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**MedDream (version 8.0.0)**

**INSTALL MANUAL**

**of MedDream PACS functionalities**

**version 7.2.6**

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## ABOUT SOFTWARE

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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 viewing functionalities can be integrated into HIS/RIS/EHR/EMR, Telemedicine, Patient Portals, National Systems, CAD and AI algorithms. MedDream Universal Enterprise viewing functionalities 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

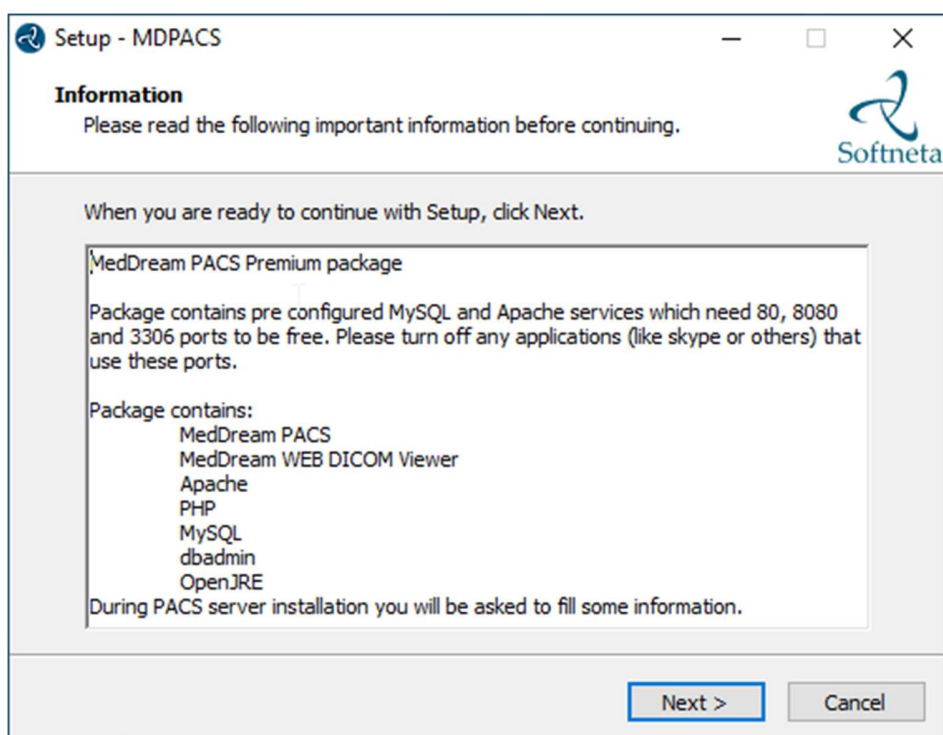
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-  The Operating system is **Windows 10 (x64)** or one of the **Windows Server (x64)** versions: 2012, 2012 R2, 2016, 2019.
-  Make sure the server has at least **2 GHz CPU with 2 cores, 3 GB of RAM, 20 GB** of available **hard disk** space. Network bandwidth is not less than **4 Mbit/s**.

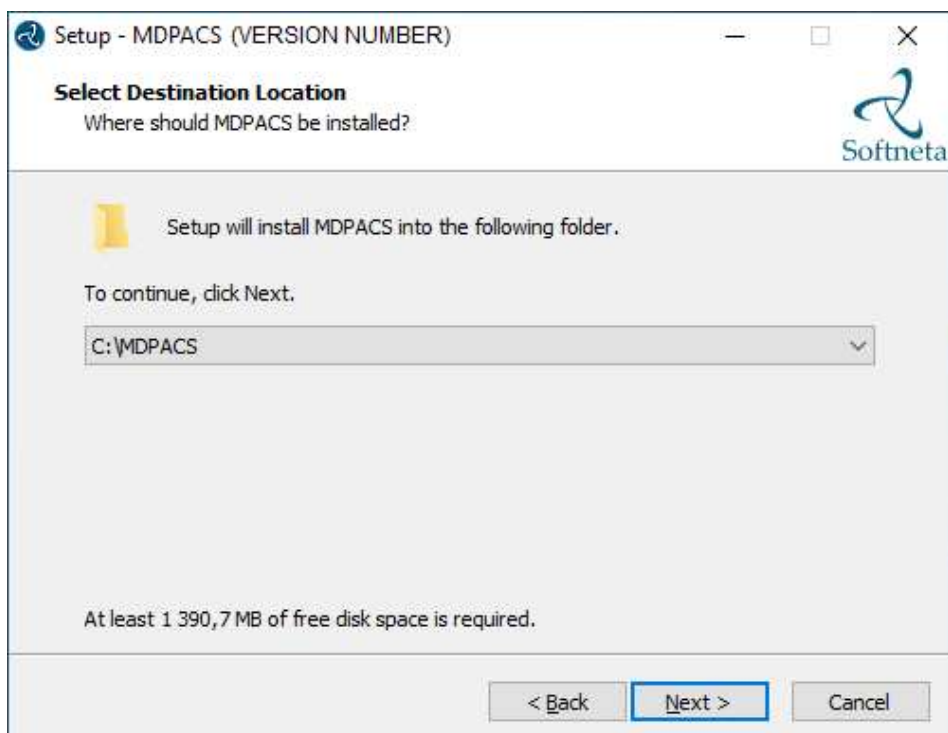
## INSTALLATION FOR THE FIRST TIME

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-  **Install all in one package (MedDream DICOM Viewer functionalities, MedDream PACS functionalities, MySQL database and additional programs):**
  - **Download** the latest Windows version of the package from the Softneta website: <https://www.softneta.com/files/meddreampacs/premium/220901/MedDream-PACS-Premium-7.2.6.800.exe>
  - **Execute MedDream-PACS-Premium-7.2.6.800.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

Connections  
AET

Softneta

Please 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

Connections  
Password

Softneta

Please enter password for MySQL root user

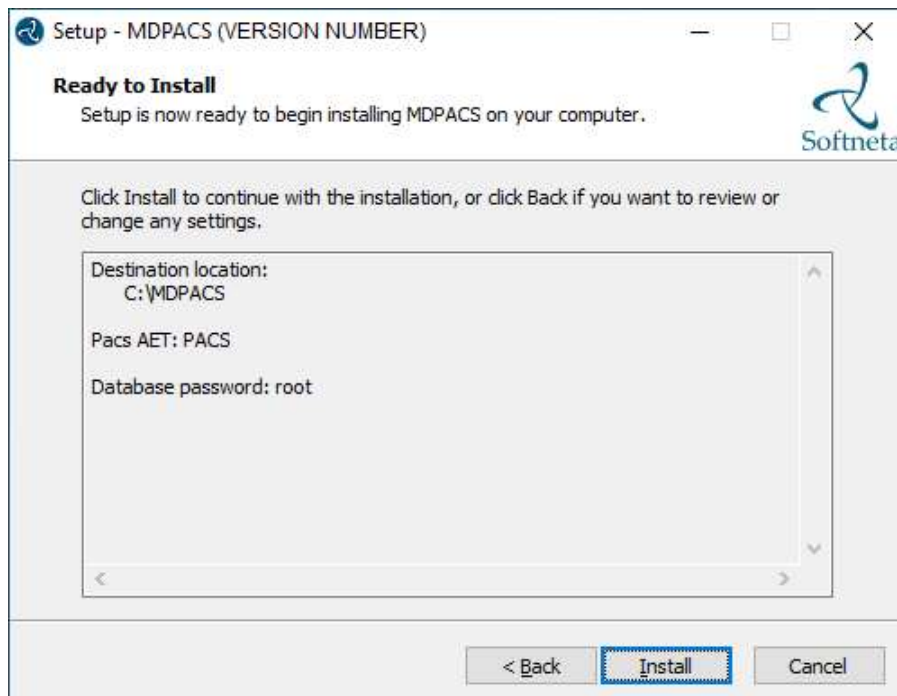
Password:

root

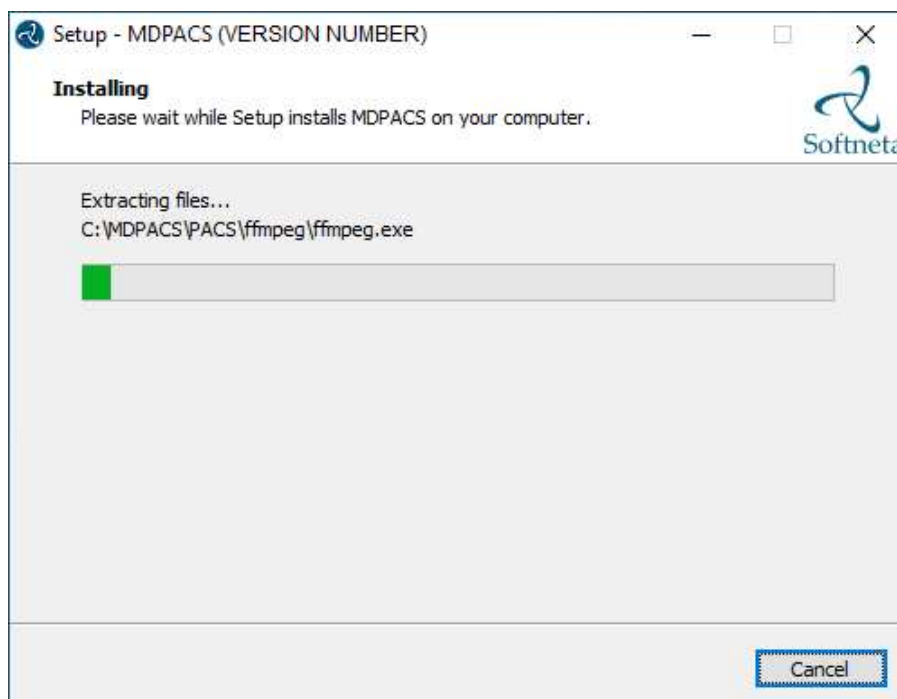
< Back Next > Cancel

**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 MedDream Viewer functionalities installation process:



- Once MedDream Viewer is installed, the MedDream PACS configuration begins. **Follow the steps below to install and configure the MedDream PACS server.**

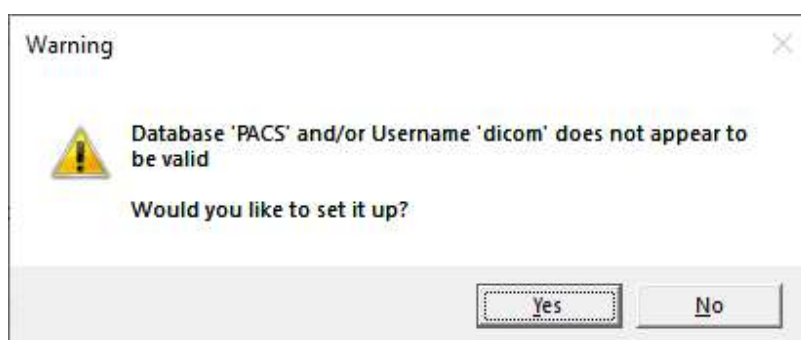
- **DICOM part:**
  - **Change** “Application Entity Title” to the same AET you specified before, e.g., PACS.
  - **Change** “Server Port” to e.g., 104.
- **Database part:**
  - **Change** “Database Name” to e.g., PACS.
  - **Enter** “Password” for database user “dicom”.
- **Storage part.**
  - **Specify** 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 details:

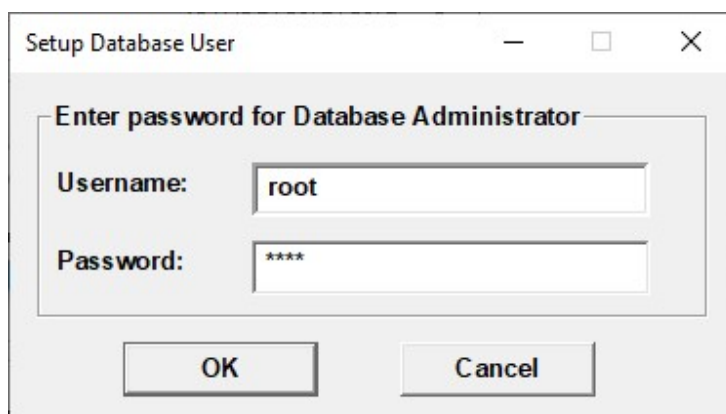
- DICOM section:**
  - Application Entity Title: PACS
  - Server Port: 104
  - Log File Directory: C:\MDPACS\PACS\log
  - Enable TLS/SSL Option
  - TLS Port: 5678
  - SSL Certificate: C:\MDPACS\PACS\PacsOne.crt (Browse...)
  - SSL Private Key: C:\MDPACS\PACS\PacsOne.key (Browse...)
- Database section:**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

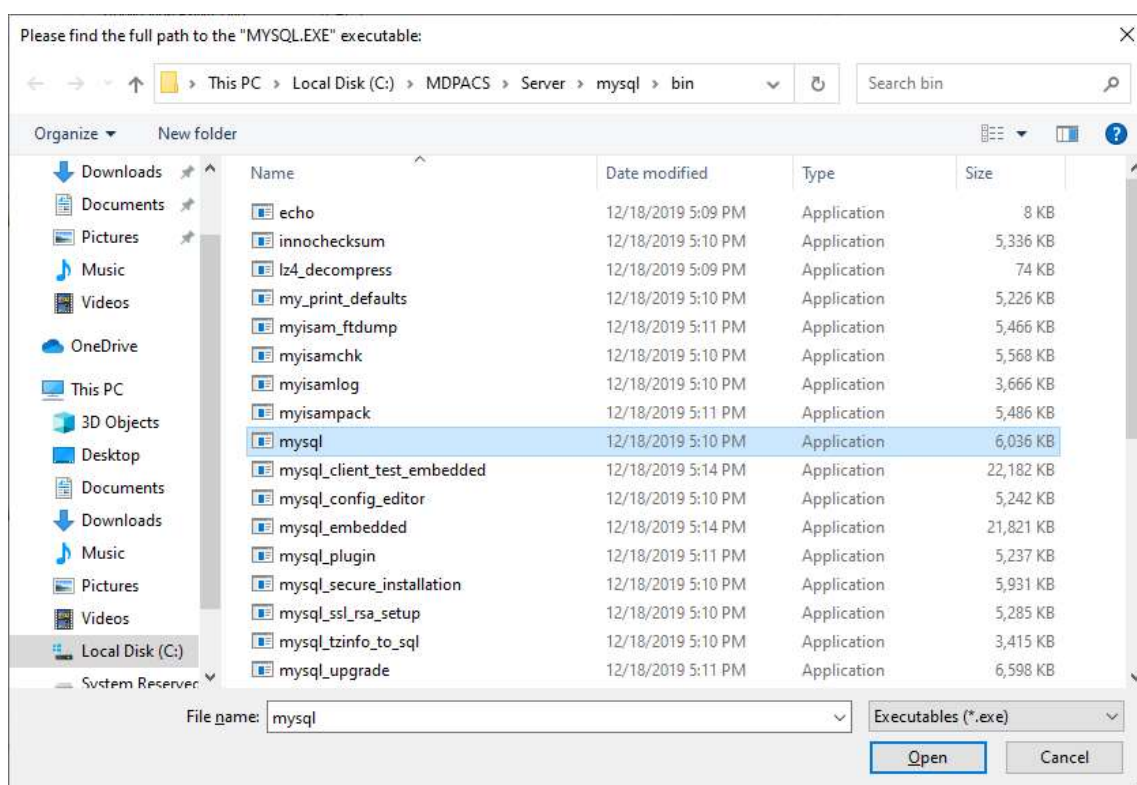


- **Enter** database password for “root” user. Enter **the same password** you specified in the MedDream Viewer installation.



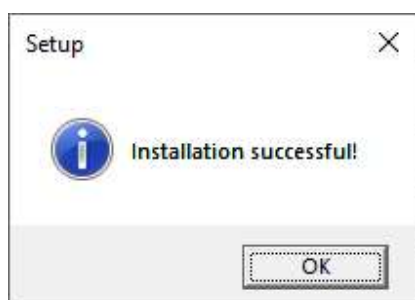
- **Find** the full path to the “**mysql.exe**”. Usually, you can find it here: C:\MDPACS\Server\mysql\bin\mysql.exe. **Select** the file and then click **Open**:





**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 functionalities installation is complete. Click **Finish** button.



## CONFIGURATION

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1

**MedDream Viewer functionalities 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=8080
```

```
com.softneta.preparation.coreThreadCount=40
```

```
com.softneta.preparation.maxThreadCount=50
```

```
com.softneta.preparation.multiFrameThreadCount=20
```

```
com.softneta.tempCleaner.cleanRateMilliSec=1800000
```

```
# incidental leftovers from Export
```

```
com.softneta.tempCleaner.tempItems[0].directory=${com.softneta.meddream.tempDir}
/archive
```

```
com.softneta.tempCleaner.tempItems[0].pattern=*
```

```
com.softneta.tempCleaner.tempItems[0].olderThanSec=7200
```

```
# incidental leftovers from Burn
com.softneta.tempCleaner.tempItems[1].directory=${com.softneta.meddream.tempDir}
com.softneta.tempCleaner.tempItems[1].pattern=*_export
com.softneta.tempCleaner.tempItems[1].olderThanSec=21600
com.softneta.tempCleaner.tempItems[1].matchAnyDepth=false

# incidental leftovers from Forward
com.softneta.tempCleaner.tempItems[2].directory=${com.softneta.meddream.tempDir}
com.softneta.tempCleaner.tempItems[2].pattern=forward_*.dcm
com.softneta.tempCleaner.tempItems[2].olderThanSec=7200
com.softneta.tempCleaner.tempItems[2].matchAnyDepth=false

# leftovers from MPR (no cleaning by other means so far)
com.softneta.tempCleaner.tempItems[3].directory=${com.softneta.meddream.tempDir}/3d
com.softneta.tempCleaner.tempItems[3].pattern=*
com.softneta.tempCleaner.tempItems[3].olderThanSec=7200

# incidental leftovers from viewing some videos
com.softneta.tempCleaner.tempItems[4].directory=${com.softneta.video.convertedDir}
com.softneta.tempCleaner.tempItems[4].pattern=*
com.softneta.tempCleaner.tempItems[4].olderThanSec=3600

# files prepared both on demand and in background (no cleaning by other means so far)
com.softneta.tempCleaner.tempItems[5].directory=${com.softneta.preparation.cacheDir}
com.softneta.tempCleaner.tempItems[5].pattern=*
com.softneta.tempCleaner.tempItems[5].olderThanSec=604800

# incidental leftovers from Share
com.softneta.tempCleaner.tempItems[6].directory=${com.softneta.dicom.library.
upload.tempDir}
com.softneta.tempCleaner.tempItems[6].pattern=*
com.softneta.tempCleaner.tempItems[6].olderThanSec=86400
##### Miscellaneous

# Number of times a failed background job will be restarted.
# Default value: 3
```

---

```
spring.batch.job.maxFailedJobRestarts=10
```

```
spring.profiles.include=auth-pacsone
```

```
authorization.defaultLoginPermissions=SEARCH,EXPORT_ISO,EXPORT_ARCH,FORWARD,
REPORT_VIEW,REPORT_UPLOAD,PATIENT_HISTORY,UPLOAD_DICOM_LIBRARY,3D_RENDERING,ADMIN,
DOCUMENT_VIEW
```

```
authorization.users[0].userName=root
```

```
authorization.users[0].role=SEARCH,EXPORT_ARCH,FORWARD,REPORT_VIEW,REPORT_UPLOAD,
PATIENT_HISTORY,UPLOAD_DICOM_LIBRARY,3D_RENDERING,ADMIN,VIEW_PRIVATE,DOCUMENT_VIEW
```

```
com.softneta.meddream.loginEnabled=true
```

```
logging.file.name=mdjavacore.log
```

```
logging.level.com.softneta=ERROR
```

```
com.softneta.dicom.library.upload.anonymized=true
```

```
com.softneta.meddream.pacs.configurations[0].type=PacsOne
```

```
com.softneta.meddream.pacs.configurations[0].id=Pacs
```

```
com.softneta.meddream.pacs.configurations[0].username=root
```

```
com.softneta.meddream.pacs.configurations[0].searchApiEnabled=true
```

```
com.softneta.meddream.pacs.configurations[0].imageApiEnabled=true
```

```
##To enable "Save annotation" and "SHARE" functions configure and uncomment below 3
lines. Add MEDDREAM AETitle into PACS system to accept annotations.
```

```
#com.softneta.meddream.pacs.configurations[0].storeScpAet=PACS
```

```
#com.softneta.meddream.pacs.configurations[0].storeScpIp=127.0.0.1
```

```
#com.softneta.meddream.pacs.configurations[0].storeScpPort=104
```

```
com.softneta.meddream.pacs.configurations[0].encoding=ISO-8859-1
```

```
com.softneta.meddream.pacs.configurations[0].encodingTo=
```

```
com.softneta.meddream.pacs.configurations[0].password=root
```

```
authentication.database.databaseName=PACS
```

```
authentication.database.jdbcUrl=jdbc:mysql://127.0.0.1:3306/PACS
```

```
com.softneta.meddream.pacs.configurations[0].url=
```

```
jdbc:mysql://127.0.0.1:3306/PACS?characterEncoding=latin1
```

**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.

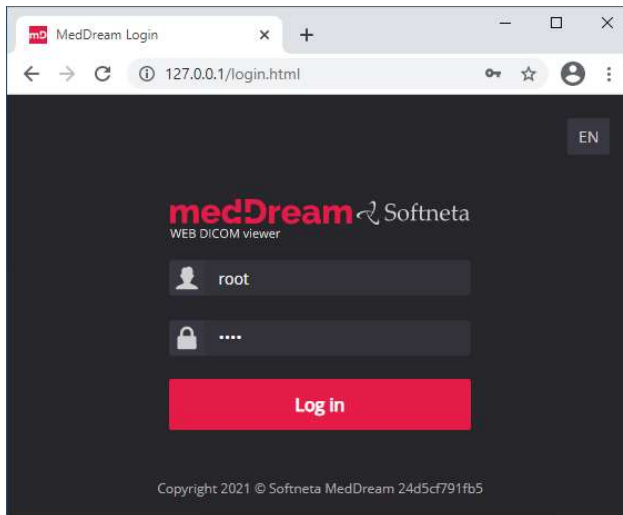
## INSTALLATION VERIFICATION

1

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

2

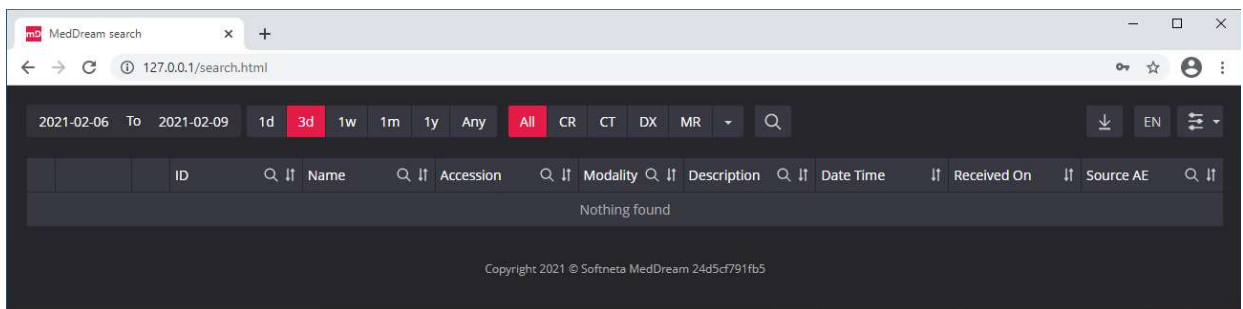
In the login window, enter the username “root” and the password of this user. Press **Log in** button:



**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:



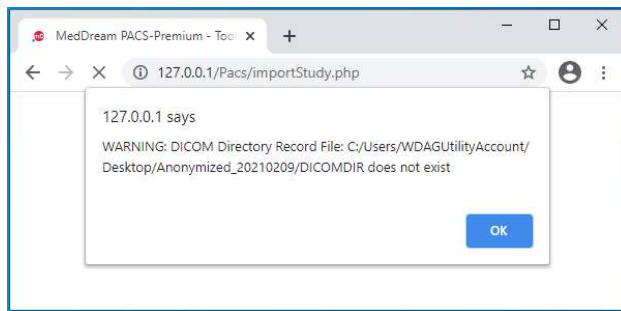
4

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

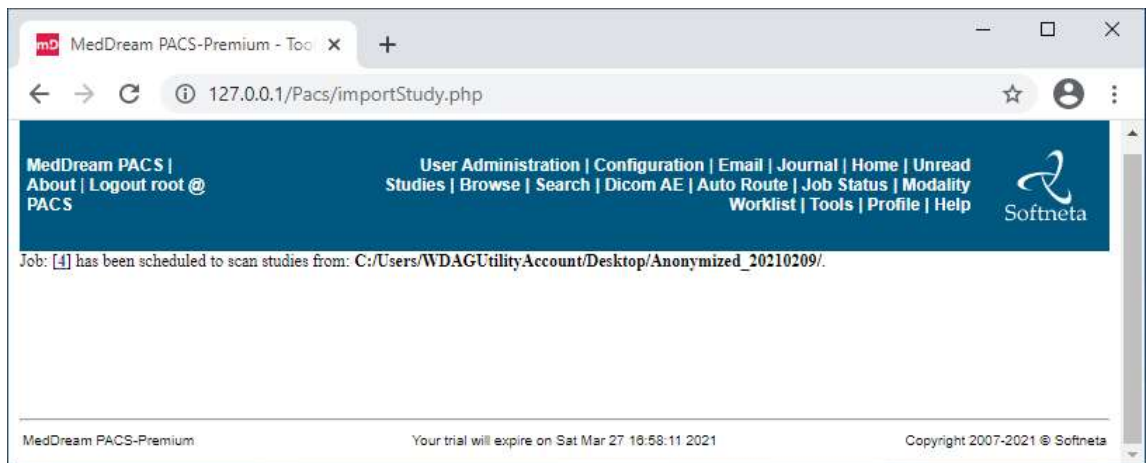
- **Open** a browser and **enter** the MedDream PACS URL <http://127.0.0.1/Pacs> (P must be a capital letter). **Enter** your login credentials and press **<Login>** button:

- 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-Premium web interface. The top navigation bar includes links for 'About', 'Logout', 'User Administration', 'Configuration', 'Email', 'Journal', 'Home', 'Unread Studies', 'Browse', 'Search', 'Dicom AE', 'Auto Route', 'Job Status', 'Modality Worklist', 'Tools', 'Profile', and 'Help'. 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, there is a table with columns: ID, Username, AE Title, Type, Class, Universally Unique ID (UUID), Schedule, Priority, Submit Time, Start Time, Finish Time, Status, Retries, Details, Retry Interval, and N/A. A single job is listed with ID 3, Username root, AE Title N/A, Type import study, Class 2021-02-10 17:36:41, Schedule Immediately, Priority Medium, Submit Time 2021-02-10 17:36:41, Start Time 2021-02-10 17:36:42, Finish Time 2021-02-10 17:36:47, Status success 0, Retries 2 images imported, and Retry Interval 0. Below the table are 'Check All' and 'Delete' buttons. The interface also shows '0 pending or failed jobs' and 'Other User's Jobs' with a summary bar for 0 Completed, 0 Pending, 0 Failed, 0 Scheduled Immediately, 0 Scheduled Later, and 0 Warning. The footer contains 'MedDream PACS-Premium', 'Your trial will expire on Sat Mar 27 10:58:11 2021', and 'Copyright 2007-2021 © Softneta'.

**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).

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#### 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 interface. The top navigation bar includes links for 'To', '1d', '3d', '1w', '1m', '1y', 'Any', 'All', 'CR', 'CT', 'DX', 'MR', and a search icon. Below this, there is a table with columns: ID, Name, Accession, Modality, Description, Date Time, Received On, and Source AE. A single study is listed with ID 0, Name Anonymized, Accession KP, Modality DX, Description CIURNA, Date Time 20160428 095315.000, and Source AE. Below the table, there is a '1 to 1 of 1' indicator and 'Previous', '1', 'Next' buttons.

- **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 CONSIDERATIONS

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It's recommended to run PHP as an Apache module instead of CGI executables due to both performance and security reasons.



SESSION.SAVE\_PATH is an existing directory path to store the temporary PHP session files. Since MedDream PACS uses PHP sessions which may contain MySQL username and password information, it is highly recommended that the security permission for this directory be set to enable access ONLY for the local Administrators and the Windows SYSTEM accounts.

## TROUBLESHOOTING

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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






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MedDream PACS is licensed under the Commercial License. Please contact [info@softneta.com](mailto:info@softneta.com) to get Commercial license.

**NOTE:** If you have any questions about MedDream prices, please contact our SALES team by e-mail [info@softneta.com](mailto:info@softneta.com) or by phone +370 670 15991.

## HELP AND RESOURCES

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-  Detailed MedDream Viewer functionalities 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](mailto:support@softneta.com) or call +370 645 06960.



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