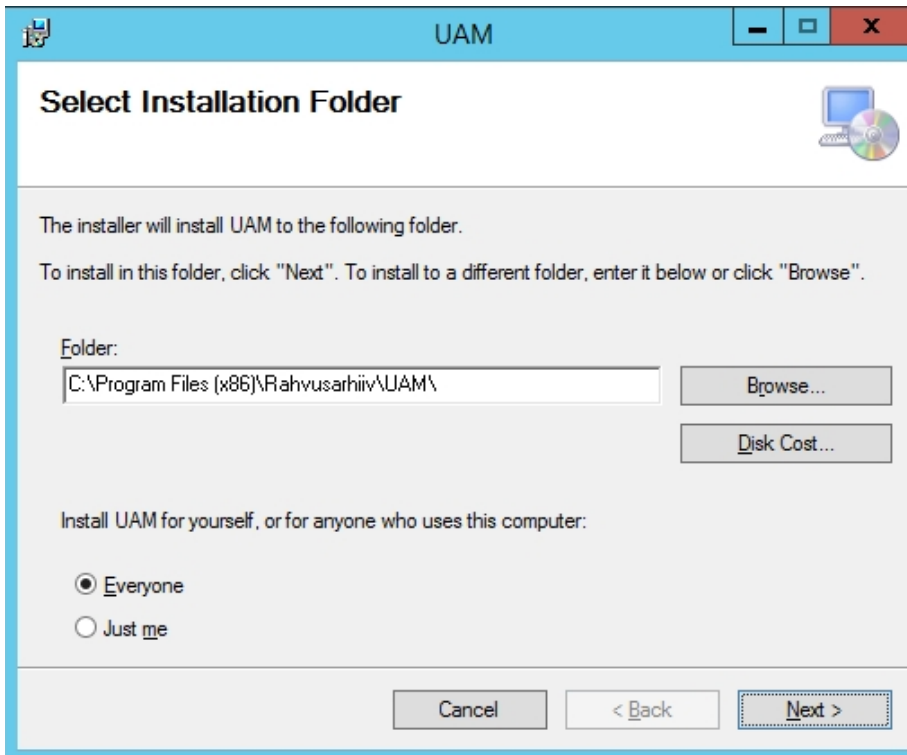


Figure 18.

Click Next (Figure 19).

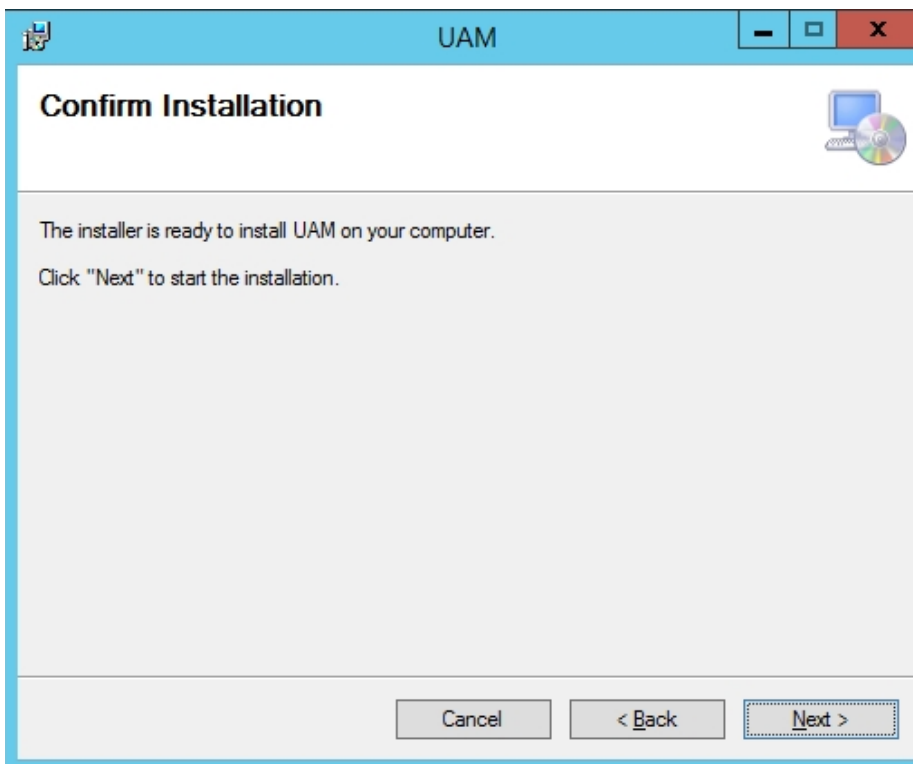


Figure 19.

When installing the UAM, you can choose between two options: Standard and LITE (Figure 20). We recommend using Standard.

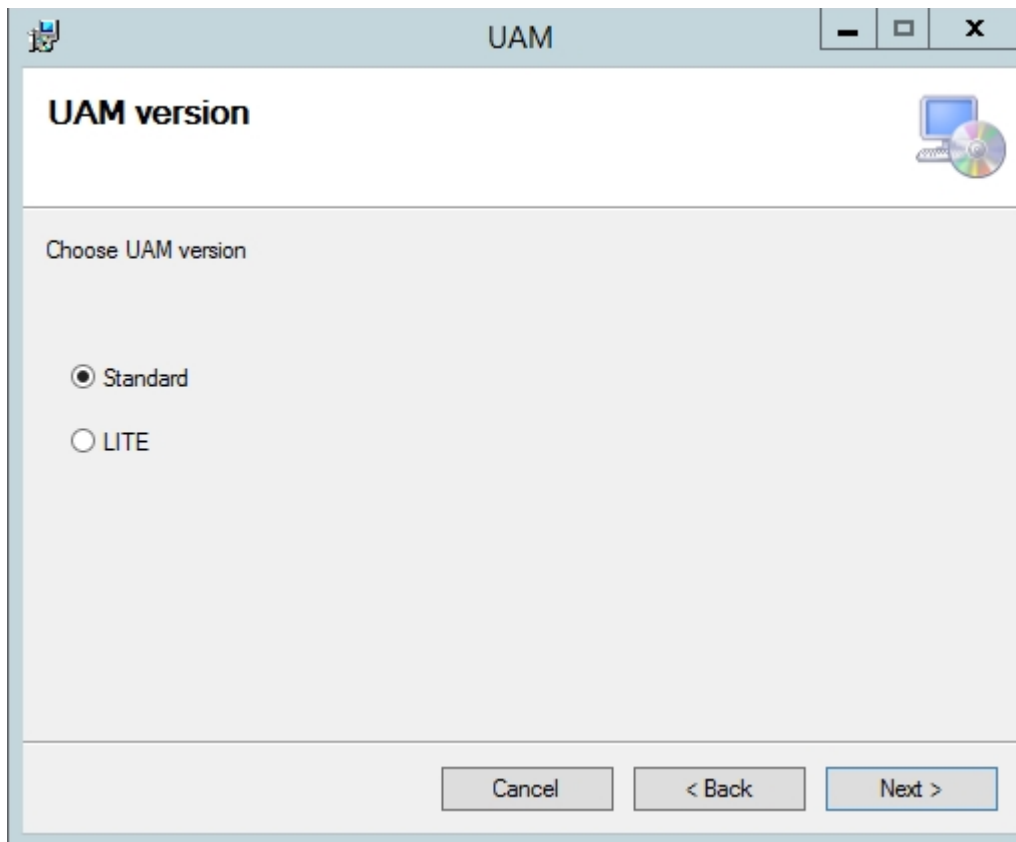


Figure 20.

The LITE version of the UAM can be used to process archival material without immediately transmitting the materials to an archive.

Differences in the LITE version:

- No archival project status;
- No restrictions based on the archival project status;
- The function level may be missing from the archival structure;
- Series can be added to fonds/sub-fonds;
- Fonds can have both sub-fonds and functions at the same time.

Next, you will be asked to select the system's language.

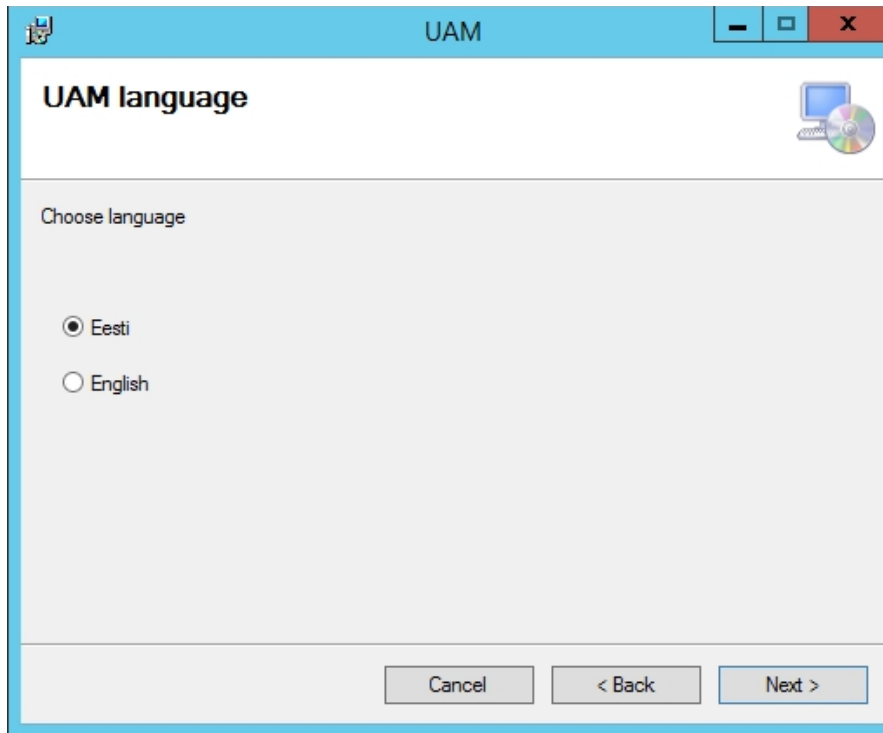


Figure 21.

Finally, you will need to select the server where the UAM database will be created and click OK (Figure 22).

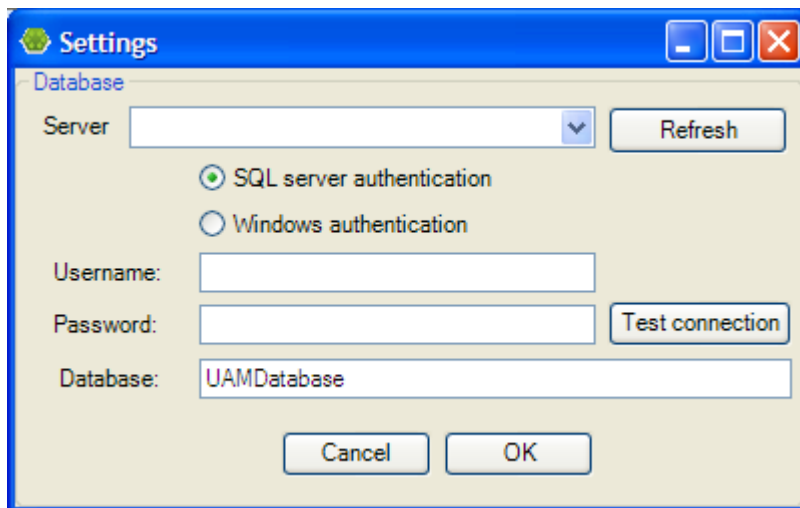


Figure 22.

See the next page for more information!

All fields in the Settings window must be filled:

- *Server* – location of the database server. You can select between locations that have been previously defined in this computer, or enter the name of the desired server manually. If the desired server is not in the list, enter the server name or address manually, for example 192.168.0.50\SQLEXPRESS.
- *Refresh* – refreshes the list of options in the Server field.
- *SQL server authentication* – connections to the database are subject to SQL Server authentication, and the username and password must be provided.
- *Windows authentication* – connections to the database are subject to Windows authentication. No username or password are required. The connection can only be established if the user's Windows account has been granted access rights to the server database. Using the Windows authentication option is recommended for UAM installation.
- *Username* – the database username for SQL Server authentication.
- *Password* – the database password for SQL Server authentication.
- *Test connection* – Click the button to confirm that the provided information is sufficient to access the Server.
- *Database* – the name of the database stored on the server, containing UAM data.

During installation, the existence of the database with the provided name on the server will be confirmed. If the database does not exist, it will be created. If the database exists, its structure version will be checked, and if necessary, updated to match the UAM version being installed.

The database user must have the following rights:

- UAM installation
  - If the provided Database does not exist, the database user must have the right to create a database, such as the server role dbcreator or sysadmin.
  - If the provided Database exists, the database user must have the role db\_owner at that database's level.
  - If the same UAM version is already installed on that database, the database user may have only the roles db\_datareader and db\_datawriter at that database's level.
- To use the UAM, the database user must have the roles db\_datareader ja db\_datawriter at that database's level.

Click Close (Figure 23).

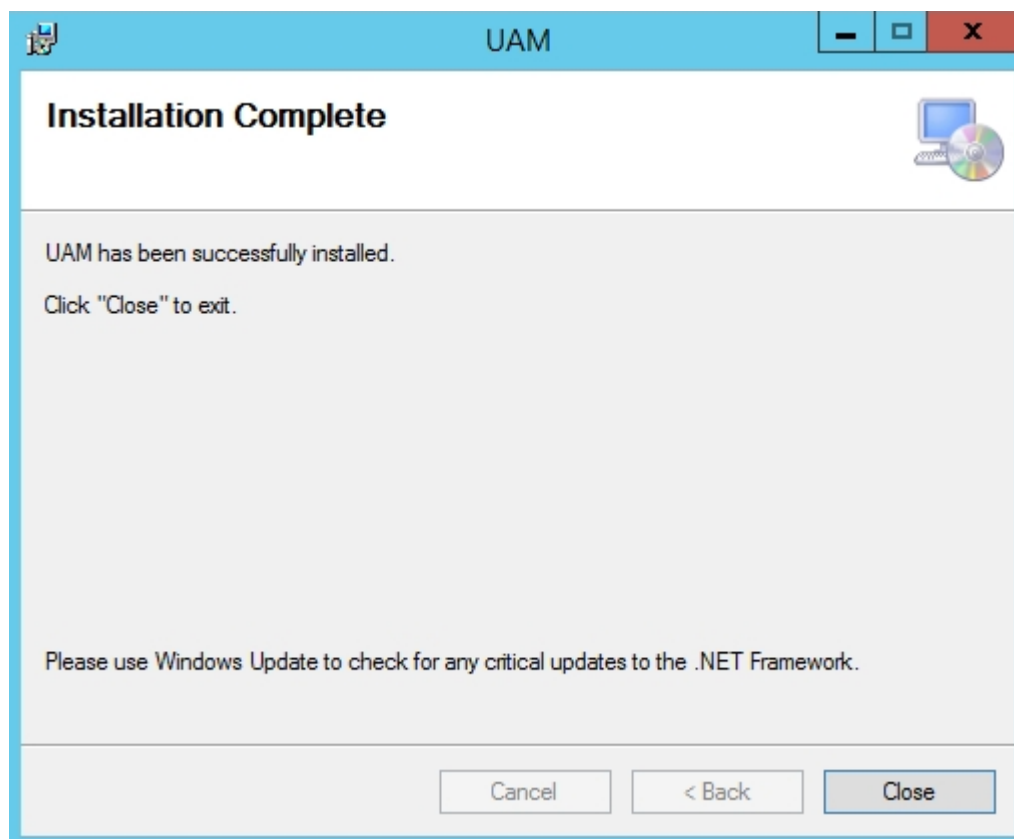


Figure 23.

The installation of UAM was successful.

Please see the next page for further configuration.

## 5. UAM Settings

UAM settings for the first time use (Figure 24).

The screenshot shows a 'Settings' dialog box with the following sections and fields:

- Locations of computer files**
  - Loaded materials: \* C:\temp\UAMfiles
  - Source: C:\temp\UAMfiles
  - Destination: C:\temp\UAMfiles
  - Printouts: C:\temp\UAMfiles
- Location of Java**
  - Java interpreter (java.exe) location (JRE 1.5 or later): \* C:\Program Files (x86)\Java\jdk1.8.0\_74\bin
- Information of components**
  - Program version: Lite
  - Program language: English
  - Author's first and last name:
  - Position:
- Input and output**
  - Input configuration:
  - Output configuration:
- Database settings** (button)
- DHX / X-Road**
  - Sender ID code:
  - Sender registry code:
  - X-Road proxy IP:
  - Receiver registry code: 70001946
- File processing**
  - UAM processes files: ☒
  - Computer file converter: LibreOffice (ver 4.1.4.2+)
  - converter EXE path: C:\Program Files\LibreOffice :
  - Image Converter: .NET Bitmap Class
  - Technical metadata extractor: Jhove (Rel. 1.11, 2013-09-29)
  - Decode signed containers: ☒ DDOC ☒ BDOC ☒ Unzip
- Save** and **Cancel** buttons.

Figure 24.

Please see the next page for further information.

To use the UAM, you must provide the system settings. The initial configuration must be performed when the UAM is started for the first time.

#### Locations of computer files

- *Loaded materials* [mandatory] – where the uploaded material files are held.
- *Source* – the default folder for all uploads.
- *Destination* – the default folder for transmitting the data to external media.
- *Printouts* – the default location for saving all printout files.

#### Location of Java

- *Java interpreter* (java.exe) location (JRE 1.5 or later) [mandatory] – when importing records (along with files), the files will be checked to ensure that they match the correct archival format. The validation uses Java, so it requires the location of the java.exe file, usually located in C:\Program Files\Java\jre\_ver\bin.

DEC / X-Road – if the agency's records are being transmitted to the National Archives, the following data must be provided:

- *Sender ID code*
- *Sender registry code*
- *X-Road proxy IP*
- *Receiver registry code*

#### Input and output

- *Input configuration* – the configuration file used when converting the uploaded material. This file describes the conversion of XML elements of the specific electronic record management system's output to UAM elements.
- *Output configuration* – the configuration file used when converting material for export.

#### File processing

- *UAM processes files* – enable or disable the file processing section.
- *Computer file converter* – defines the document file converter used when uploading material files. Currently the OpenOffice or LibreOffice can be used.
- *Image Converter* – defines the image file converter used when uploading material files. Currently the value is restricted to .NET Bitmap Class.
- *Technical metadata extractor* – currently the value is restricted to Jhove (Rel. 1.11, 2013-09-29).
- *Decode signed containers* – enable or disable digital signature decoding and file unpacking.

#### Information of components

- *Program version* – possible to change the version of the application.
- *Program language* – possible to change the language of the application.

To update the settings, open the File menu and select Settings in UAM.