medDream

HTML 5 ZERO-FOOTPRINT DICOM VIEWER

QUICK START GUIDE

Windows x64 MedDream PACS Lite

Document version 1.00

This guide describes the basics of installing and configuring web-based DICOM Viewer for PACS server. More information is provided in the full Install Manual, download its latest version: Install Manual.

IHE XDS-I.b PASSED

FDA K222320 510(k) CLEARED

CE 0197 Class IIb certified

ABOUT SOFTWARE

This guide describes MedDream DICOM Viewer deployment on Windows x64. MedDream PACS Lite software package contains all the software required to run MedDream Viewer on your server.

The Viewer can be integrated into HIS/RIS/EHR/EMR, Telemedicine, Patient Portals, National Systems, CAD and AI algorithms. MedDream Universal Enterprise Viewer can be installed on premises, in any virtual environment or on cloud.

MedDream is designed to aid medical professionals in day-to-day decision-making process. MedDream is a cost effective certified solution perfect for software vendors, integrators, OEM‘s and national system providers.

PREREQUISITES

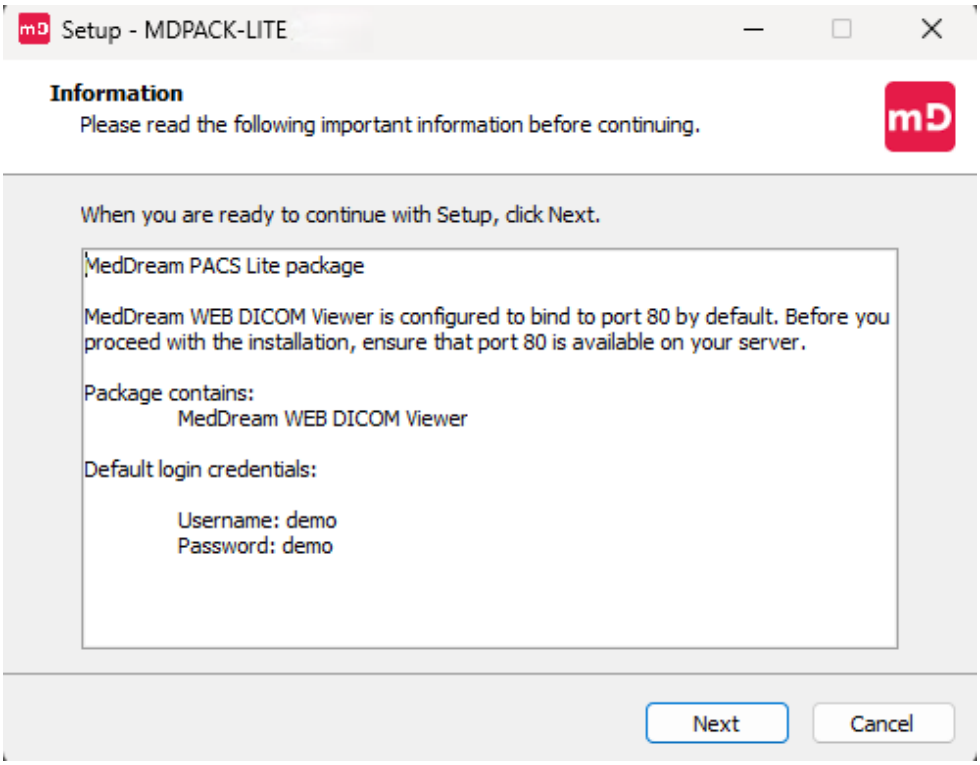
✓ Check User Manual section: “MedDream viewing functionalities minimal hardware requirements”.

INSTALLATION FOR THE FIRST TIME

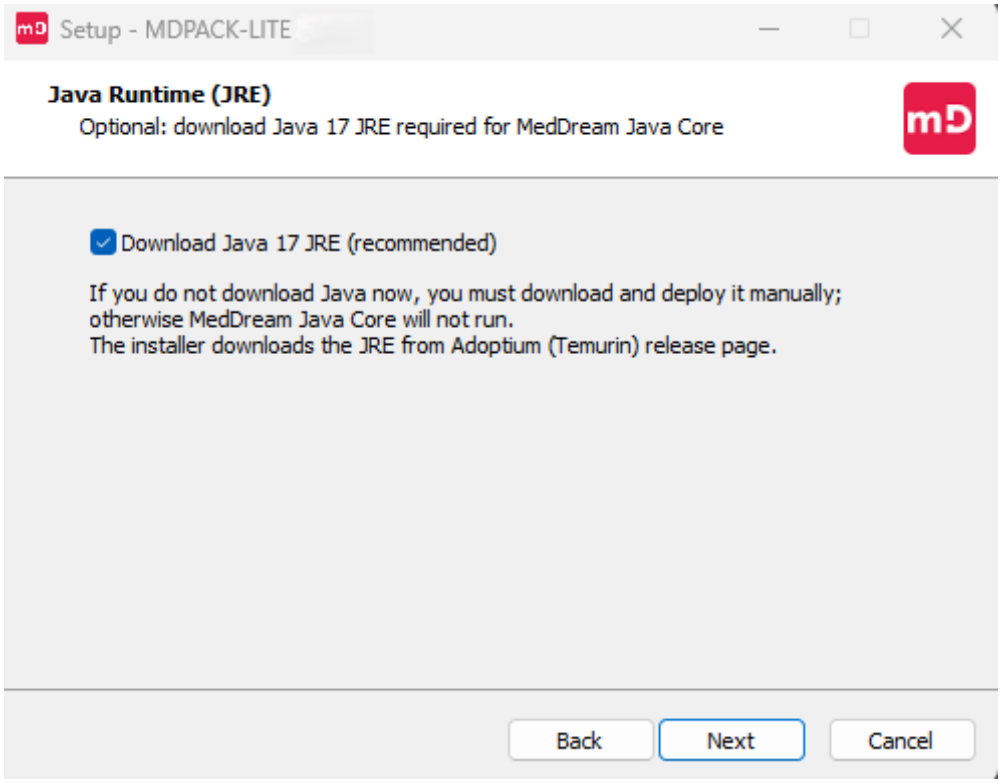
1 **Install all in one package (MedDream DICOM Viewer, Orthanc PACS and JAVA):**

- **Download** the latest Windows version of the “MedDream PACS Lite” package from the medDream website: https://meddream.com/products/meddream-pacs-server/#downloads
- **Run MedDream-PACS-Lite.exe**

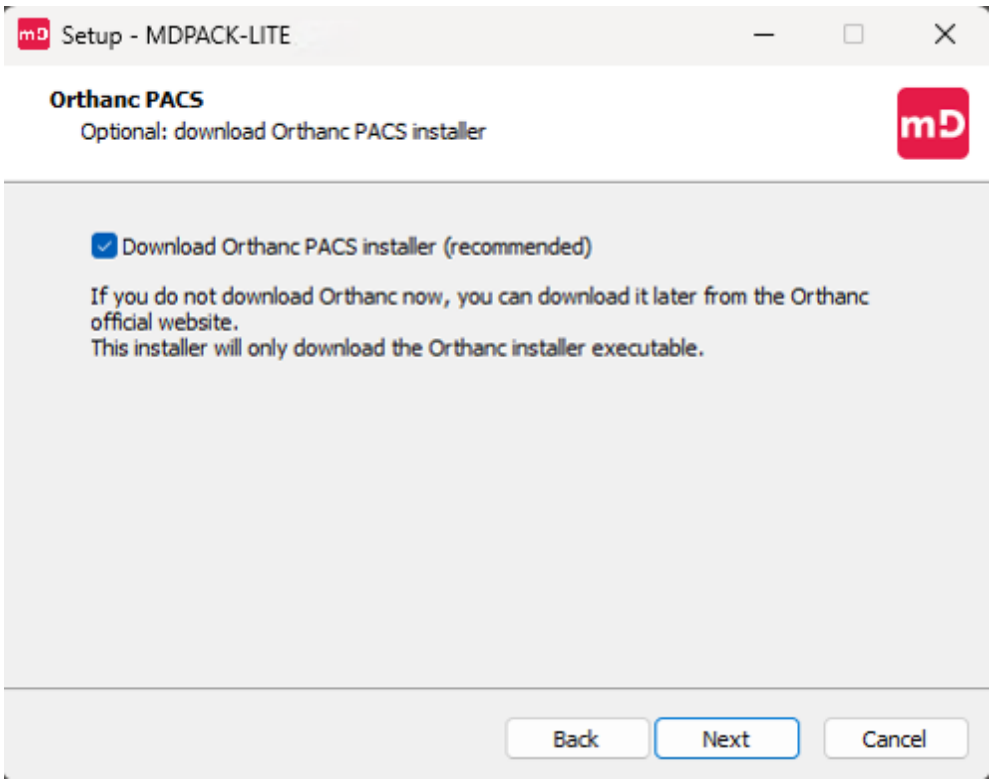
- **Remember** default MedDream Viewer **login credentials** and click **Next >** button:



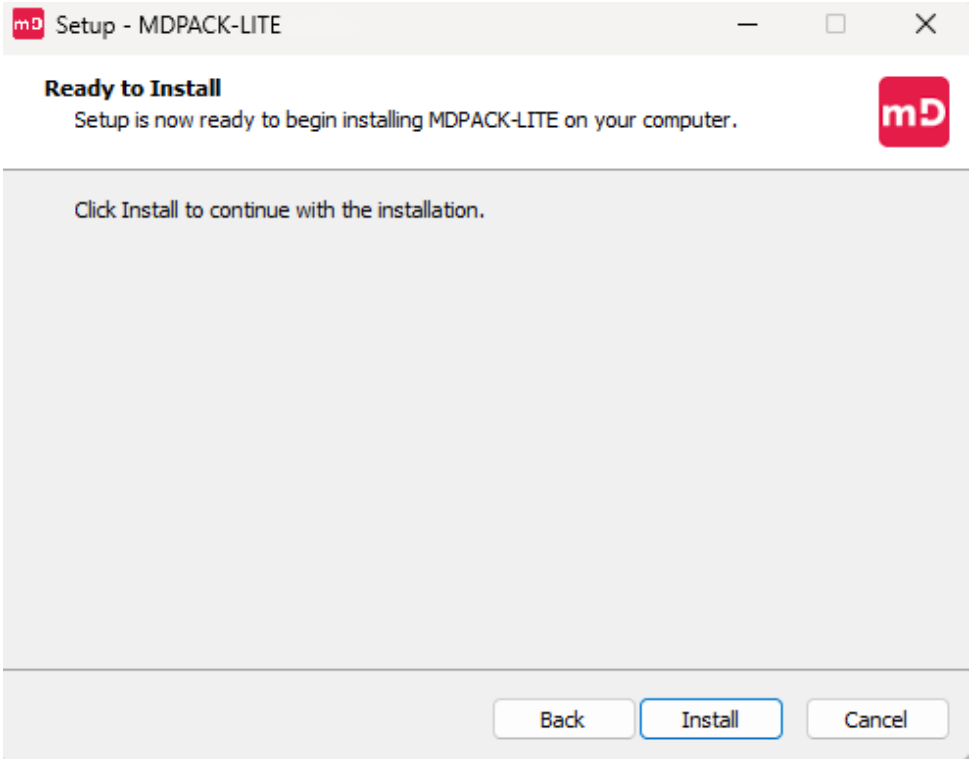
- For best experience select: **Download and install Java 17 JRE** and click **Next >** button:



- Optional: **Download Orthanc PACS installer** select **checkbox** and click **Next >** button:

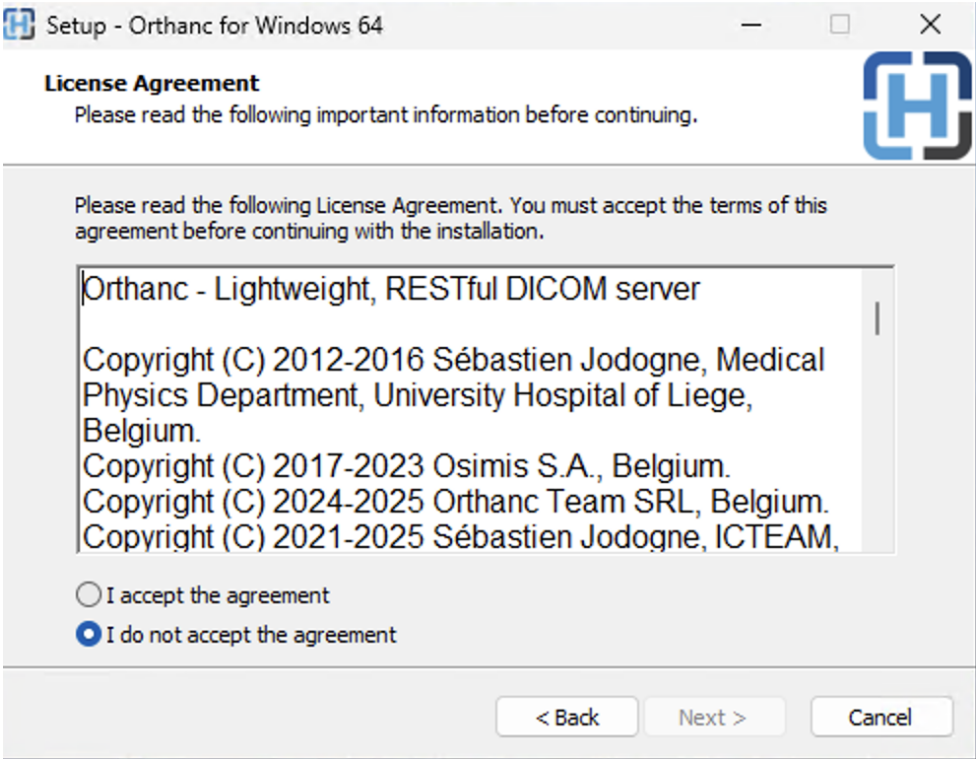


- Click **Install** button:

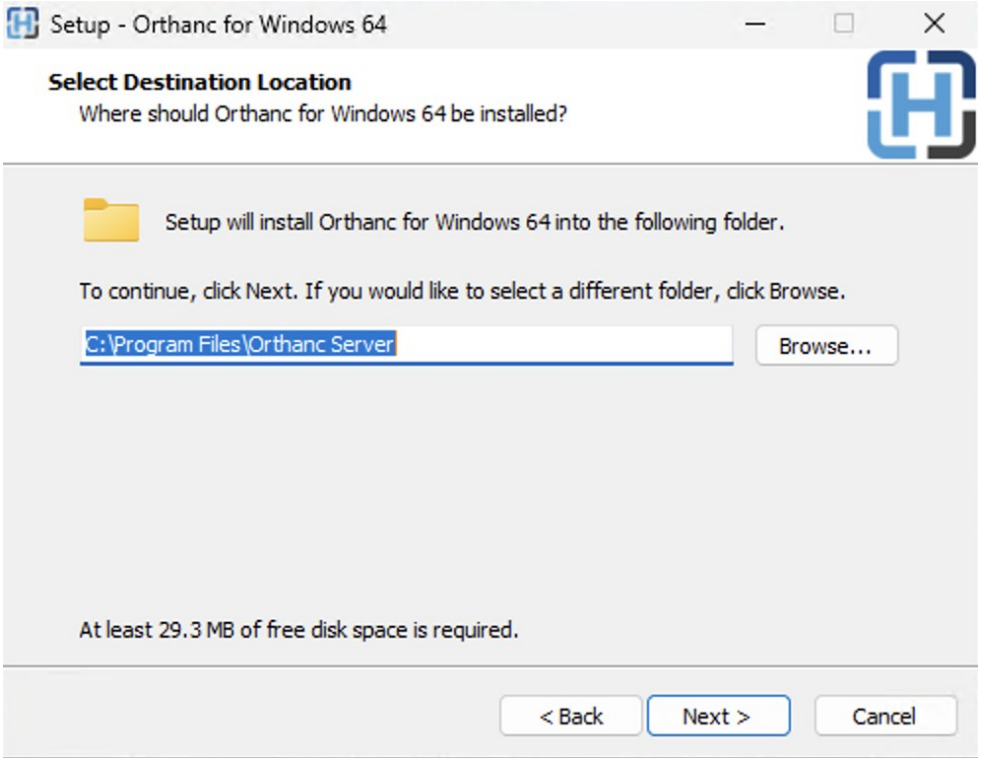


- Once MedDream Viewer is installed, the Orthanc PACS installation begins. Click **Next>** button:

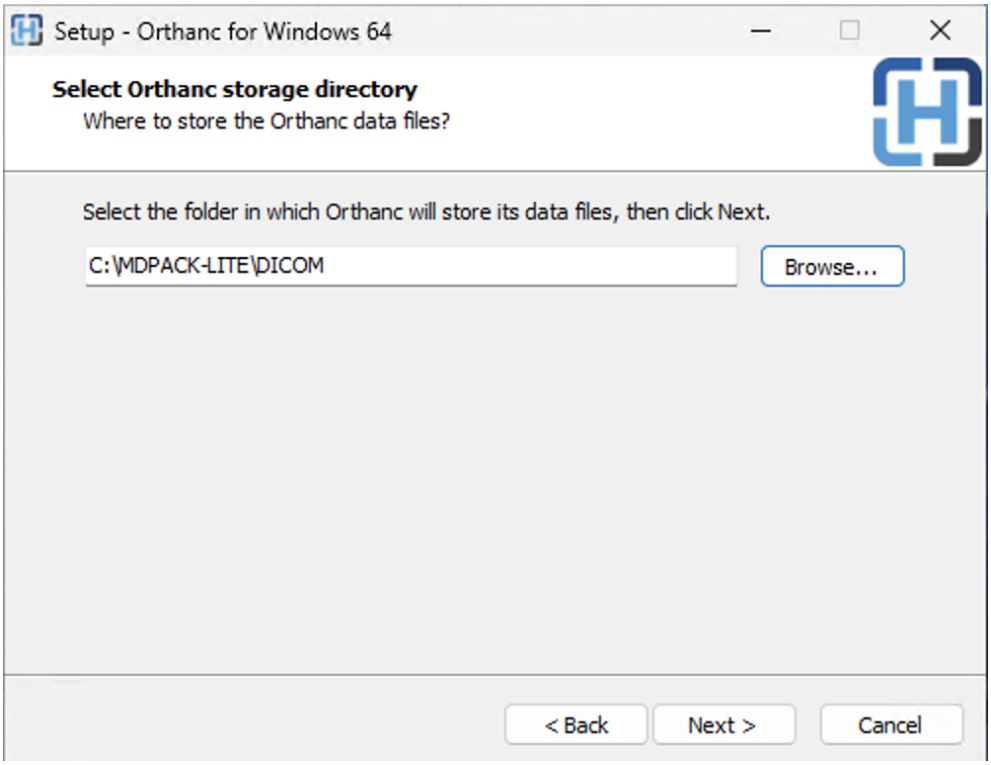
- **Read** Orthanc License Agreement, **choose** “I accept the agreement” and click **Next >** button:



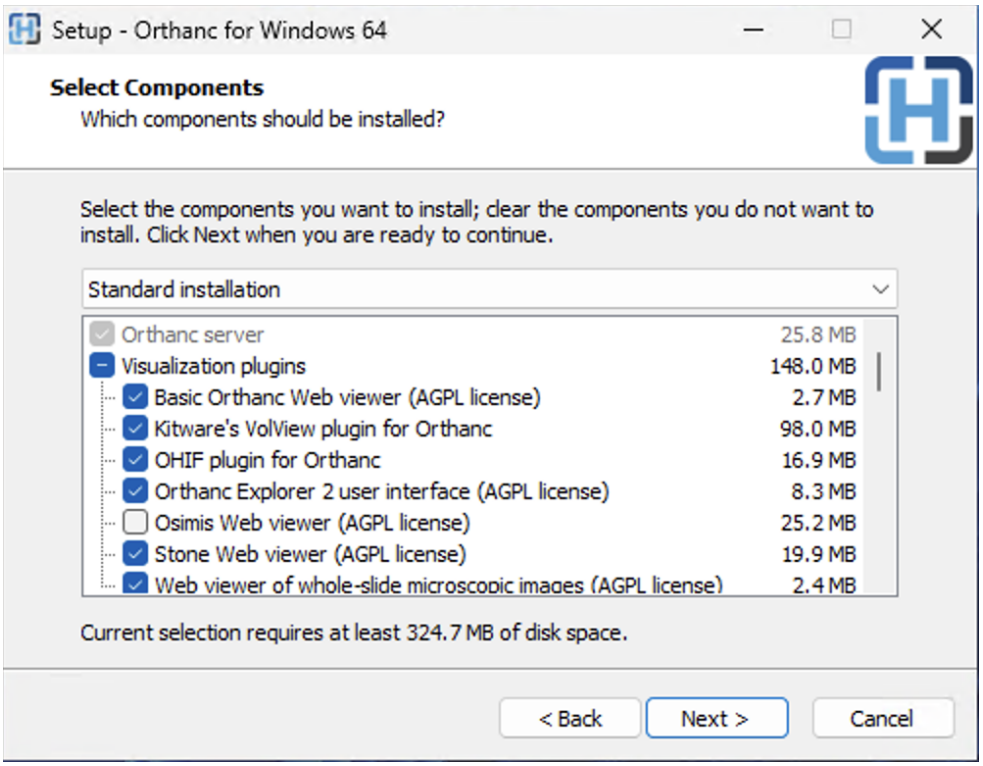
- **Change** location folder to **"C:\MDPACK-LITE\PACS\Orthanc Server"** and click **Next >** button:



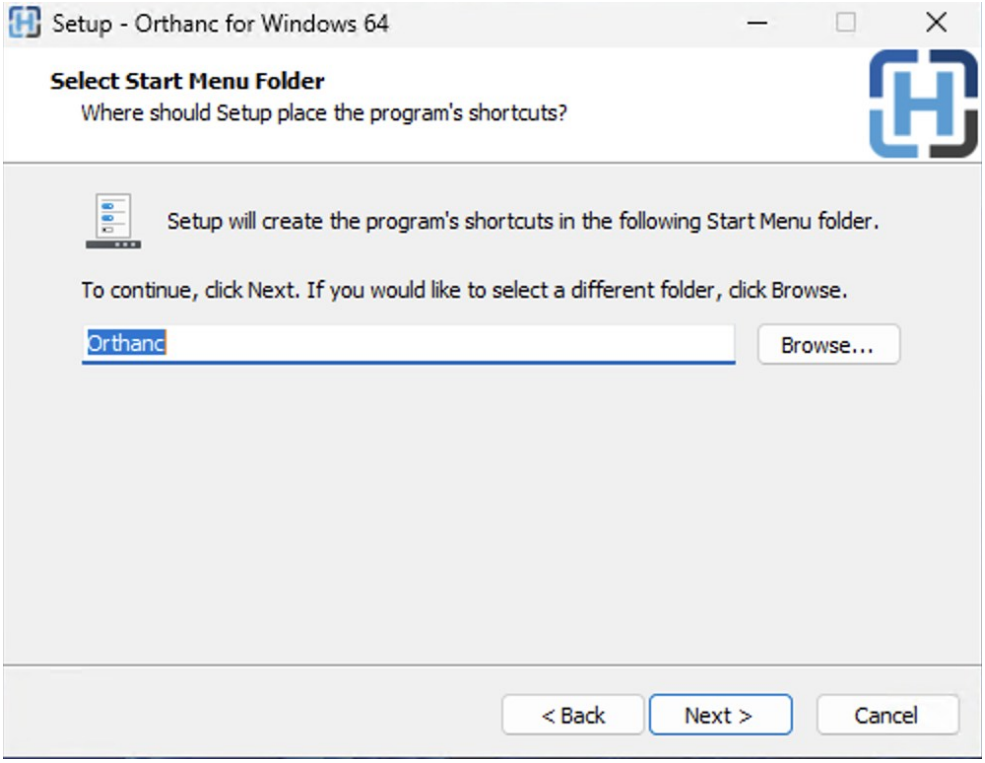
- **Change** Orthanc storage of studies to **"C:\MDPACK-LITE\DICOM"** and click **Next >** button:



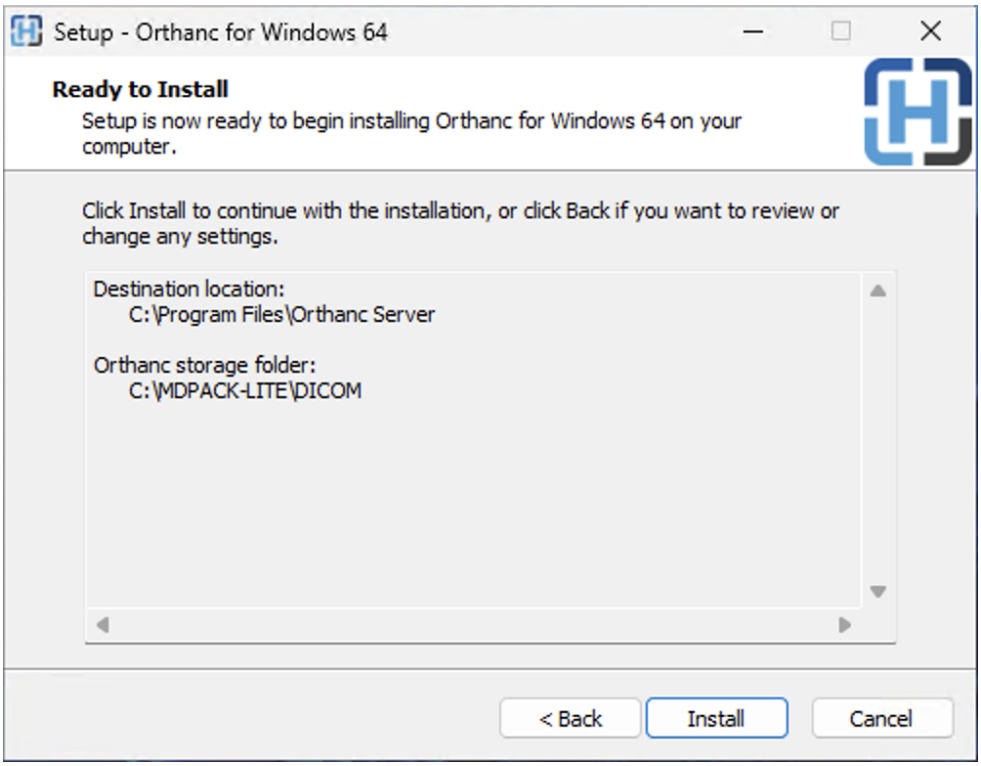
- **Choose** “Full installation” of Orthanc and click **Next >** button:



- **Select** the place where to add shortcut to Orthanc in the Start Menu folder:



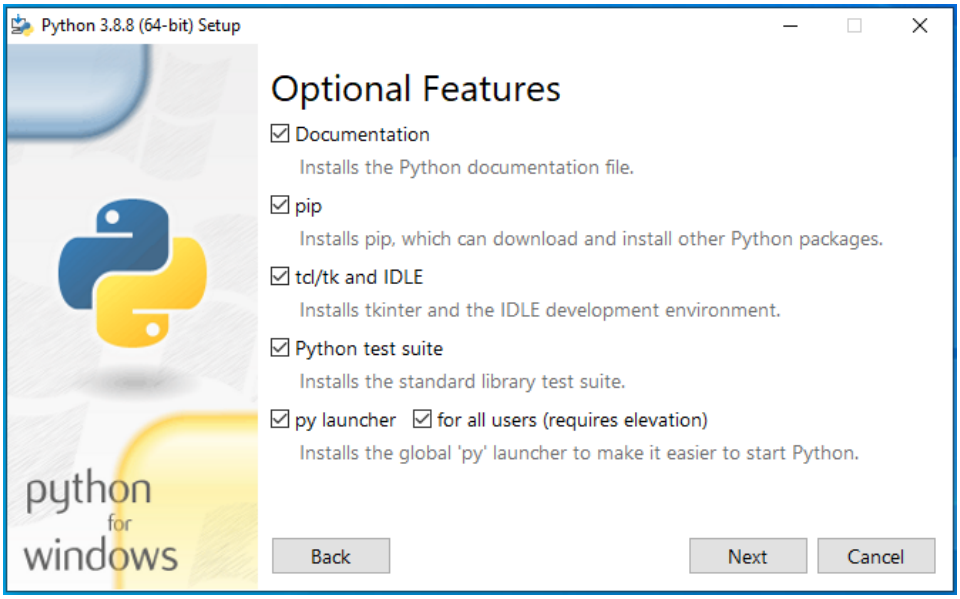
- Click **Install** to continue with the installation:



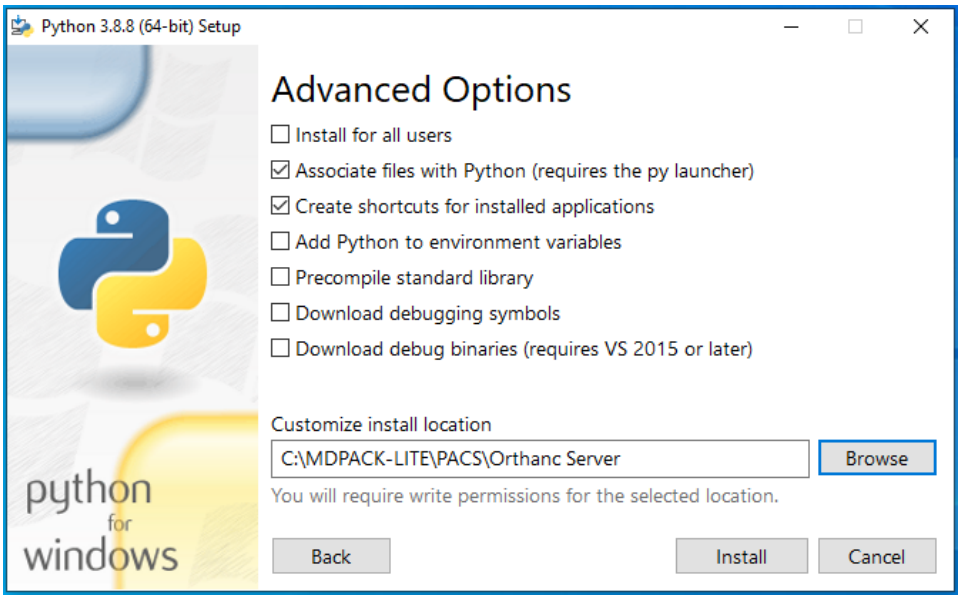
- You have completed the **Orthanc** installation. Click **Finish** button.

- Once **Orthanc** is installed, the **Python** installation begins. Click **Customize installation**.

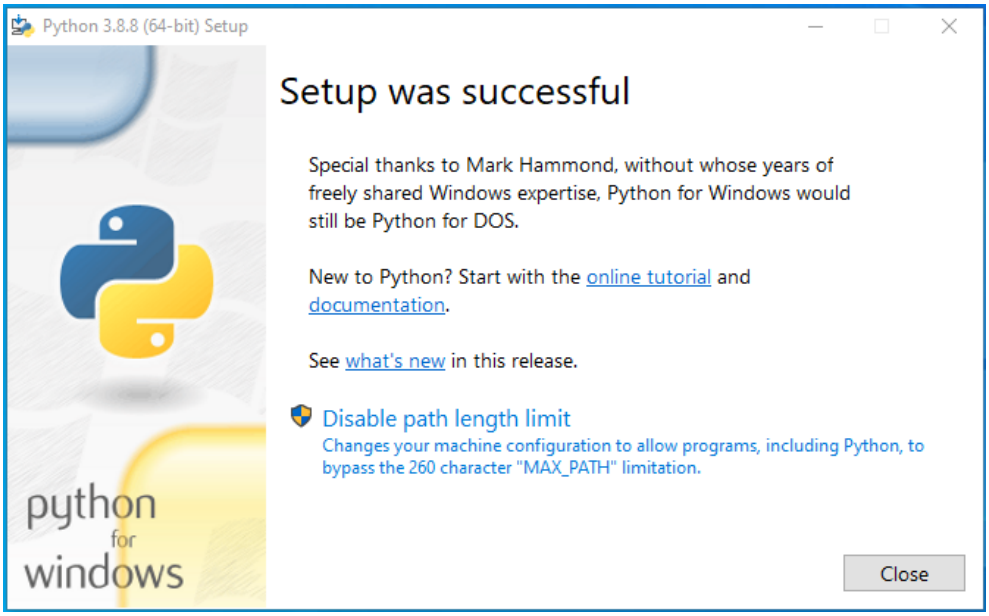
- Click **Next**.



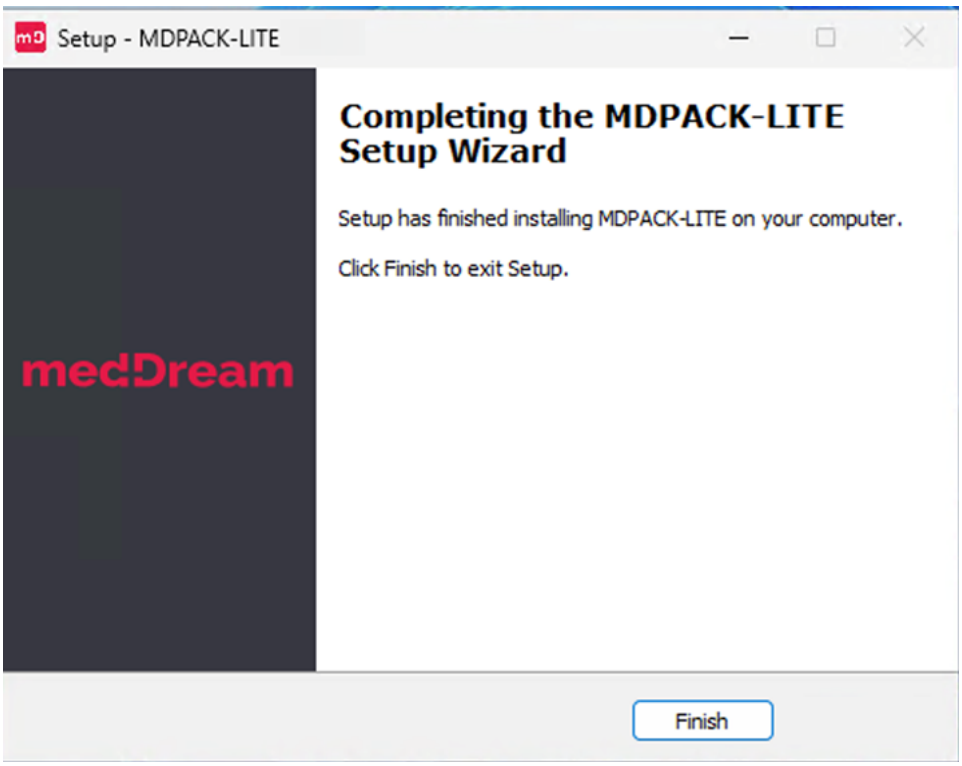
- Change install location to **"C:\MDPACK-LITE\PACS\Orthanc Server"**



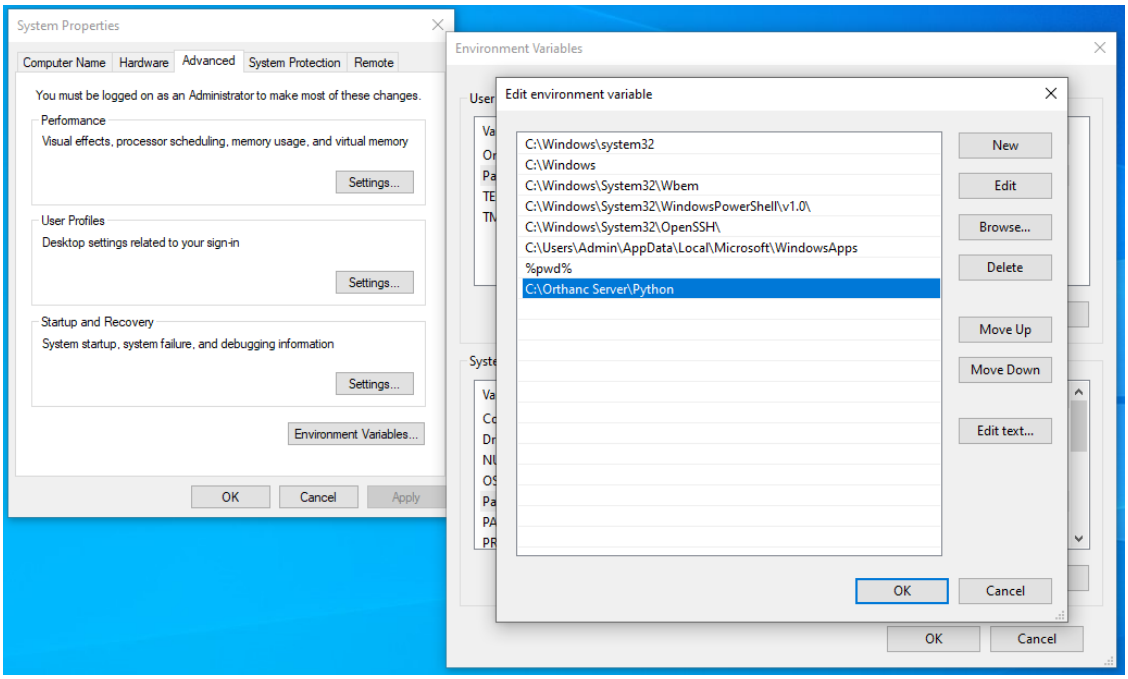
- You have completed the **Python** installation. Click **Close** button.



- Well done, you have completed the installation. Click **Finish** button.



NOTE: If you choose to install Orthanc server and/or python to different location, you need to update the PATH variable in windows, so that it contains path to Python root folder location.



CONFIGURATION

1 **MedDream Viewer settings.** You can add additional MedDream settings or change existing ones in the C:\MDPACK-LITE\MedDream\application.properties file. **The minimum MedDream DICOM Viewer configuration** for opening studies stored on the Orthanc PACS server is given below:

```
server.port=80
server.servlet.session.timeout=60
#server.compression.enabled=true
server.compression.mime-types=application/octet-stream


#com.softneta.settings.fileLocation=${com.softneta.meddream.configRoot}/sys/settings
#com.softneta.thumbnails.ffMpegExecutable=ffmpeg


authentication.manager.username=admin
authentication.manager.password=
#management.server.port=8081
#management.server.address=127.0.0.1
```

```
#com.softneta.meddream.login.maxAttemptsToConnect=5
#com.softneta.meddream.login.timeoutSeconds=60
#com.softneta.meddream.login.doubleTimeOnRepeatedFailedAttempts=true
#com.softneta.meddream.login.failedAttemptsMaxWaitSeconds=900
#com.softneta.meddream.login.showWarningMessagesAboutPassword=false


#com.softneta.meddream.searchPatientHistoryInAllStorages=false


spring.profiles.include=auth-inmemory
authentication.inmemory.users[0].userName=demo
authentication.inmemory.users[0].password=demo
authorization.users[0].userName=demo
authorization.users[0].role=ADMIN,PATIENT_HISTORY,UPLOAD_DICOM_LIBRARY,EXPORT_ISO,EXPORT_ARCH,FOR
WARD,REPORT_UPLOAD,FREE_DRAW_EDIT,SMART_DRAW_EDIT,KO_PR_EDIT,CLEAR_CACHE,USER_SETTINGS
#authorization.users[0].accessibleStorages=PacsOneQR,d4c5Dicomweb
authorization.defaultLoginPermissions=SEARCH,DOCUMENT_VIEW


#spring.profiles.include=auth-his,auth-inmemory
#spring.profiles.include=auth-his
#authentication.his.token-service-address=http://127.0.0.1:8088/v3/validate
#authentication.his.valid-his-params=study,storage
#authentication.his.valid-his-params=accnum
#authentication.his.valid-his-params[0]=patient,accnum
#authentication.his.valid-his-params=patient
#authentication.his.valid-his-params=file
#authentication.his.useSameSession=true
#authentication.his.patient-integration-open-studies=false


logging.level.ROOT=ERROR
#logging.level.com.softneta=INFO
#logging.level.sun.net.www.protocol.http=DEBUG
logging.file.name=meddream


com.softneta.dicom.library.upload.anonymizeLevel=1
```

```
#com.softneta.meddream.dcmsnd.bind=MEDDREAM
#com.softneta.meddream.dcmsnd.dicomSendThreadCount=2
#com.softneta.meddream.dcmsnd.forwardingMethod=cmove


#com.softneta.dicomStoreService.localAETitle=MEDDREAM
#com.softneta.dicomStoreService.port=11116
com.softneta.dicomStoreService.address=127.0.0.1
#com.softneta.dicomStoreService.saveDirectory=${com.softneta.meddream.tempDir}/STORE
com.softneta.dicomStoreService.acceptAETitles=SendersTitle,AnotherTitle
#com.softneta.dicom-store-service.allowedIps=192.168.111.87,192.168.111.88,192.168.111.91
#com.softneta.dicomStoreService.prepareReceivedFile=true
#com.softneta.dicomStoreService.prepareForTheseLocalTitles=


#com.softneta.preparation.thumbnailCreationModalities=CT,PT,MR
#com.softneta.preparation.thumbnailCreation=all
#com.softneta.preparation.enabled=true
#com.softneta.preparation.cachePreparationFiles=false
#com.softneta.preparation.compressPixelsBeforeSave=false
#com.softneta.preparation.persistCache=true
#com.softneta.preparation.cacheTimeToIdleSeconds=86400
#com.softneta.preparation.downloadDicomCoreThreadCount=5
#com.softneta.preparation.downloadDicomMaxThreadCount=40
#com.softneta.preparation.downloadDicomQueueCapacity=5000


com.softneta.temp-cleaner.cleanRateMilliSec=1800000
#com.softneta.temp-cleaner.cron=0 30 0 * * *
#com.softneta.temp-cleaner.monitoringFrequencyMilliSec=60000
#com.softneta.temp-cleaner.freeSpaceThresholdPct=90

com.softneta.temp-cleaner.tempItems[0].directory=${com.softneta.preparation.cacheDir}
com.softneta.temp-cleaner.tempItems[0].pattern=*
com.softneta.temp-cleaner.tempItems[0].olderThanSec=604800
```

```
com.softneta.temp-cleaner.tempItems[1].directory=${com.softneta.meddream.tempDir}
com.softneta.temp-cleaner.tempItems[1].pattern=*_archive
com.softneta.temp-cleaner.tempItems[1].olderThanSec=7200
com.softneta.temp-cleaner.tempItems[1].matchAnyDepth=false

com.softneta.temp-cleaner.tempItems[2].directory=${com.softneta.meddream.tempDir}
com.softneta.temp-cleaner.tempItems[2].pattern=*_export
com.softneta.temp-cleaner.tempItems[2].olderThanSec=21600
com.softneta.temp-cleaner.tempItems[2].matchAnyDepth=false

com.softneta.temp-cleaner.tempItems[3].directory=${com.softneta.meddream.tempDir}
com.softneta.temp-cleaner.tempItems[3].pattern=forward_*.dcm
com.softneta.temp-cleaner.tempItems[3].olderThanSec=7200
com.softneta.temp-cleaner.tempItems[3].matchAnyDepth=false

com.softneta.temp-cleaner.tempItems[4].directory=${com.softneta.video.convertedDir}
com.softneta.temp-cleaner.tempItems[4].pattern=*
com.softneta.temp-cleaner.tempItems[4].olderThanSec=3600

com.softneta.temp-cleaner.tempItems[5].directory=${com.softneta.dicom.library.upload.tempDir}
com.softneta.temp-cleaner.tempItems[5].pattern=*
com.softneta.temp-cleaner.tempItems[5].olderThanSec=86400

com.softneta.temp-cleaner.tempItems[6].directory=${com.softneta.dicomStoreService.saveDirectory}
com.softneta.temp-cleaner.tempItems[6].pattern=*
com.softneta.temp-cleaner.tempItems[6].olderThanSec=86400

#com.softneta.temp-
cleaner.tempItems[7].directory=${com.softneta.meddream.tempDir}/dcm/OrthancLocal
#com.softneta.temp-cleaner.tempItems[7].pattern=*
#com.softneta.temp-cleaner.tempItems[7].olderThanSec=86400



#com.softneta.audit.serverHostname=192.168.1.123
#com.softneta.audit.serverPort=6514
com.softneta.audit.useTls=false
com.softneta.audit.trustStore=file:///c:/tmp/nxlog/client/cacerts.jks
com.softneta.audit.trustStorePassword={password}
com.softneta.audit.keyStore=file:///c:/tmp/nxlog/client/cacerts.jks
```

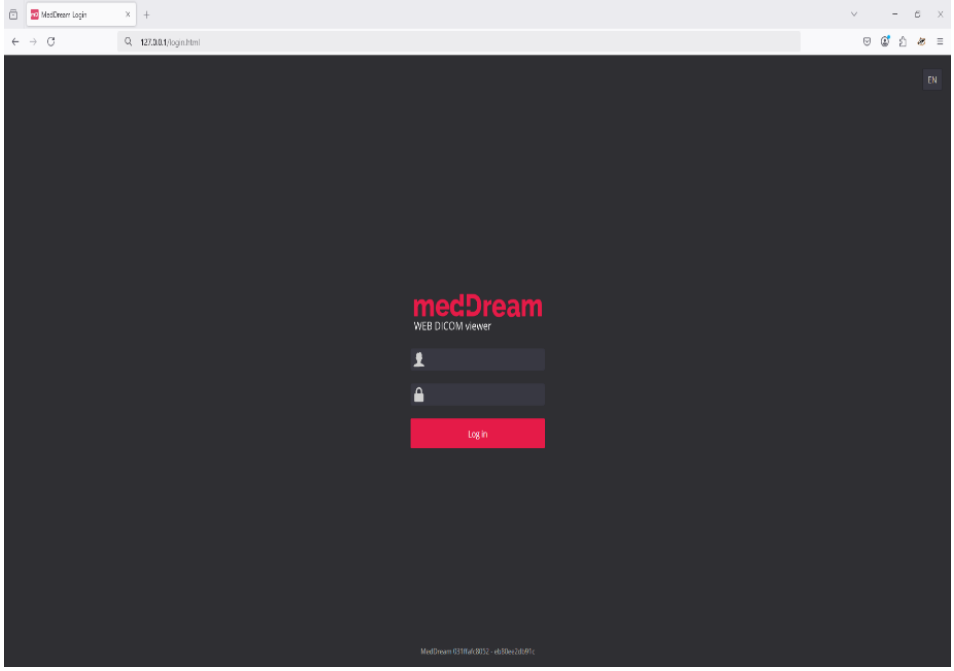
```
com.softneta.audit.keyStorePassword={password}


spring.batch.job.maxFailedJobRestarts=10
#com.softneta.meddream.patientHistoryDaysLimit=365
com.softneta.meddream.enabledColorPalettes=HOT_IRON,PET,HOT_METAL_BLUE,PET_20_STEP,RAINBOW
#com.softneta.meddream.toolbarButtonsOrderingEnabled=false
#com.softneta.meddream.http.brandingCacheMaxAgeSec=0
#com.softneta.cache.studyStructureSec=300
#com.softneta.dicomParser.useJdtLookupDDict=false
#com.softneta.dicomParser.parseUNasILE=false
#com.softneta.meddream.blacklist.tokenSeriesRestrictionPreservesAnnotations=false


com.softneta.meddream.pacs.configurations[0].type=Orthanc
com.softneta.meddream.pacs.configurations[0].id=OrthancLocal
com.softneta.meddream.pacs.configurations[0].baseUrl=http://127.0.0.1:8042
com.softneta.meddream.pacs.configurations[0].username={Username}
com.softneta.meddream.pacs.configurations[0].password={Password}
#com.softneta.meddream.pacs.configurations[0].dicomCacheDirectory=${com.softneta.meddream.tempDir
}/dcm/OrthancLocal
#com.softneta.meddream.pacs.configurations[0].cacheDicomFiles=true
#com.softneta.meddream.pacs.configurations[0].pythonPlugin=false
com.softneta.meddream.pacs.configurations[0].storeScpAet=ORTHANC
com.softneta.meddream.pacs.configurations[0].storeScpIp=127.0.0.1
com.softneta.meddream.pacs.configurations[0].storeScpPort=4242
#com.softneta.meddream.pacs.configurations[0].storeScuAet=MEDDREAM2
```

NOTE: In the C:\MDPACK-LITE\MedDream\ApTemplates you can find examples of MedDream Viewer configurations with explanations. All MedDream settings are stored in the application.SAMPLE.properties file.

VERIFICATION

1. Open a browser and enter the MedDream URL http://127.0.0.1/ in the address bar.

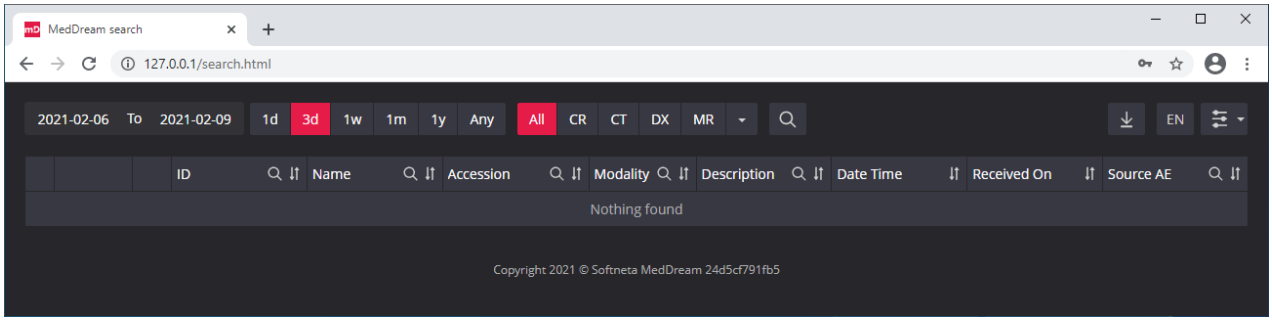
2. In the login window, enter the username **demo** and password **demo**. Press **Log in** button:



TIP: If you can't connect, restart MedDream service in Windows services (run in cmd line: services.msc and restart MedDream service).

3

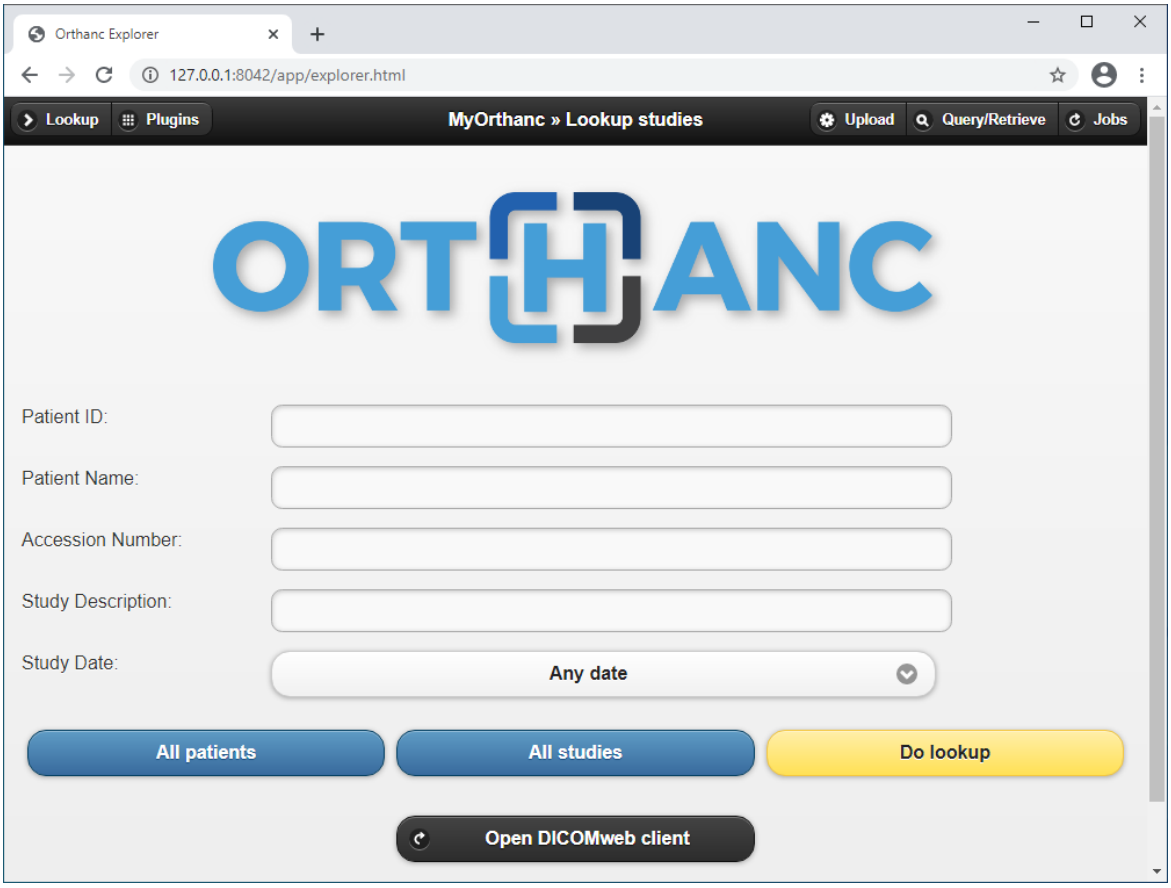
MedDream Viewer shows an empty list of studies:



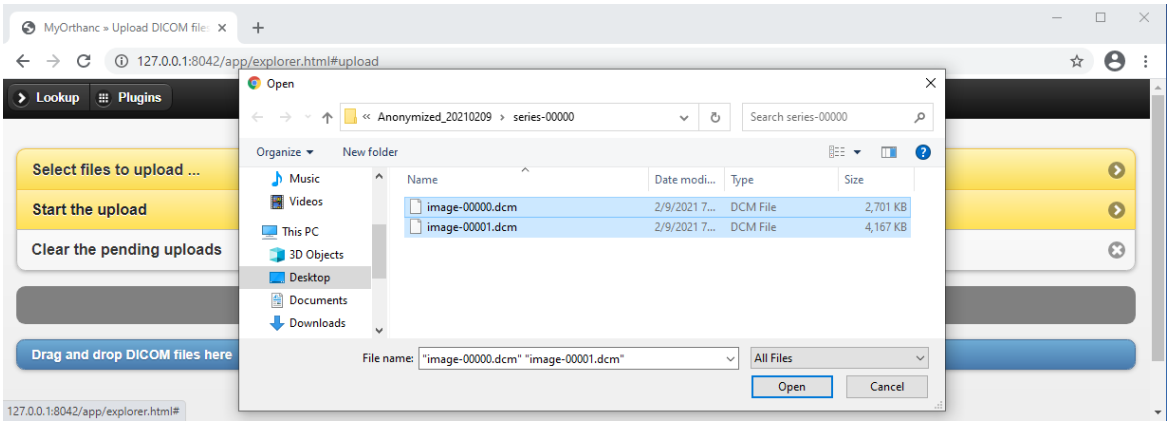
4

Upload studies to the Orthanc PACS server, follow these steps:

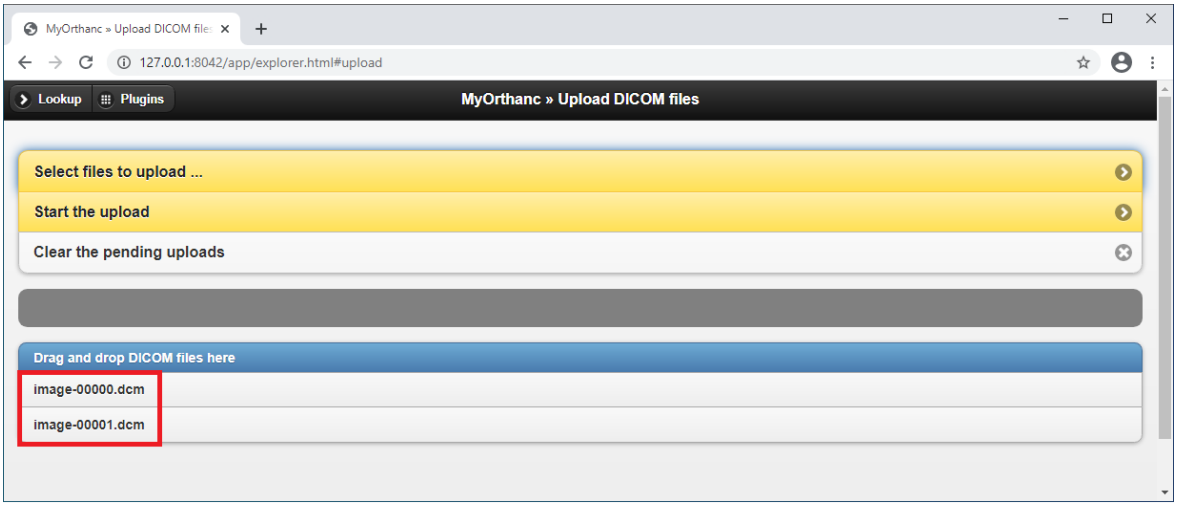
- **Open** a browser and **enter** the Orthanc PACS URL http://127.0.0.1:8042/ and click the **Upload** button at the top right of the page:



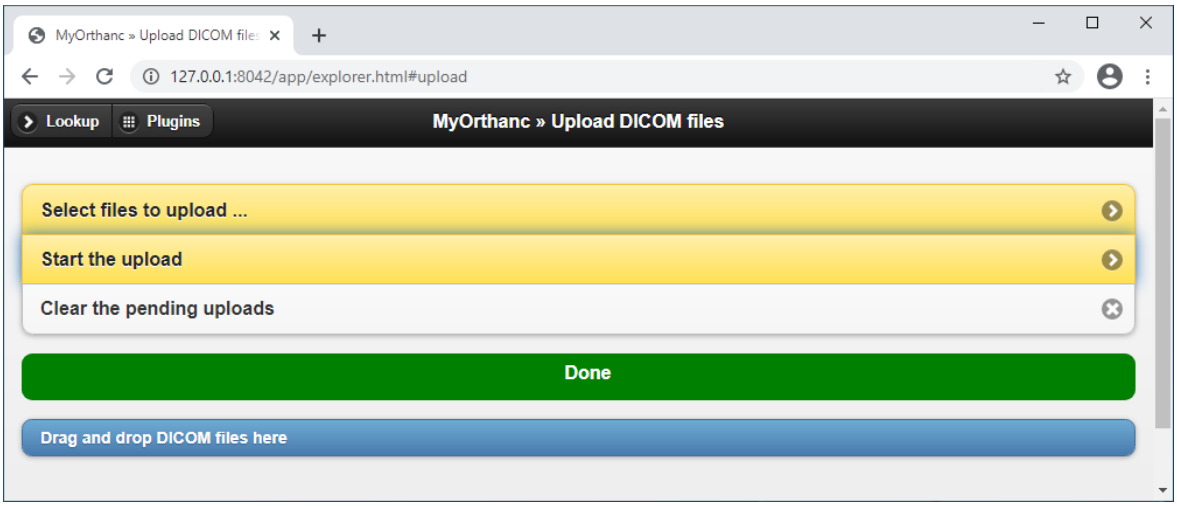
- **Click** “Select files to upload”, **select** the DICOM files you want to upload and click **Open** button:



- In the **"Drag and drop DICOM files here"** section you can see the selected files. Click **"Start the upload"** button to upload files to the repository:



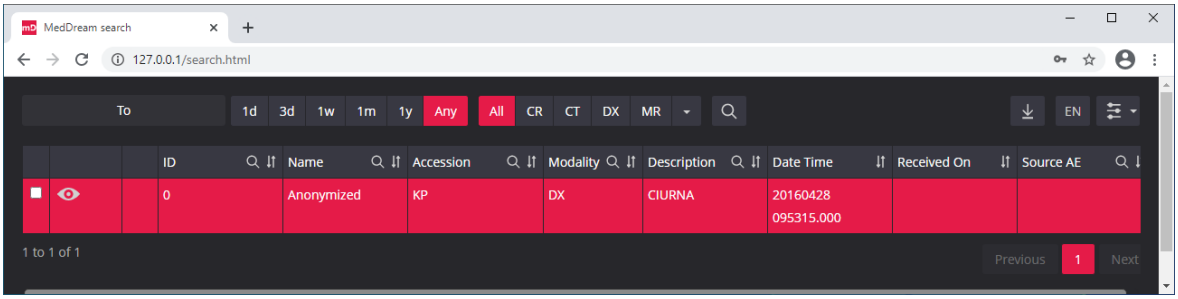
- When the DICOM files are uploaded to the repository, the system displays a “Done” success message.



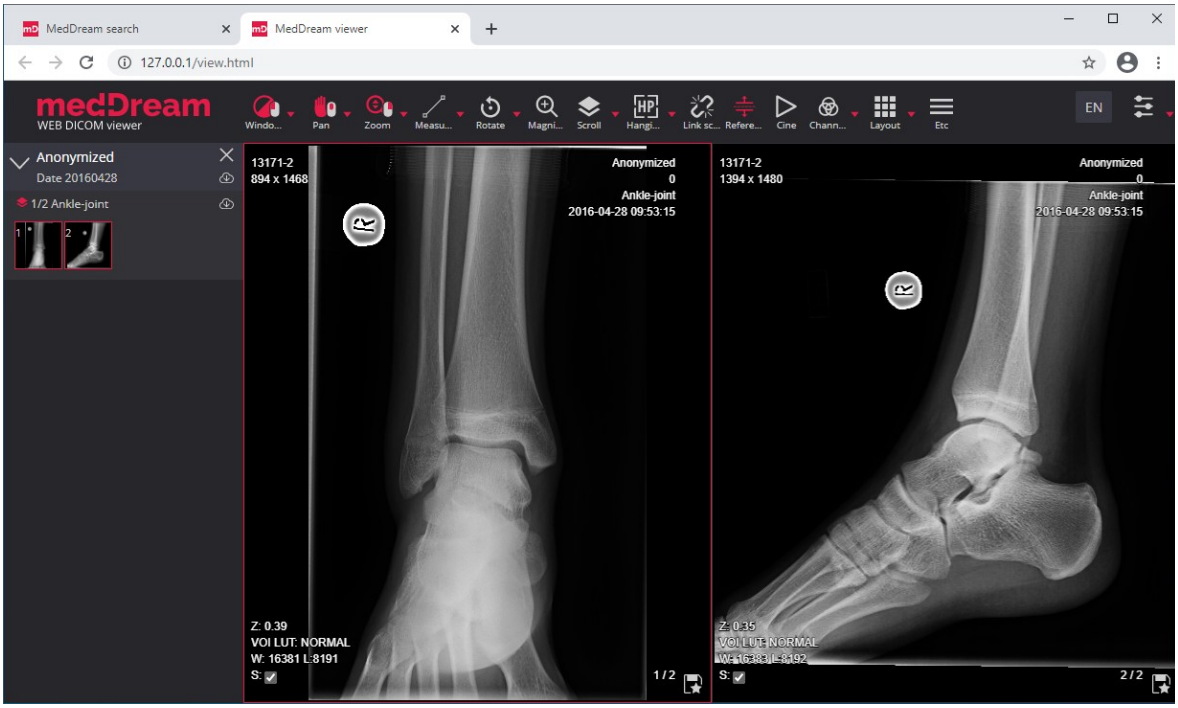
TIP: Samples of anonymized studies can be downloaded from https://demo.meddream.com/ (Login –> Open the selected study –> Click Export –> Select the DICOM format and click Export again –> Press the Download link).

5 **Review uploaded studies in the MedDream Viewer:**

- **Type** http://127.0.0.1/ into your browser's address bar again. **Login** with user **demo,** password **demo** and **change** the date range selection by pressing **<Any>** button. Now you can see your studies in the list:



- **Click** once on the study with the left mouse button. MedDream Viewer opens the study in a new browser tab:



6 Now you can try and see how powerful and useful this tool is.

TROUBLESHOOTING

✓ You must restart the MedDream service each time after changes to the application.properties file or if something went wrong. You can restart the service by running in cmd line: services.msc -> then selecting MedDream service and clicking Restart on the left.

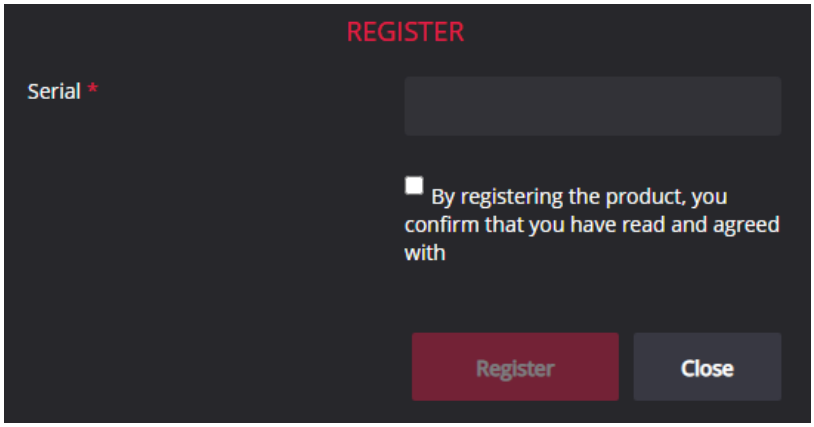
✓ If you can't open the studies, clearing your browser's cache may help. Open a browser and press **CTRL+SHIFT+DEL**. Then select which old data you want to delete and click **Clear** data.

✓ MedDream DICOM Viewer logs are stored in the **C:\MDPACK-LITE\MedDream\meddream.main.log**. The standard logging level in the application.properties file is set to INFO. If the log contains too little information, you can change the logging level to **DEBUG** by changing the value of the logging.level.com.softneta parameter.

LICENSE

MedDream DICOM Viewer licensed under the Commercial License. Please contact sales@meddream.com to get TRIAL or Commercial license. If you have a License Serial number, follow these instructions:

1. Press **Register** button. The system opens a license registration window:



2. Enter the name of the organization and the license **Serial** number you received.

3. Click on the link **EULA** and read Software License Agreement. After reading, close the window by clicking the **<Close>** button.

4. **Check** the box ☐ to confirm that you accept license agreement.

5. Press **Register** button. The license will be successfully registered.

NOTE: If you have any questions about MedDream licenses and prices, please contact our SALES team by e-mail sales@meddream.com or by phone +370 670 15991.

HELP AND RESOURCES

✓ Detailed MedDream installation and configuration instructions are provided in the install manual. You can download it from here: https://www.meddream.com/files/meddreamviewer/doc/MedDream-DICOM-Viewer-Install-Manual.pdf

- We are constantly improving this product. Get the most out of your MedDream Viewer with updated features and performance.
- Download the User manual from https://www.meddream.com/files/meddreamviewer/doc/MedDream-DICOM-Viewer-User-Manual.pdf and get more information about this device.
- Read short instructions and watch tutorial videos here: https://www.meddream.com/documentation/user-guide/user-introduction/
- Our great SUPPORT team is always ready to help you. If you have any questions, please write an email to support@meddream.com or call +370 672 62795.