



MedDream (version 8.3.0)

INSTALL MANUAL

of MedDream PACS functionalities

version 7.3.1

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ABOUT SOFTWARE

This guide describes MedDream viewing and PACS functionalities deployment on Windows x64. MedDream PACS Premium software package contains all the software required to run MedDream viewing and PACS functionalities 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



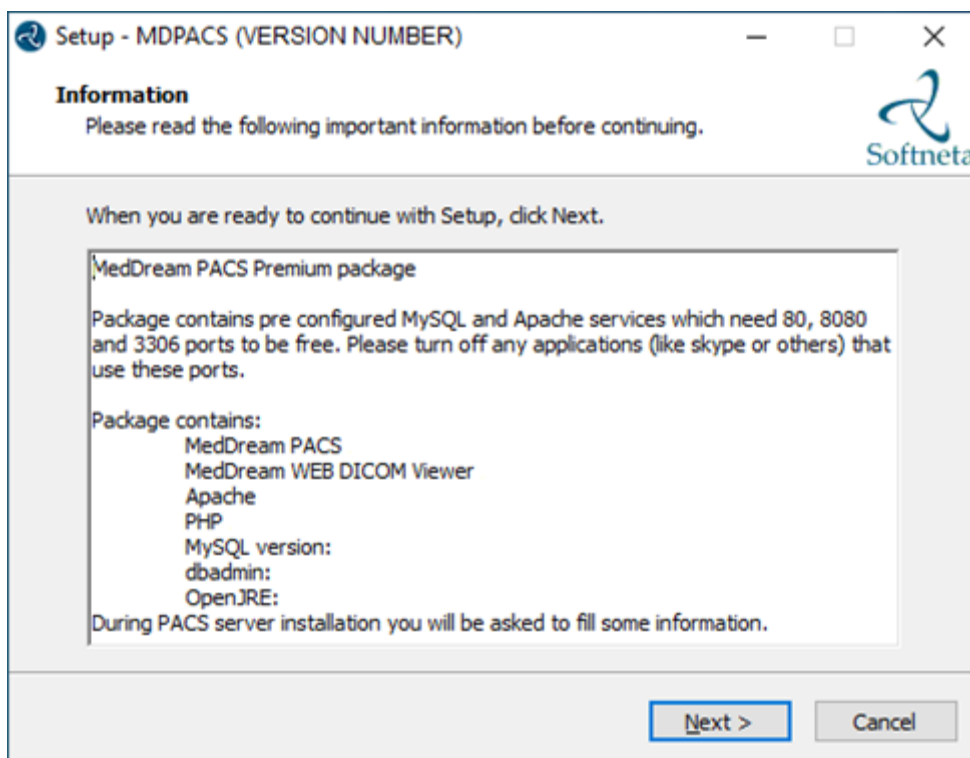
Check [User Manual](#) section: "Product installation" to find out minimal hardware requirements.

INSTALLATION FOR THE FIRST TIME

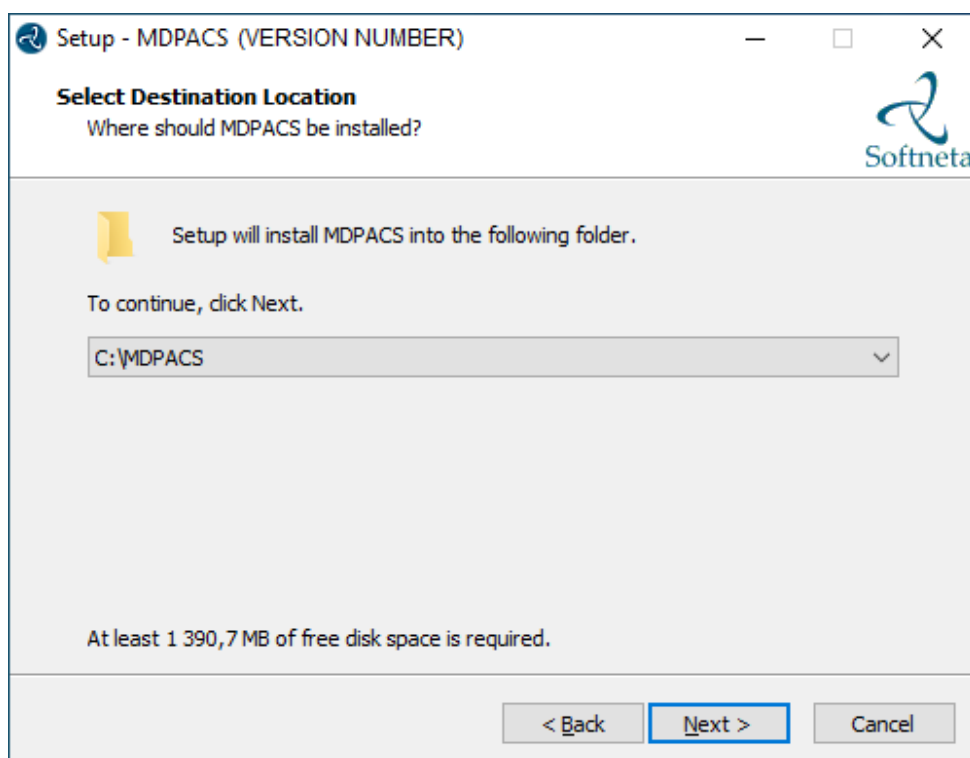
1

Install all in one package (MedDream DICOM Viewer, MedDream PACS, MySQL database and additional programs):

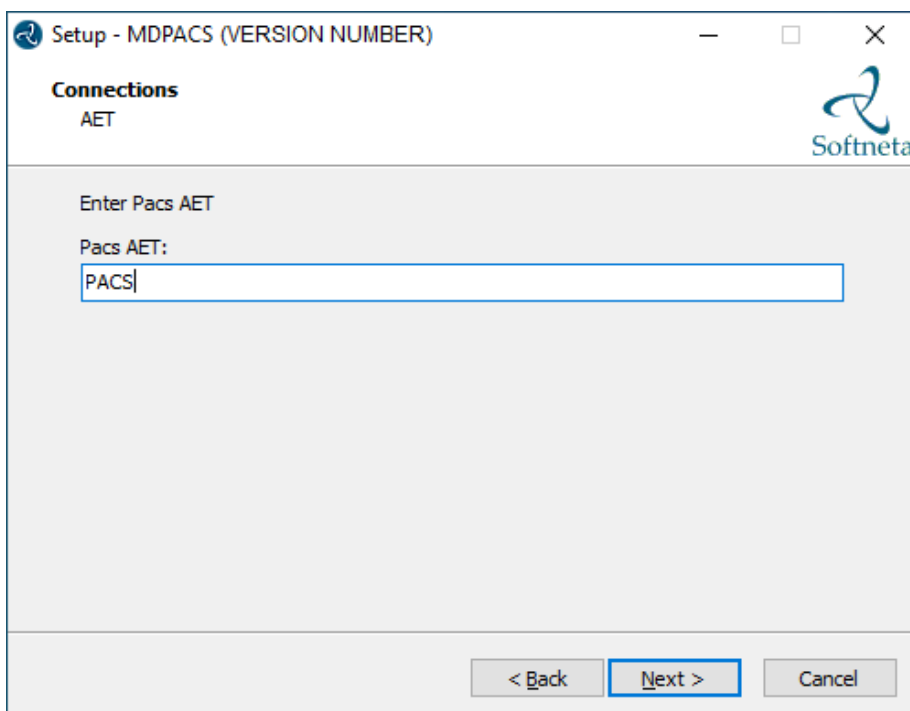
- **Download** the latest Windows version of the package from the Softneta website: <https://www.softneta.com/files/meddreampacs/premium/LATEST/MedDream-PACS-Premium.exe>
 - **Execute MedDream-PACS-Premium.exe** and click **Next >** button:
-



- Choose **C:\MDPACS** and click **Next >** button:



- **Enter** Pacs AET, such as PACS. Remember it, you will need to specify the exact same AET name in the PACS configuration. Then click **Next >** button:



Setup - MDPACS (VERSION NUMBER)

Connections
AET

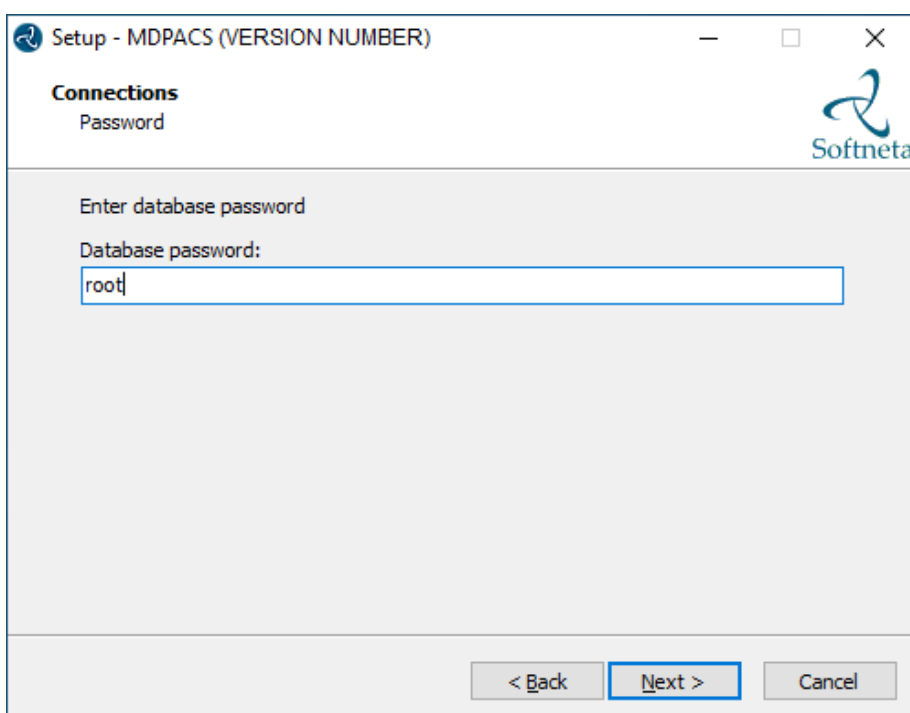
Enter Pacs AET

Pacs AET:
PACS

< Back **Next >** Cancel

TIP: Pacs AET will be saved in the C:\MDPACS\MedDream\application.properties file.

- **Enter** database password. Remember it. Then click **Next >** button:



Setup - MDPACS (VERSION NUMBER)

Connections
Password

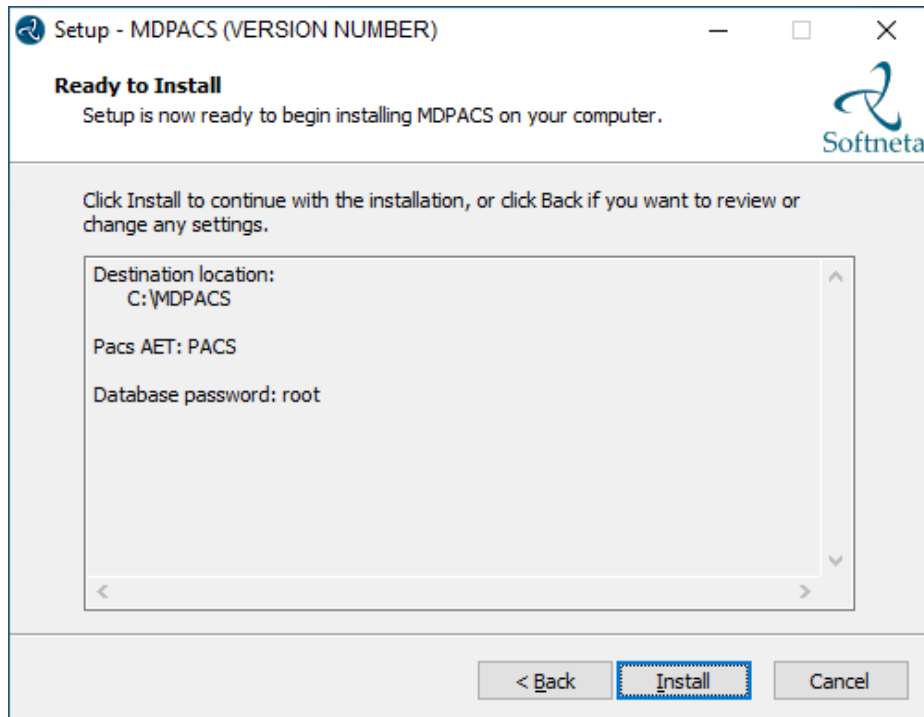
Enter database password

Database password:
root

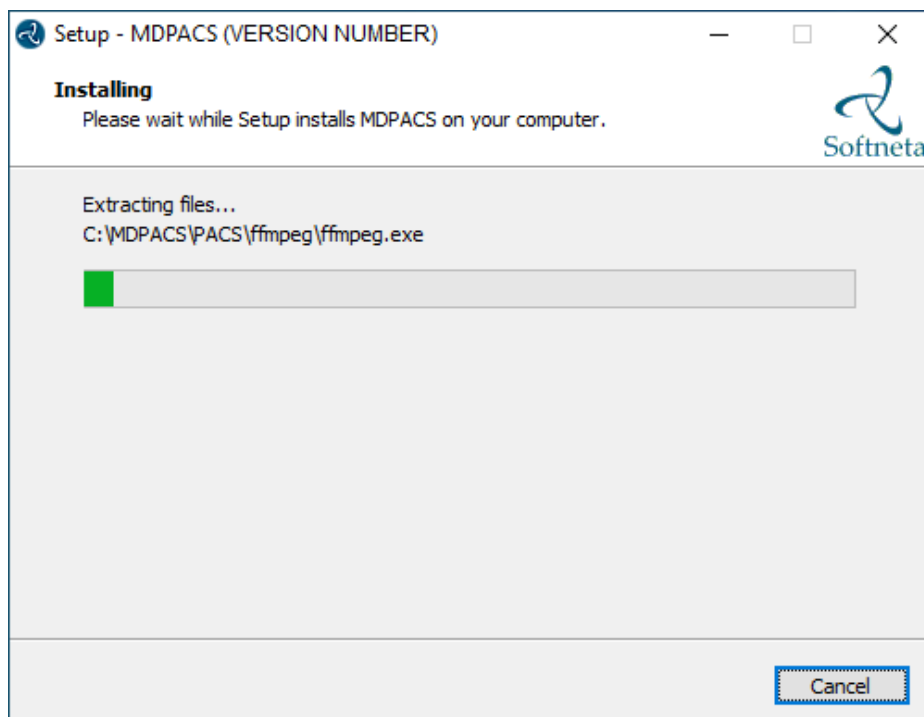
< Back **Next >** Cancel

TIP: Database password will be saved in the C:\MDPACS\MedDream\application.properties file.

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



- A progress bar will be displayed during the MDPACS installation process:



- Once MedDream PACS is installed, the MedDream PACS configuration begins. **Follow the steps below to install and configure the MedDream PACS server.**
 - **DICOM part:**
 - **Change** "Application Entity Title" to the same AET you specified before, e.g., PACS.
 - **Change** "Server Port" to e.g., 104.
 - **Database part:**
 - **Change** "Database Name" to e.g., PACS.
 - **Enter** "Password" for database user "dicom".

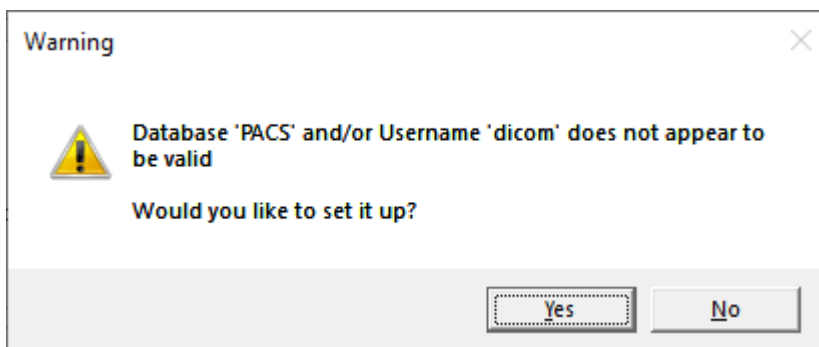
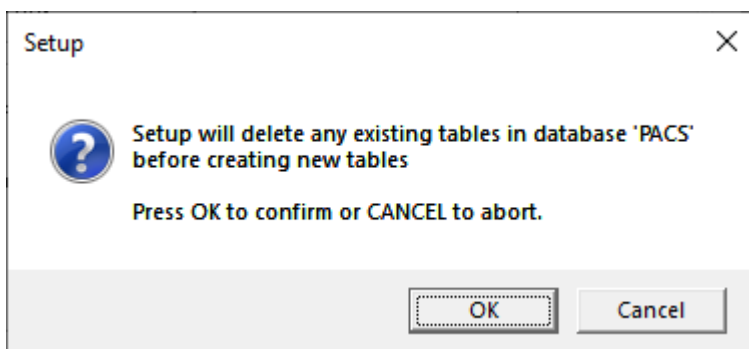
- **Storage part.**
 - **Specify** the storage location for the DICOM files, e.g., C:\MDPACS\DICOM.
- **Click Install** button.

The screenshot shows the 'MedDream PACS Premium Installer' window with the following configuration options:

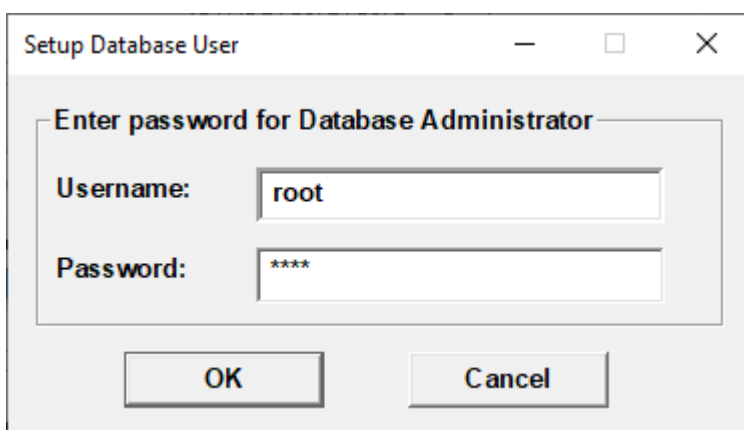
- DICOM**
 - Application Entity Title: PACS
 - Server Port: 104
 - Log File Directory: C:\MDPACS\PACS\log
 - Enable TLS/SSL Option
 - TLS Port: 5678
 - SSL Certificate: C:\MDPACS\PACS\PacsOne.crt (Browse...)
 - SSL Private Key: C:\MDPACS\PACS\PacsOne.key (Browse...)
- Database**
 - Database Host: localhost
 - Database Port: 3306
 - Database Name: PACS
 - Username: dicom
 - Password: *****
- Storage**
 - Default Archive Directory: C:\MDPACS\DICOM
 - Archive Format: DicomPart10 (Default)
- HL-7 Message Listener Option**
 - Enable HL-7 Message Listener Option
 - HL-7 Listener Port: 7777
 - HL-7 Message Persistence: 90 Days

Buttons at the bottom: Upgrade, Install, Uninstall, Cancel.

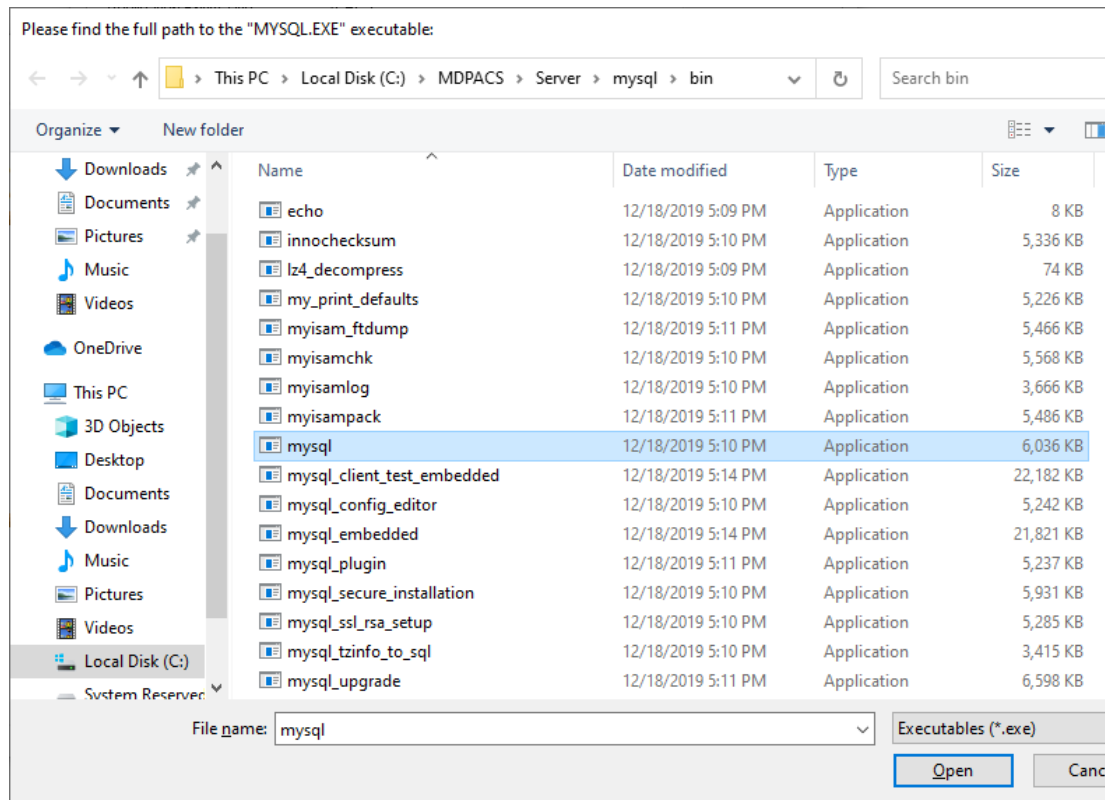
- You will be notified by two messages. It is recommended to press **<OK>** button in the first message and **<Yes>** in the second:



- **Enter** database password for “root” user. Enter **the same password** you specified in the MedDream Viewer installation.

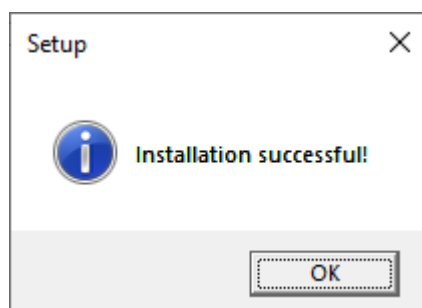


- Find the full path to the “mysql.exe”. Usually, you can find it here: C:\MDPACS\Server\mysql\bin\mysql.exe. Select the file and then click **Open**:



TIP: You can have several MySQL databases installed on your computer, choose correct database.

- When the MedDream PACS installation is complete, a success message is displayed.



- MedDream PACS Premium installation is complete. Click **Finish** button.



CONFIGURATION

- 1 **MedDream Viewer settings.** You can add additional MedDream settings or change existing ones in the C:\MDPACK\MedDream\application.properties file. **The minimum MedDream DICOM Viewer configuration** for opening studies stored on the MedDream PACS Premium 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=${com.softneta.meddream.configRoot}/sys/ffmpeg/ffmpeg.exe

authentication.manager.username=admin
authentication.manager.password=

#management.server.port=8081
```

```
#management.server.address=127.0.0.1
#com.softneta.meddream.maxAttemptsToConnect=5
#com.softneta.meddream.timeoutSeconds=60

#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,SEARCH,PATIENT_HISTORY,UPLOAD_DICOM_LIBRARY,EXPORT_ISO,EXPORT_ARCH, FORWARD, REPORT_UPLOAD, DOCUMENT_VIEW, FREE_DRAW_EDIT, SMART_DRAW_EDIT, CLEAR_CACHE, USER_SETTINGS
#authorization.users[0].accessibleStorages=PacsOneQR,d4c5Dicomweb

logging.level.ROOT=ERROR
#logging.level.com.softneta=INFO
logging.file.name=meddream

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

#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.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.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.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.meddream.pacs.configurations[0].type=PacsOne
com.softneta.meddream.pacs.configurations[0].id=PacsOneLocal
#com.softneta.meddream.pacs.configurations[0].forwardApiEnabled=false
com.softneta.meddream.pacs.configurations[0].url=jdbc:mysql://127.0.0.1:3306/PACS
#com.softneta.meddream.pacs.configurations[0].url=jdbc:postgresql://127.0.0.1:5432/PACS
com.softneta.meddream.pacs.configurations[0].username=root
com.softneta.meddream.pacs.configurations[0].password=root
#com.softneta.meddream.pacs.configurations[0].mappedStorageLocation=C://PacsStorage//Studies
s=Z://Studies1|E://DICOM//=Z://Studies2
com.softneta.meddream.pacs.configurations[0].useModalityAggregation=true

```

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

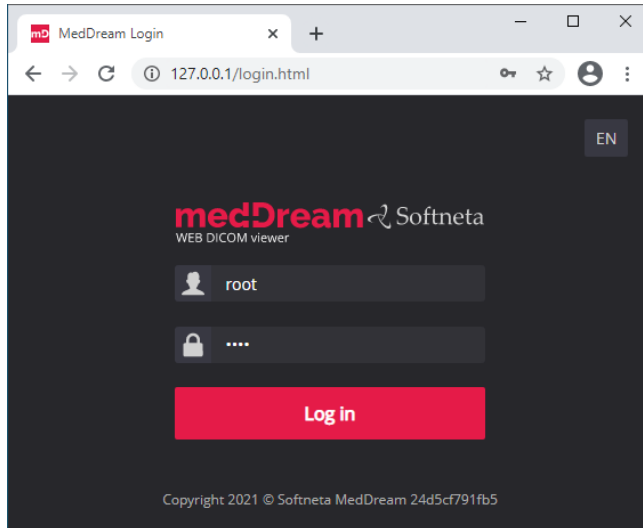
VERIFICATION

1

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

2

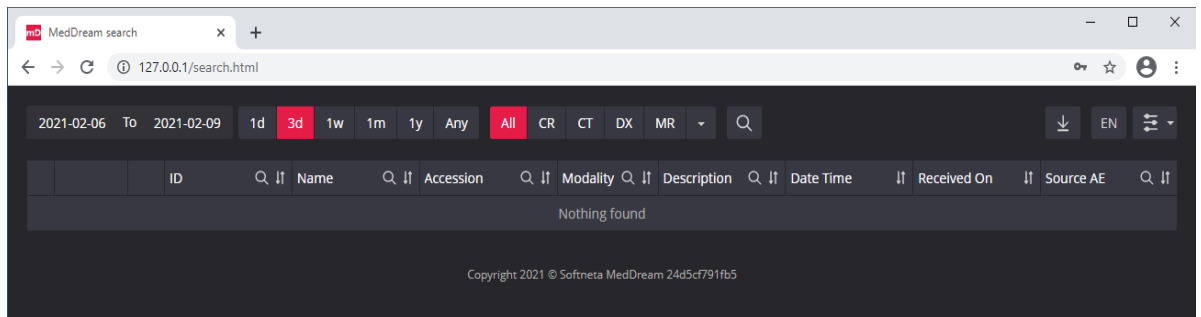
In the login window, enter the username "root" and the password of this user. Press **Log in** button:



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

3

If you did not upload the studies using the MedDream PACS user interface, you will see an empty list of studies:



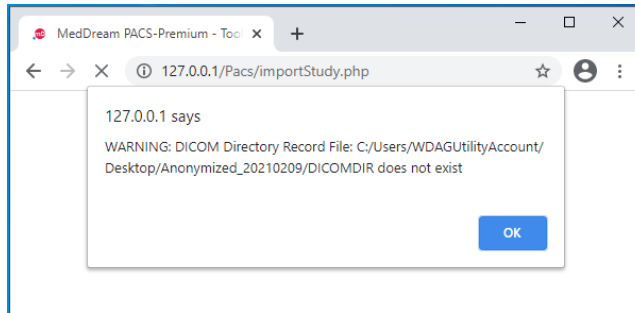
4

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

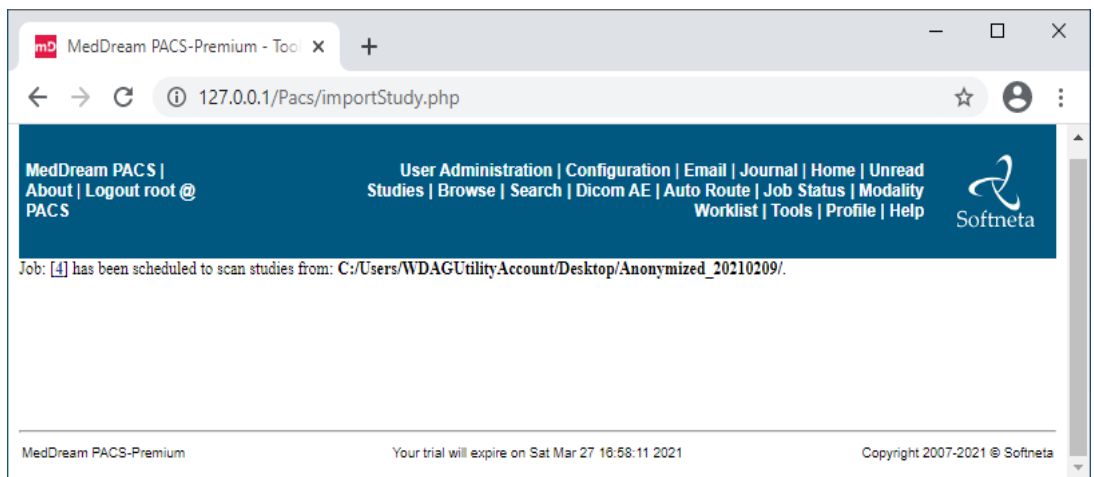
- **Open** a browser and **enter** the MedDream PACS URL <http://127.0.0.1/Pacs> (P must be a capital letter). **Enter** your login credentials and press **<Login>** button:

- Click **“Tools”** menu. DICOM images can be uploaded to the server by importing a directory with DICOM files. Click **“Import”** submenu and **enter** the full path to the local directory with files. Press **<Import Studies>** button.

- Press **<OK>** button in the warning message:



- **Click** on the link with job number:



- **Review jobs.** In the “My Submitted Jobs” table you can verify if the import was successful and how many files were imported to the server:

The screenshot shows the MedDream PACS status page. The browser address bar displays '127.0.0.1/Pacs/status.php?type=0'. The page header includes navigation links like 'User Administration', 'Configuration', and 'Email'. The main content area is titled 'My Submitted Jobs' and indicates '1 completed jobs. Completed jobs will be deleted after a period of 24 hours'. Below this, a table lists the job details:

ID	Username	AE Title	Type	Class	Universally Unique ID (UUID)	Schedule	Priority	Submit Time	Start Time	Finish Time	Status	Retries	Details	Retry Interval	N/A
<input type="checkbox"/>	3	root	N/A	import study	2021-02-10 17:36:41	Immediately	Medium	2021-02-10 17:36:41	2021-02-10 17:36:42	2021-02-10 17:36:47	success	0	2 images imported.	0	N/A

Below the table are 'Check All' and 'Delete' buttons. The page also shows '0 pending or failed jobs' and 'Other User's Jobs' with a summary of 0 completed, 0 pending, 0 failed, 0 scheduled immediately, 0 scheduled later, and 0 warning jobs.

TIP: Samples of anonymized studies can be downloaded from <https://demo.softneta.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:

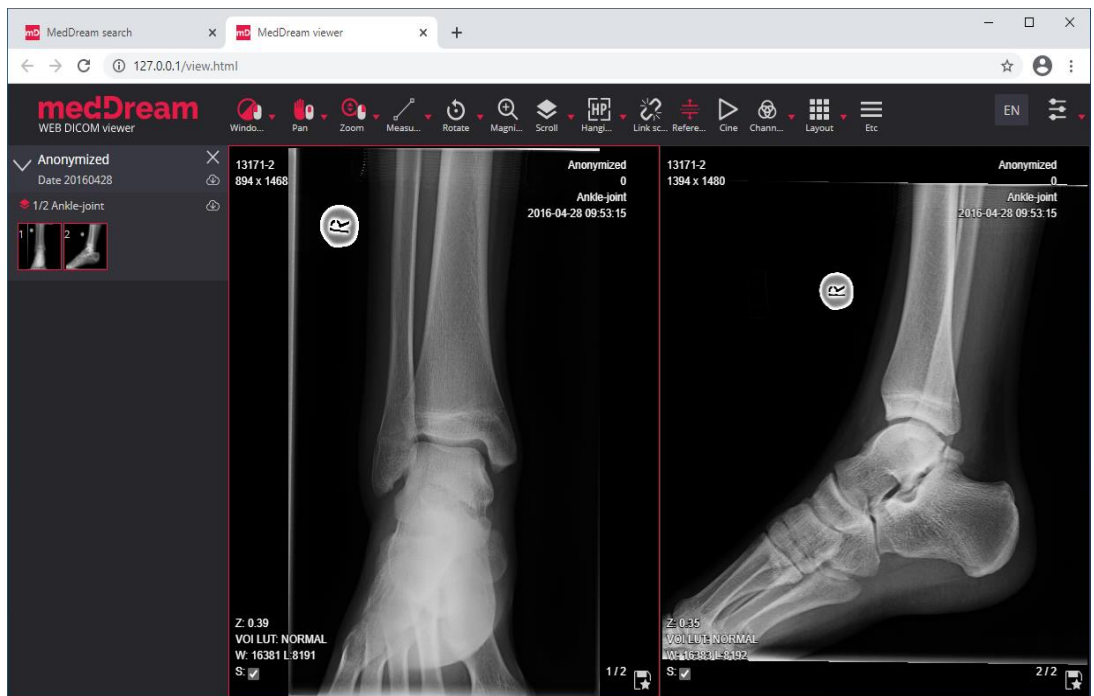
- Type <http://127.0.0.1/> into your browser's address bar again. **Login** with user **demo**, password **demo** and **change** the date range selection by pressing **<Any>** button. Now you can see your studies in the list:

The screenshot shows the MedDream search results page. The browser address bar displays '127.0.0.1/search.html'. The search filters are set to 'Any' for the date range. The search results table is as follows:

ID	Name	Accession	Modality	Description	Date Time	Received On	Source AE
0	Anonymized	KP	DX	CIURNA	20160428 095315.000		

The page shows '1 to 1 of 1' results and navigation buttons for 'Previous' and 'Next'.

- **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.

SECURITY RECOMMENDATIONS

Softneta recommends users take defensive measures to minimize the risk of exploitation of the vulnerabilities. Specifically, users should:

- ✓ Minimize network exposure for all control system devices and/or systems, and ensure they are not accessible from the Internet.
- ✓ Locate control system networks and remote devices behind firewalls and isolate them from business networks.
- ✓ When remote access is required, use secure methods, such as virtual private networks (VPNs), recognizing VPNs may have vulnerabilities and should be updated to the most current version available. Also recognize VPN is only as secure as its connected devices.

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\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 info@softneta.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 info@softneta.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.softneta.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.softneta.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.softneta.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@softneta.com or call +370 672 62795.



MedDream is manufactured by Softneta UAB.
Medical device class: Regulation (EU) 2017/745
Class IIb medical device
FDA cleared K222320
ID of the notified body: 0197
Document version 3.0
Date of issue: 2023-10-24
Language: EN
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CE 0197
Class IIb certified

FDA K222320
CLEARED 510(k)