SonicDICOM PACS Starter Guide

Version 3.1

April 15, 2022

©2023 Fujidenolo Solutions Co., Ltd. All rights reserved.

Contents

Introduction
Revision History1
1. Overview
DICOM Server1
DICOM Viewer2
2. Supported Modalities and Images2
3. System Requirements
Server
Hardware3
OS4
Database4
Required Program4
Client4
Web Browser (PC)4
Web Browser (Tablet)5
Web Browser (Tablet)5 4. Limitation of Trial Edition5
Web Browser (Tablet)54. Limitation of Trial Edition55. Download5
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6
Web Browser (Tablet) 5 4. Limitation of Trial Edition 5 5. Download 5 6. Install 6 Install required software 6
Web Browser (Tablet) 5 4. Limitation of Trial Edition 5 5. Download 5 6. Install 6 Install required software 6 Install SonicDICOM PACS 7
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6Install required software6Install SonicDICOM PACS77. Start SonicDICOM PACS12
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6Install required software6Install SonicDICOM PACS77. Start SonicDICOM PACS12Start SonicDICOM PACS12
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6Install required software6Install SonicDICOM PACS77. Start SonicDICOM PACS12Start SonicDICOM PACS12If SonicDICOM PACS fails to start normally15
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6Install required software6Install SonicDICOM PACS77. Start SonicDICOM PACS12Start SonicDICOM PACS12If SonicDICOM PACS fails to start normally15If Web Server fails to start15
Web Browser (Tablet)54. Limitation of Trial Edition55. Download56. Install6Install required software6Install SonicDICOM PACS77. Start SonicDICOM PACS12Start SonicDICOM PACS12If SonicDICOM PACS fails to start normally15If Web Server fails to start15If DICOM Server fails to start18

9. Import DICOM Files	22
Import Sample DICOM Files	22
Import Your DICOM Files	23
10. Send Images to SonicDICOM PACS	23
Check required information	23
1) IP Address	23
2) Port Number	24
3) AE Title	24
Register SonicDICOM PACS information to modalities, etc.	24
Send images from modalities	25
11. Get Images from SonicDICOM PACS	26
Check required information	26
1) IP Address	26
2) Port Number	26
3) AE Title	27
Register information of SonicDICOM PACS to third party's DICOM viewer, etc	27
Register information of third party's DICOM viewer, etc. to SonicDICOM PACS	28
Browse images on DICOM viewer	28
12. Check License ID	29
Check your License ID on PACS Manager	29
Check your License ID on web interface	31
13. Activate	32
Make sure that database has been upgraded	32
Activate on PACS Manager	33
Activate on the web interface	35

PACS Manager	
1. Start/Stop SonicDICOM PACS	
Start SonicDICOM PACS	
How to stop SonicDICOM PACS	42
2. Access Web Interface	43
How to access web interface from PACS Manager	43
How to access web interface from another terminal	43
3. Import DICOM Files	45
4. Set Data Path/Backup Path	48
5. Set Default Character Set	50
6. Set Log Path	52
7. Set Log Level	54
8. Enable HTTPS	56
9. Set Web Server Port	58
10. Switch Database	60
11. Set up Database Backup	63
12. Set up DICOM Connection	66
How to add DICOM Provider	66
How to edit DICOM Provider	69
How to add DICOM User	71
How to edit DICOM User	74
How to delete DICOM Provider/DICOM User	76
13. Activate	78
Make sure that database has been upgraded	78
Activation	79
Advanced	

1. Hardware Configuration	81
SSD/HDD	81
CPU	82
Memory	82
2. Upgrade Database	82
Install Microsoft SQL Server Express	83
Change the database to Microsoft SQL Server	103
Upgrade to Microsoft SQL Server Standard	107
2. Store Data in NAS	109
Enable to use network path	109
Set up permission in Microsoft SQL Server	113
Specify NAS as the storage location for DICOM files and log files	120
4. Restore Database	122
5. Enable HTTPS	130
How to install ISS (Internet Information Services)	130
Creating a Server Certificate	132
Enabling HTTPS communication	135
TIPS	137
How to check your IP Address	137
How to set IP Address	

Introduction

SonicDICOM PACS is software that combines the capabilities of DICOM Server with Web browser based DICOM Viewer.

This document describes overview of SonicDICOM PACS and instructions of installation.

Revision	Date	Description
1.0	November 25, 2013	Initial version
2.0	December 14, 2016	Update for software version 2.3.2
3.0	April 20, 2018	Update for software version 3.0.0
3.1	April 15, 2022	Update for software version 3.9.5 / Add and
		improve articles

Revision History

1. Overview

SonicDICOM PACS is software that combines the capabilities of DICOM Server with Web browser based DICOM Viewer.

DICOM Server

DICOM Server can connect to modalities such as CR, CT, MRI, etc. and can store scanned data.

Also, it can connect to third party's DICOM Viewer that is compliant with the DICOM Standard.

Connection to modalities and third party's DICOM Viewer will be processed in parallel.

So you can simultaneously connect to multiple modalities and DICOM Viewer.

DICOM Viewer

DICOM Viewer is Web browser based.

You can use it from any terminal in the same network by only accessing to the URL on Web browser such as Google Chrome, Mozilla Firefox, etc.

You do not need to install software and not need to add any plug-in to Web browser.

Also, this DICOM Viewer is designed to be simply integrated with Web applications such as HIS, RIS, and others via URL.

NOTE: SonicDICOM PACS should not be used for diagnosis purposes in the country and the region where pharmaceutical approvals (such as FDA, CE, HIPAA, etc.) are required in order to use this product for diagnosis.

2. Supported Modalities and Images

SonicDICOM PACS supports following types of modalities.

- Computed Radiography (CR)
- Computed Tomography (CT)
- Digital X-Ray (DX)
- Endoscope (ES)
- Mammography (MG)
- Magnetic Resonance (MR)
- Nuclear Medicine (NM)
- Positron Emission Tomography PET-CT (PT)
- Radio Fluoroscopy (RF)
- Radiographic Imaging (RG)
- Radiation Therapy (RT)
- Secondary Capture (SC)

- Ultrasound (US)
- X-Ray Angiographic (XA)
- External-camera Photography (XC)

And it can handle the following types of images.

- Monochromatic and color images
- Static images and multiframe images
- Uncompressed and compressed (RLE Lossless, JPEG Lossy, JPEG Lossless, JPEG 2000 Lossy, JPEG 2000 Lossless)

3. System Requirements

System Requirements of SonicDICOM PACS are as below.

Server

Hardware

CPU:

We recommend 2GHz and 4 cores or bigger cores.

3GHz or more is recommended when there are many images of large capacity such as Xray and Mammography.

If there is high frequency of Web Connection and DICOM Connection, bigger core is recommended.

Memory:

We recommend 4 GB or more.

If there is high frequency of Web Connection and DICOM Connection, we recommend adding more memory.

Also, if you use Microsoft SQL Server Standard Edition or Enterprise Edition, you need to add 2GB more.

OS HDD:

We recommend to change the HDD of OS area to SSD. A capacity is 200 GB or more.

HDD for Data Path:

We recommend using NAS.

When you select it, please place importance on Random Read more than Sequential Read.

HDD for Backup Path:

Please use internal or external HDD that has same capacity as Data Path. Internal HDD is preferable from our experience.

LAN:

1 GB or more is required.

Reference Page: Advanced > 1. Hardware Configuration

OS

- Windows 10 (64 bit)
- Windows Server 2016, 2019

Database

• Microsoft SQL Server 2016, 2017, 2019, 2022

Required Program

• Microsoft .NET Framework 4.7

Client

Web Browser (PC)

- The latest version of Google Chrome
- The latest version of Mozilla Firefox
- The latest version of Microsoft Edge

Web Browser (Tablet)

- The latest version of Safari
- The latest version of Google Chrome

4. Limitation of Trial Edition

Trial Edition has following limitations.

- The max number of Studies: 10
- The max number of Web Connection: 5
- The max number of DICOM Connection: 5

Web Connection:

The number of users who can access web interface of SonicDICOM PACS at the same time.

DICOM Connection:

The number of devices/software that can connect with SonicDICOM PACS by using DICOM communication.

Such as Modalities (CR, CT, etc.), third party's DICOM Viewers, and so on.

There is no limitation on features that can be used.

5. Download

Trial Edition of SonicDICOM PACS is available to download free of charge.

- Access the download page by the following URL. https://sonicdicom.com/on-premises/download/
- 2. Fill out the form with required information.

- 3. Read and accept our privacy policy before using the form. If you wish to receive marketing emails (introduction of product information and service, announcement of events and others), select the "Accept".
- 4. Select "Submit".
- 5. We will send an email with URL of the download page to the email address you entered.
- 6. Click the URL in the email to access the download page.
- 7. Select "Download".

6. Install

Install required software

To run SonicDICOM PACS, Microsoft .NET Framework 4.7 is necessary to be installed on PC/Server that SonicDICOM PACS is installed.

It is pre-installed on the latest versions of Windows 10 and Windows Server 2016/2019.

If not, install it by using Windows Update.

Install SonicDICOM PACS

- 1. Start up the downloaded installer.
- 2. Click "Next".

Setup - SonicDICOM PACS	– 🗆 X
	Welcome to the SonicDICOM PACS Setup Wizard
	This will install SonicDICOM PACS version 3.0.0 on your computer.
	It is recommended that you dose all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
	Next > Cancel

- 3. Read License Agreement and check "I accept the agreement" after confirming its contents.
- 4. Click "Next".



- 5. Select a folder to install.
- 6. Click "Next".



- 7. Select your language.
- 8. Click "Next".

Setup - SonicDICOM PACS	-	×
Application Language What language Should You Build Your App?		
Choose your language settings, and then dick next.		
Application Language		
English		~
English		- G €>
French		Y
Italian		
Japanese		
Korean		
Vietnamese		
The analysis		
< Back Nex	dt >	Cancel

9. Select a folder to save a program's shortcut that is created in Start Menu.

10. Click "Next".



11. Click "Next".

If you want to create a shortcut on the desktop, check "create a

PACSManager shortcut on your desktop".



12. Click "Install".

Setup - SonicDICOM PACS –		×
Ready to Install Setup is now ready to begin installing SonicDICOM PACS on your computer.		
Click Install to continue with the installation, or click Back if you want to review or change any settings.		
Destination location: C:¥Program Files¥SonicDICOM PACS	^	
Start Menu folder: SonicDICOM PACS		
Additional tasks: create a PACSManager shortcut on your desktop.		
< >	×	
< <u>B</u> ack	Cance	:

13. Installation will start.

Do not perform other operation during the installation.

Setup - SonicDICOM PACS —		×
Installing Please wait while Setup installs SonicDICOM PACS on your computer.		
Extracting files C:¥¥SonicDICOM PACS¥media¥NDP461-KB3102436-x86-x64-AllOS-ENU.exe		
	Cano	el

14. Click "Finish".

If you would start up PACS Manager after the installation, check "Run

PACSManager.exe".

Setup - SonicDICOM PACS	- 🗆 ×
	Completing the SonicDICOM PACS Setup Wizard
	Setup has finished installing SonicDICOM PACS on your computer. The application may be launched by selecting the installed icons.
	Click Finish to exit Setup.
	Run PACSManager.exe
	Finish

7. Start SonicDICOM PACS

You can start SonicDICOM PACS using PACS Manager.

Start SonicDICOM PACS

- 1. Make sure that the status of DICOMApp is "Stopped".
- 2. Click "Start".

ne	Server	Database	Connection	License	Localization			
Wi	ndows Se	ervice						
C	ОІСОМАр	p Stoppe	•				(Start
Vie	ewer							
	-Access f	rom this PC						
	URL	http://local	host/viewer/				Open	the viewer
	Access f	rom other P	C					
	URL					\sim	Open	the viewer
	Default	Account						
	ID	: ac	lmin					
	Passwo	ord :pa	assword					
	For sec	curity purpo:	ses, please ch	nange you	ir initial passi	word.		
-Im	port DICC	DM File						
								Browse
ŀ	🗸 Include	sub-folder	5					Import

- 3. "Status Panel" is displayed.
- 4. "OK" is displayed in the status field of DICOM Server and Web Server.

Status	
2021-06-17 11:47:55 [Service] Starting Windows	Service "DICOMApp" (3.7.9.30).
2021-06-17 11:47:55 [Service] Starting Log Mana	aer [OK]
2021-06-17 11:47:55 [Service] Loading settings	
2021-06-17 11:47:55 [Service] Starting DICOM Se	erver
2021-06-17 11:47:55 [Service] Loading language	
2021-06-17 11:47:55 [Service] Loading license in	formation [OK]
2021-06-17 11:47:55 [Service] Starting Web Service	er I OK I
2021-00-17 11.47.55 IServicer windows Service	DICOMADD statted successiuliv.

5. When SonicDICOM PACS is started normally, "Windows Service 'DICOMApp' started successfully" will be displayed.

Status	
2021-06-17 11:47:55 [Service] Starting Windows Service "DICOMApp" (3.7	7.9.30).
2021-06-17 11:47:55 [Service] Starting Log Manager [OK	
2021-06-17 11:47:55 [Service] Loading settings	
2021-00-17 11:47:55 (Service) Clearing cache	
2021-00-17 11:47:55 (Service) Starting DicOM Server 1 UN	
2021-00-17 11:47:55 (Service) Loading language file	
2021-06-17 11:47:55 [Service] Loading license information	
2021-06-17 11:47:55 [Service] Windows Service "DICOMApp" started succ	seefully
2021-00-17 11.47.33 ISelvice Willdows Selvice DicomAbb statted succ	essiuliv.

6. The status of DICOMApp will display "Running".

PACS Manager 3
Home Server Database Connection License Localization
Windows Service
Viewer
Access from this PC
URL http://localhost/viewer/ Open the viewer
Access from other PC
URL V Open the viewer
Default Account
ID : admin Password : password
For security purposes, please change your initial password.
Import DICOM File
Browse
include sub-folders Import
Close status panel

If SonicDICOM PACS fails to start normally

If the port to be used by SonicDICOM PACS is already in use by the other software, PACS cannot be started normally. This is due to a port conflict that causes Web Server or DICOM Server of SonicDICOM PACS to fail to start.

"FAILED" is displayed in status field of Server that failed to start.



In this case, you need to change either the port used by the other software, or the port used by SonicDICOM PACS.

Info: The default Port Number of Web Server is "80".

The default Port Number of DICOM Server is "104".

If Web Server fails to start

Change the port that may be in conflict with another software to another port.

1. Click the "Server" tab.

DICOMApp Stopped	Start
/iewer	
Access from this PC	
URL http://localhost:104/viewer/	Open the viewer
Access from other PC	
URL http://192.168.20.49:104/viewer/ ~	Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial password.	
mport DICOM File	0
	Browse
✓ Include sub-folders	Import

PACS Man	nager	
Home	Server Databa	se Connection License Localization
- 0	OICOM Server	
	Data Path	Browse
	Backup Path 1	Browse
	Backup Path 2	Browse
	Default Character	Set ASCII ~
	Log Path	Browse
		○ Information
-v	Veb Server	
	🗹 Enable HTTP	Port Number 80
	🗹 Enable HTTPS	Port Number 443
	SSL Cert (S	core: Local Machine - My) CON-DESC IDPERTURING (20(05)/010/2) ×
		Save Cancel
		Open status panel

2. Change "Port Number" of "Web Server".

3. Click "Save".

If DICOM Server fails to start

Select DICOM Provider and change the port that may be in conflict with another software to another port.

1. Click the "Connection" tab.

Server Database Connection License Localization	
	Start
ысомарр зарреа	Start
Viewer	
Access from this PC	
URL http://localhost:81/viewer/	Open the viewer
Access from other PC	
URL http://192.168.20.49:81/viewer/ ~	Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial password.	
mport DICOM File	
	Browse
☑ Include sub-folders	Import
	Close status papel

2. Click DICOM Provider.

ACS Manager	I
Home Server Database Connection	License Localization
DICOM Provider / DICOM User	Name Provider0001 AE Title Provider1 Port Number 104
	Save Cancel
	Open status panel

3. Change "Port Number".

PACS N	/lana	ger								x
Hor	ne	Server	Database	Connection	License	Localization				
	iic.	Server	Database		cicense	Localization				
		COM Prov	vider / DICO	M User						
		Provic	der (Provide er (userPC) er (user2)	r0001)		Name	Provid	ler0001		
		Provid	der (Provide	r0002)		AE Title	Provid	ler1		
						Port Number	104	÷	>	
		Ac	d DICOM P	rovider		Add DICOM Us	er		Delete	
								Save	Cancel	
									Open statu	s panel

4. Click "Save".

8. Login

- 1. Open a web browser (Google Chrome, etc.).
- 2. Access web interface of SonicDICOM PACS.

Reference Link: PACS Manager > 2. Access Web Interface

Enter the ID and Password, then click "LOG IN".
FYI, the initial values of ID and password are as follows.

ID: admin Password: password

NOTE: After your trial use, change the initial password for security. You can change it on User Settings > Profile > Password

9. Import DICOM Files

You can import sample DICOM files or your DICOM files.

Import Sample DICOM Files

You can import sample DICOM files if you access List page with no saved Study.

1. Click "Import".



2. Dialog "Import Sample DICOM Files" will appear.



3. Click "Import".

Import Your DICOM Files

You can import your DICOM files on List page.

Also, you can import DICOM files on PACS Manager as well.

Please use PACS Manager if you import large data volumes or large numbers of files.

Reference Page:

- User Manual > List > Toolbar Features > Import

- PACS Manager > 3. Import DICOM Files

TIP:

FAQs > Cannot view or import DICOM file correctly.

10. Send Images to SonicDICOM PACS

You can send images from modalities, third party's PACS, etc. to SonicDICOM PACS using DICOM communication.

Check required information

To send images to SonicDICOM PACS, you need to register SonicDICOM PACS information in the product that will send images, such as modalities. The required information is only three that are "IP Address", "Port Number", and "AE Title".

The following explains each information.

1) IP Address

IP Address is like home address or telephone numbers on IP network. On Windows default setting, IP Address is configured automatically when it connects to a network.

In this state, IP Address could be changed every time you start up the OS. So, you

need to change this setting and fix the IP Address in devices that will do DICOM communication.

Reference Page:

TIPS > How to check IP Address TIPS > How to set IP Address

2) Port Number

This is the number to identify the program that the computer uses for communication.

The default Port Number of SonicDICOM PACS is "104".

3) AE Title

This is the name for identifying the application that will do DICOM communication. The default AE Title of SonicDICOM PACS is "Provider1".

Register SonicDICOM PACS information to modalities, etc.

Please register SonicDICOM PACS "IP Address", "Port Number", and "AE Title" to modalities, etc.

Register method differs depending on each modality, so check with the manufacturer's support staff or another person who can assist.

The followings are the default values to be registered.

ltem	Value
IP Address	Check individually (it is different depending on each environment)
Port Number	104
AE Title	Provider1

24

If you would like to use a value other than the default one, change the settings in Connection of PACS Manager or Admin Settings > Server > Connection of the web interface.

Reference Page: PACS Manger > Set up DICOM Connection

Info:

Information of SonicDICOM PACS (side of receiving images) is called "DICOM Provider".

Also, information of modalities (side of sending images) is called "DICOM User".

The information of the side of sending images (DICOM user) will be registered automatically to SonicDICOM PACS once it receives images from modalities, etc.

NOTE: The option of DICOM provider "Allow DICOM Connection with unregistered DICOM User" needs to be enabled.

Send images from modalities

After you complete registration of information, actually send images. And check the following points.

- Images are sent from modalities, etc. to SonicDICOM PACS.
- SonicDICOM PACS receive images properly.
- SonicDICOM PACS can display images properly.

11. Get Images from SonicDICOM PACS

You can get and view images from SonicDICOM PACS using DICOM communication on third party's DICOM viewer or PACS.

Check required information

To get images from SonicDICOM PACS, the information of both sides, SonicDICOM PACS and the product will get images, such as third party's DICOM viewer, must be mutually registered.

The required information is only three that are "IP Address", "Port Number", and "AE Title".

The following explains each information.

1) IP Address

IP Address is like home addresses or telephone numbers on an IP network.

On Windows default setting, IP Address is configured automatically every time it connects to a network.

In this state, IP Address could be changed at the time of OS start up and so on. So you need to change this setting and fix the IP Address in devices that will do DICOM communication.

Reference Page:

TIPS > How to check IP Address

TIPS > How to set IP Address

2) Port Number

This is the number to identify the program that the computer uses for communication.

The default Port Number of SonicDICOM PACS is "104".

3) AE Title

This is the name for identifying the application that will do DICOM communication. The default AE Title of SonicDICOM PACS is "Provider1".

Also, please check "IP Address", "Port Number", and "AE Title" of third party's DICOM viewer, etc.

If you are not sure, check with the manufacturer's support staff or another person who can assist.

Register information of SonicDICOM PACS to third party's DICOM viewer, etc.

Please register "IP Address", "Port Number", and "AE Title" of SonicDICOM PACS to third party's DICOM viewer, etc.

Register method differs depending on each product.

If you are not sure, check with the manufacturer's support staff or another person who can assist.

The followings are the default values to be registered.

ltem	Value
IP Address	Check individually (it is different depending on each environment)
Port Number	104
AE Title	Provider1

If you would like to use a value other than the default one, change the settings in Connection of PACS Manager or Admin Settings > Server > Connection of the web interface.

Reference Page: PACS Manger > Set up DICOM Connection

Info:

Information of SonicDICOM PACS (responding side) is called "DICOM Provider". Also, information of DICOM viewer (requesting side) is called "DICOM User".

Register information of third party's DICOM viewer, etc. to SonicDICOM PACS

Please register "IP Address", "Port Number", and "AE Title" of third party's DICOM viewer, etc. to SonicDICOM PACS.

You can register them on "PACS Manager > Connection" or "Web interface > Admin Settings > Server > Connection"

Information of SonicDICOM PACS (responding side) is called "DICOM Provider". Also, information of DICOM Viewer (requesting side) is called "DICOM User".

Browse images on DICOM viewer

After you complete registration of information, actually get images. And check the following points.

- Third party's DICOM viewer, etc. can get Study list properly.
- Third party's DICOM viewer, etc. can browse and display images properly.

12. Check License ID

Check your License ID on PACS Manager

1. Click the "License" tab.

Indows Service -		
DICOMApp St	opped	Start
iewer		
Access from th	is PC	
URL http:/	/localhost/viewer/	Open the viewer
Access from o	ther PC	
URL	~	Open the viewer
Default Accour	nt	
ID	: admin	
Password For security p	: password purposes, please change your initial password	L
nport DICOM File	2	
		Browse
✓ Include sub-f	olders	import

2. Check "License ID".

me	Server	Database	Connect	tion Licen	se Localizat	tion	
l	license ID			b televited			
l	license Ty	pe		Trial			
ι	icensed 1	ō					
l	license Ex	piration					
S	Support E	xpiration					
N	Maximum	number of	Studies			10	
N	Maximum	number of	Web Cor	nections		5	
N	Maximum number of DICOM Connections					5	
4	Activation Key						
							Activate

Check your License ID on web interface

- 1. Access web interface of SonicDICOM PACS.
- 2. Log in.
- 3. Check "License ID" in Admin Settings > General > License.

SonicDICOM PACS			\varTheta Administrato
🔁 Dashboard	General		
Jul Statistics			
🗘 Share	Trial Edition		
Admin Settings	This License has limitation. - Maximum number of Studies: 10		
General	- Maximum number of Web Connections: 5 - Maximum number of DICOM Connections: 5		
Server	This License has expiration.		
Client	- Support Expiration:		
Account	Contact Activation		
Statistics			
Share	License Localization Security Option		
User Settings	License		
List			
Viewer	License ID		
Report	License Type	Trial Edition	
Profile	Maximum number of Studies	10	
Browser Settings	Maximum number of Web Connections	5	
Multi-Monitor	Maximum number of DICOM Connections	5	
1 About	Activation		
	Activation		

Reference Page:

PACS Manger > Access Web Interface

8. Login

PACS Manager > Activate
13. Activate

You can activate on PACS Manager or web interface.

Make sure that database has been upgraded

Before activating, make sure that the database has been upgraded to Microsoft

SQL Server.

CS Manager	
Home Server Database Connection License Localization	
Database O Microsoft SQL Server Source Image: Source Compact Image: Source Compact	Password
Daily Backup 12:00 AM Data Path Backup Path 1	Backup Path 2
	Save Cancel
	Close status panel

If the database has not been upgraded, please refer to the following page to upgrade to Microsoft SQL Server.

Also, change the type of database to be used to Microsoft SQL Server.

Reference Page:

- Advanced > Upgrade Database
- PACS Manager > Switch Database

WARNING: Support will not be provided if the database has not been changed to Microsoft SQL Server.

Activate on PACS Manager

1. Click the "License" tab.

DICOMApp	Stopped	Start
Viewer		
Access from	n this PC	
URL ht	tp://localhost/viewer/	Open the viewer
- Access fror	n other PC	
URL		 Open the viewer
ID Password	: admin : password	
For securi	ty purposes, please change your initial p	assword.
-Import DICOM	File	
		Browse
		import

2. Enter Activation Key in the field of "Activation Key".

3. Click "Activate".

:S Mana	iger						
Home	Server	Database	Connection	License	Localizat	ion	
Lic	cense						
	License ID)					
	License Ty	/pe				Trial	
	Licensed	То					
	License E	piration					
	Support E	xpiration					
	Maximum	number of	Studies			10	
	Maximum	number of	Web Connec	tions		5	
	Maximum	number of	DICOM Conr	nections		5	
	Activation	Key					
							Activate
							Open status panel

4. When activation is completed, the items in "License" will be updated.

ltem
License Type
Licensed To
License Expiration
Support Expiration
Maximum number of Studies
Maximum number of Web Connection
Maximum number of DICOM Connection

Activate on the web interface

- 2. Log in to the web interface.
- 3. Access Admin Settings > General > License and select "Activation".

SonicDICOM PACS			\varTheta Administrato
Dashboard	General		
<u>베</u> Statistics			
Share	Trial Edition		
Admin Settings	This License has limitation. - Maximum number of Studies: 10		
General	Maximum number of Web Connections: 5 Maximum number of DICOM Connections: 5		
Server	This License has expiration.		
Client	- Support Expiration:		
Account	Contact Activation		
Statistics			
Share	License Localization Security Option		
User Settings	Lizenze		
List	License		
Viewer	License ID		
Report	License Type	Trial Edition	
Profile	Maximum number of Studies	10	
Browser Settings	Maximum number of Web Connections	5	
Multi-Monitor	Maximum number of DICOM Connections	5	
C About			

3. Enter Activation Key.

4. Click "Activate".



6. When activation is completed, the items in "License" will be updated.

Reference Page:

- PACS Manager > Access Web Interface
- 8. Login

14. Update SonicDICOM PACS

1. Download the installer of latest version SonicDICOM PACS from the following URL: https://sonicdicom.com/on-premises/download/

For information on how to download it, please refer to: 5. Download

Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.

Wi	ndows Se	ervice		lection	License	Localization				
C	DICOMAp	p Stop	oped						Start	
Vie	ewer									
	-Access f	rom this	PC							
	URL	http://lo	ocalhost/\	/iewer/				Open	the viewer	
	Access f	rom oth	er PC							
	URL						\sim	Open	the viewer	
	Default	Account								
	ID		: admin							
	Passwo For sec	ord curity pu	: passwo	rd lease cl	nange vo	ur initial pass	word.			
[-Im	port DICC	OM File -								
									Browse	
5	🗸 Include	sub-fol	ders						Import	
								Γ		

- 3. Click "x" to close PACS Manager.
- Start up the installer and follow the wizard. Installation will be done and SonicDICOM PACS can be updated to the latest version.
 For information on how to install, please refer to: 6. Install > Install SonicDICOM PACS

NOTE: When updating, all information such as studies, accounts, licenses will be automatically migrated.

However, license information will be migrated only if the major version of the product is the same.

PACS Manager

1. Start/Stop SonicDICOM PACS

You can start or stop PACS using PACS Manager.

Start SonicDICOM PACS

- 1. Make sure that the status of DICOMApp is "Stopped".
- 2. Click "Start".

PACS Manager	
Home Server Database Connection License Localization	
Windows Service	Start
Viewer	
Access from this PC URL http://localhost/viewer/	Open the viewer
Access from other PC URL	Open the viewer
Default Account	
ID : admin Password : password	
Por security purposes, please change your initial password.	
Import DICOM File	Browse
☑ Include sub-folders	Import
	Close status panel

- 4. "Status Panel" is displayed.
- 5. "OK" is displayed in status field of DICOM Server and Web Server.

Status				×
2021-04-14 16:33:38 [Service] 2021-04-14 16:33:38 [Service] 2021-04-14 16:33:38 [Service] 2021-04-14 16:33:38 [Service]	Starting Log Manager Starting Windows Service "I Loading settings	LOK 1 DICOMAdd" (3.7.7.2	27).	
2021-04-14 16:33:39 [Service 2021-04-14 16:33:40 [Service 2021-04-14 16:33:40 [Service] 2021-04-14 16:33:40 [Service]	Starting DICOM Server			
2021-04-14 16:33:42 [Service 2021-04-14 16:33:42 [Service]	Starting Web Server	I OK I	fullv	

6. When PACS is started normally, "Windows Service"DICOMApp" started successfully" will be displayed.

Status			
2021-06-17 11:47:55 [Service]	Starting Windows Service "DIC	OMApp" (3.7.9.30).	
2021-06-17 11:47:55 [Service]	Starting Log Manager	LOK 1	
2021-06-17 11:47:55 [Service]	Loading settings		
2021-06-17 11:47:55 [Service]	Clearing cache		
2021-06-17 11:47:55 [Service]	Starting DICOM Server	T OK T	
2021-06-17 11:47:55 [Service]	Loading language file	LOK 1	
2021-06-17 11:47:55 [Service]	Loading license information	I OK I	
2021-06-17 11:47:55 [Service]	Mindaws One ins "DICOMMANN"	-ttdf-lb-	
2021-06-17 11:47:55 IService	Windows Service "DICOMADD"	started successfully.	

7. The status of DICOMApp will display "Running".

PACS Manager	x
Home Server Database Connection License Localization	
Windows Service DICOMApp Running Stop	
Viewer	
Access from this PC	
URL http://localhost/viewer/ Open the viewer	
Access from other PC	
URL V Open the viewer	
Default Account	
ID : admin	
Password : password For security purposes, please change your initial password.	
Import DICOM File	
Browse	
Import	
Close status panel	

How to stop SonicDICOM PACS

- 1. Make sure that the status of DICOMApp is "Running".
- 2. Click "Stop".

DICOMApp Stopped	Start
iewer	
Access from this PC	
URL http://localhost:104/viewer/	Open the viewer
Access from other PC	
URL http://192.168.20.49:104/viewer/ ~	Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial password.	
iport DICOM File	Browso
	Browse
☑ Include sub-folders	Import

3. The status of DICOMApp will display "Stopped".

2. Access Web Interface

Make sure that the status of DICOMApp is "Running".

If the status of DICOMApp is "Stopped", click "Start" to start SonicDICOM PACS.

How to access web interface from PACS Manager

To access the web interface from a PC/server that SonicDICOM PACS is installed, click "Open the viewer" under "Access from this PC".

(DICOMApp	Runnin	9				[Stop
Vie	wer							
	Access fr	om this PC						
	URL	http://loca	host/viewer/				Open th	e viewer
	Access fr	om other F	C					
	URL	1000				~	Open th	e viewer
	Default A	ccount						
	ID	: a	dmin					
	Passwor For secu	d : p rity purpo	assword ses, please cł	nange you	ur initial pas	sword.		
Im	port DICO	M File						
[Browse
[Include	sub-folder	s				[Import

How to access web interface from another terminal

Enter the URL displayed in the select menu "Access from other PC" into your Web browser.

The URL is automatically generated from the list of IP addresses of the PC/server on which SonicDICOM PACS is installed.

Depending on network configuration and settings, you may not be able to access the web interface even if you use this URL.

	Server	Database	Connection	License	Localizatio	in			
W	indows S	ervice							
	DICOMA	op Running	9				[Stop	1
Vi	ewer								
	Access	from this PC							
	URL	http://local	host/viewer/				Open th	e viewer	
F	Access	from other P	C						
	URL	-				~	Open th	ie viewer	
-	Default	Account							
	ID	: ac	dmin						
	Passw	ord : pa	assword						
	For se	curity purpo	ses, please cl	hange you	ur initial pas	sword.			
In	port DIC	OM File							
								Browse	
	Include	e sub-folder	s				[Import	

Please refer to the following link for information about the operating environment.

Reference Page: System Requirements

3. Import DICOM Files

1. Make sure that the status of DICOMApp is "Running".

If the status of DICOMApp is "Stopped", click "Start" to start SonicDICOM PACS.

2. Click "Browse".

CS Manager	
Home Server Database Connection License Localization	
Windows Service	
DICOMApp Running	Stop
Viewer	
Access from this PC	
URL <u>http://localhost/viewer/</u>	Open the viewer
Access from other PC	
URL	Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial password.	
· · · · · · · · · · · · · · · · · · ·	
Import DICOM File	
	Browse
Include sub-folders	Import
	Close status panel

Wi	indows Se	ervice						
C		フォルダーの	₿				×	Stop
Vie	ewer							
	Access							
	URL	>					en t	he viewer
	Access URL	× _ s	onicDICOM_San SonicDICOM_ SonicDICOM_ SonicDICOM	n <mark>ple</mark> Sample_CF Sample_CF Sample_CF	2_01 2_02		en t	he viewer
	Default ID		SonicDICOM SonicDICOM SonicDICOM	Sample_CT Sample_M Sample_M Sample_M	_01 R_01 R_02 R_03		F	
	For se						<u>~</u>	
	-	新しい	フォルダーの作成(N)	OK	キャンセル		
- Im	port DIC	OM File						Browse
E	Include	e sub-folde	ers					Import

3. Select the folder that contains DICOM files to be imported.

4. Check "Include sub-folders", if you want to import DICOM files in sub-folders.

Import DICOM File	
	Browse
Include sub-folders	Import

5. Click "Import".

Import DICOM File	
	Browse
☑ Include sub-folders	Import

6. When the import is completed, "Import has been completed" is displayed.

		×
DICOMApp	has been completed.	2/2 pp
Viewer	.+	
-Access fr		
ONE I		
Access fro		
URL		r
Default A		
ID		
Passwor		
For secu		
Import DICOI		
C:\Users\N		vse
Include :		port
E	kport error files	Close

7. Click "Close".

4. Set Data Path/Backup Path

Data Path and Backup Path can be set using PACS Manager.

Data Path is where to save/refer to a DICOM file. Backup Path is where to back up a DICOM files.

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.
- 2. Click the "Server" tab.

DICOMA	pp Stopped	Start
Viewer		
Access	from this PC	
URL	http://localhost/viewer/	Open the viewer
Access	from other PC	
URL	~ ~	Open the viewer
Default	t Account	
ID	: admin	
Passw	vord : password	
For se	ecurity purposes, please change your initial password.	
Import DIC	COM File	
		Browse
Includ	le sub-folders	Import

3. Under the "DICOM Server", click "Browse..." of Data Path or Backup Path.

lome Server Database	Connection License Localization
DICOM Server	
Data Path	Browse
Backup Path 1	Browse
Backup Path 2	Browse
Default Character Set	Japanese \vee
Log Path	Browse
	○ Information
Web Server	
Enable HTTP	Port Number 80 📮
Enable HTTPS	Port Number 443 🗼
SSL Cert (Store:	Local Machine - My)
	Save Cancel
	Close status panel

4. Select any path.

Browse For Folder	×
E. Desktop	
> 🔷 OneDrive - Personal	
> 🤱	
> 💻 This PC	
> 🐂 Libraries	
> 🎒 Network	
> 🖭 Control Panel	
👩 Recycle Bin	
>	
>	
>	
> 🔒	
Make New Folder	OK Cancel

5. Click "Save".

5. Set Default Character Set

You can set the default Character Set using PACS Manager. The Character Set you set will be used as the default, if a DICOM file does not have a DICOM tag that defines the Character Set or if the value is invalid. Changing the default value of Character Set may solve a problem of garbled characters in the DICOM file.

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.
- 2. Click the "Server" tab.

DICOMApp Stopped	
	Start
iewer	
Access from this PC	
URL http://localhost/viewer/	Open the viewer
Access from other PC	
URL	Open the viewer
Default Account	
ID : admin	
Password : password	
For security purposes, please change your initial password.	
nport DICOM File	
	Browse

Backup Path 1			Brows	ie
Default Character Se	t ASCII		~	, cm
Log Path			Brows	;e
Web Server		on (Warning) Er	ror	
Enable HTTP	Port Number	80		
Enable HTTPS	Port Number	443 🔹		
SSL Cert (Stor	re: Local Machine - My			\sim
			Save	Cancel

3. From the select menu "Default Character Set", select any Character Set.

4. Click "Save".

6. Set Log Path

You can set the location to save a log file using PACS Manager.

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.
- 2. Click the "Server" tab.

DICOMApp Stopped	Start
Viewer	
Access from this PC	
URL http://localhost/viewer/	Open the viewer
ésses from ether DC	
	Open the viewer
UKL	 Open the viewer
Default Account	
ID : admin	
Password : password	saword
For security purposes, please change your linual pa	ssword.
Import DICOM File	
	Browse
🗸 include sub-folders	Import

3. Click "Browse" under "Log Path".

PACS Manager	×
Home Server Database Conne	ction License Localization
DICOM Server	
Data Path	Browse
Backup Path 1	Browse
Backup Path 2	Browse
Default Character Set	Japanese 🗸
Log Path	C:\Program Files\SonicDICOM PACS\Log Browse
	O Information Warning O Error
Web Server	
Enable HTTP Port	Number 80 😴
Enable HTTPS Port	Number 443 🔹
SSL Cert (Store: Local	Machine - My)
	Save Cancel
	Close status panel

4. Select the location where you want to save the log file. THLY-05 \times

スクトップ				^
OneDrive				
-				
PC				
ライブラリ				
ネットワーク				
ש-חאעב	パネル			
ごみ箱				
	スクトップ OneDrive PC ライブラリ ネットワーク コントロール ごみ箱	スクトップ OneDrive PC ライブラリ ネットワーク コントロール パネル ごみ箱	スクトップ OneDrive PC ライブラリ ネットワーク コントロール パネル ごみ箱	スクトップ OneDrive PC ライブラリ ネットワーク コントロール パネル ごみ箱

5. Click "Save".

7. Set Log Level

You can set log levels using PACS Manager.

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.
- 2. Click the "Server" tab.

DICOMApp Stopped	Start
/iewer	
Access from this PC	
URL http://localhost/viewer/	Open the viewer
Access from other PC	
URL	\sim Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial	password.
mport DICOM File	
	Browse
☑ Include sub-folders	Import

3. Select which level you want for the "Log Level" to be output.

CS Manager
Home Server Database Connection License Localization
DICOM Server
Data Path Browse
Backup Path 1 Browse
Backup Path 2 Browse
Default Character Set Japanese 🗸
Log Path C:\Program Files\SonicDICOM PACS\Log Browse
O Information Warning O Error
Web Server
🗹 Enable HTTP Port Number 80 👻
Enable HTTPS Port Number
SSL Cert (Store: Local Machine - My)
Save Cancel
Close status panel

The different levels of logs are defined as follows.

Level	Description
Information	Information that should be notified
Warning	Potential unexpected problems
Error	Unexpected problems

The contents of the log differ depending on the level you chose.

Level of your choice	Contents to be output
Information	Information, Warning, Error
Warning	Warning, Error
Error	Error

4. Click "Save".

8. Enable HTTPS

You can enable HTTP communication using PACS Manager. To enable HTTPS communication, you need to install IIS (Internet Information Services) and issue a Server Certificate. Please follow the procedures in the link below.

Reference Page: Advanced > Enable HTTPS

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.
- 2. Click the "Server" tab.

DICOMApp Stopped	Start
/iewer	
Access from this PC	
URL http://localhost/viewer/	Open the viewer
Access from other PC	
URL	\lor Open the viewer
Default Account	
ID : admin	
Password : password For security purposes, please change your initial pas	sword.
mport DICOM File	
	Browse
✓ Include sub-folders	Import

3. Check "Enable HTTPS".

4. In the select menu "SSL Cert", select the Server Certificate that has been issued.

PACS Manager	>
Home Server Database Connection License Localization	
DICOM Server	
Data Path	rowse
Backup Path 1	rowse
Backup Path 2	rowse
Default Character Set ASCII ~	
Log Path	rowse
◯ Information	
Web Server	
☑ Enable HTTP Port Number 80 🗼	
Enable HTTPS Port Number 443 💌	
SSL Cert (Store: Local Machine - My)	~
Save	Cancel
	Open status panel

5. Click "Save".

9. Set Web Server Port

You can set the port to be used by Web Server using PACS Manager.

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.
- 2. Click the "Server" tab.

DICOMApp	Stopped	Start
Viewer		
Access from	this PC	
URL http	o://localhost/viewer/	Open the viewer
- Access from	other PC	
URL	v	Open the viewer
		-,
Default Acco	unt	
ID	: admin	
Password	: password	
For security	v purposes, please change your initial password.	
Import DICOM F	ile	
		Browse
Include sub	-folders	Import
· mendae sub	loideis	mpore

3. If you change the HTTP port, check "Enable HTTP". If you change the HTTPS port, check "Enable HTTPS".

4. Change the "Port Number".

PACS Manager		×
Home Server Database	Connection Licen	nse Localization
DICOM Server		
Data Path		Browse
Backup Path 1		Browse
Backup Path 2		Browse
Default Character Set	Japanese	×
Log Path	C:\Progra	m Files\SonicDICOM PACS\Log Browse
	🔿 Informa	ation Warning Error
Web Server		
Enable HTTP	Port Number	80 👻
Enable HTTPS	Port Number	443 💼
SSL Cert (Store	: Local Machine - N	My) ~
		Save Cancel
		Close status panel

5. Click "Save".

10. Switch Database

You can change the type of database. If "Microsoft SQL Server" has not been installed or its configuration has not been completed, follow the procedures in the link below.

Reference Page: Upgrade Database

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.
- 2. Click the "Database" tab.

-Win D	idows Service	opped		Start
Viev	wer			
	Access from th	is PC		
	URL http:/	/localhost/viewer/		Open the viewer
	Access from o	ther PC		
	URL		~ (Open the viewer
	Default Accou	nt		
	ID	: admin		
	Password For security p	: password urposes, please change your ini	tial password.	
	et DICOM Fil			
- imp		-		Browse
	Include sub-f	olders		Import

3. Select "Microsoft SQL Server".

CS Mana	ger										
Home	Server	Database	Connection	License	Localizat	on					
Da	Micros	oft SQL Ser	ver Compact	: rce loca	lhost						
	⊖ so	QL Server Au	uthentication	ID			Pass	word			
	Daily Ba	ckup 0 AM	∼ □ Da	ta Path	🗌 Backup	Path 1	🗌 Back	kup Path	12		
								Save		Cancel	

4. Enter the instance name in "Source". If you selected the "Default instance" when you installed Microsoft SQL Server, enter "localhost".

×

PACS Mana	ager									
Home	Server	Database	Connection	License	Localization					
Home	Server atabase Micros Authenti @ W O S(Daily Ba 12:0	Database oft SQL Serrication indrows Auth QL Server Au ckup 0 AM	Connection ver Compact ver Sou entication thentication	License	Localization	Pas h 1 🗌 Ba	isword ckup Path Save	2	Cancel	
								Open	status nar	nel
								Open	i status par	iei

5. Under "Authentication", select the authentication method.

If you select "SQL Server Authentication", enter relevant "ID" and "Password".

lome	Server Database	Connection Licens	e Localization		
Da	tabase				
(⊖ Microsoft SQL Se	erver Compact			
(Microsoft SQL Se	erver Source loo	calhost		
	Authentication				
1	O Windows Au	thentication	[1 -	
	SQL Server	Authentication I	D	Password	
	Daily Backup	✓ □ Data Path	Backup Path 1	Backup Path 2	
	12100 AM				
				Save	Cancel
					Onon status papal

6. Click "Save".

11. Set up Database Backup

You can set up automatic backup of database using PACS Manager.

An automatic backup is executed at the fixed time daily.

 Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS. 2. Click the "Database tab".

Windo	ws Service			
DICO	MApp S	topped		Start
Viewer				
Acc	ess from t	his PC		
U	RL http:	//localhost/viewer/		Open the viewer
Acc	ess from o	other PC		
U	RL		~	Open the viewer
Def	ault Accou	nt		
ID		: admin		
Pa Fo	issword or security	: password ourposes, please change your	initial password.	
Import	DICOM Fil	e —		
				Browse
⊠ In	clude sub-	folders		Import

3. Select the time for automatic backup.

4. Put a check in the backup location of the database file.

PACS Manager	×
Home Server Database Connection License Localization	
O Microsoft SQL Server Compact	
Microsoft SQL Server Source localhost	
Authentication	
Windows Authentication	
O SQL Server Authentication ID Password	
Daily Backup	
12:00 AM 🗸 🗹 Data Path 🗹 Backup Path 1 🗌 Backup Path 2	
Save Cancel	
Close status panel	

5. Click "Save".

NOTE:

- Seven generations of backup files will be stored in the selected backup location.

- If the backup location is not selected, no backup will be performed.

- System administrator should check regularly that the backup is performed successfully.

12. Set up DICOM Connection

You can connect SonicDICOM PACS to modalities, third party's DICOM viewers, third party's PACS and so on, using DICOM communication.

If you want to send images to SonicDICOM PACS from a modality or others, enter DICOM Provider information into them. If you want to get images from SonicDICOM PACS by using third party's DICOM viewer and so on, enter DICOM Provider information into it. Also, add the information of third party's DICOM viewer to the DICOM Provider as DICOM User.

Reference Page

- Send Images to SonicDICOM PACS
- Get Images from SonicDICOM PACS

How to add DICOM Provider

Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.

2. Click the "Connection" tab.

/indows Service	
DICOMApp Stopped	Start
iewer	
Access from this PC	
URL http://localhost/viewer/	Open the viewer
Access from other PC	
URL	\sim Open the viewer
Default Account	
ID : admin	
Password : password	
For security purposes, please change your initial p	password.
nport DICOM File	
	Browse
✓ Include sub-folders	Import

3. Click "Add DICOM Provider".

P/	ACS Man	ager								
	Home	Server	Database	Connection	License	Localization				
	D	ICOM Pro	vider / DICO	M User						
		Us Us	der (Provide ser (userPC) ser (user2)	r0001)		Name	Provid	ler0001		
						AE Title	Provid	ler1		
						Port Number	104	•		
		A	dd DICOM P	rovider		Add DICOM User	r		Delete	
								Save	Cancel	
									Close status	panel

67
4. Enter the information of DICOM Provider.

DIC	OM Provin	vider / DICO							
	- Provid		M User						
	Provid	der (Provide ier (userPC) ier (user2) der ()	r0001)	Name AE Title Port Number	Provic	ler002			
	Ac	dd DICOM P	rovider	Add DICOM Use	r		Delete	е	
						Save		Cancel	

5. Click "Save".

How to edit DICOM Provider

1. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.

2. Click the "Connection" tab.

iviana	ger	
me	Server Databas Connection License Localization	
Wi	ndows Service	
C	DICOMApp Stopped	Start
Vie	wer	
	Access from this PC	
	URL http://localhost/viewer/	Open the viewer
	Access from other PC	
	URL	Open the viewer
	Default Account	
	ID : admin	
	Password : password For security purposes, please change your initial password.	
	PORT DICOM File	Browse
		BIONDE
	☐ Include sub-folders	Import
		Close status nanel

3. Click DICOM Provider.

COM Provider / DK	COM User					
User (user) User (user2) Provider (Provi	C)) der0002)					
Add DICON	1 Provider	Add DICOM	User		Delete	
				Save	Cancel	

4. Edit DICOM Provider.

- DI	COM Provic	rider / DICO ler (Provide er (userPC) er (user2) ler (Provide	M User	Name AE Title Port Number	Provic	ler0001 ler1		
	Ac	Id DICOM P	rovider	Add DICOM Us	er		Delete	
						Save	Cancel	

5. Click "Save".

How to add DICOM User

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.
- 2. Click the "Connection" tab.

Nindows Service —		
DICOMApp Sto	pped	Start
/iewer		
Access from this	5 PC	
URL http://l	ocalhost/viewer/	Open the viewer
Access from oth	er PC	
URL		\sim Open the viewer
Default Account		
ID	: admin	
Password	: password	
For security pu	rposes, please change your initial pa	ssword.
mport DICOM File		
		Browse
🗹 Include sub-fo	lders	Import

3. Click DICOM Provider to which you want to add DICOM User.

4. Click "Add DICOM User".

PACS Mana	iger								
Home	Server	Database	Connection	License	Localization				
-DI	COM Prov	vider / DICO ler (Provide	M User						
					Name	Provid	ler0001]
					AE Title	Provid	ler1		
					Port Number	104	•		
l	٨		rovider			r.		Doloto	
	A.		TOVIDEI		Add Dicolar 036			Delete	
							Save	Cance	21
								Close stat	tus panel

5. Enter the information of DICOM User.

	Server	Database	Connection	License	Localization				
D	ICOM Pro	vider / DICO	M User						
	Provid	der (Provide <mark>er (user?c)</mark> ier (user2) der (Provide	r0001) r0002)		Name AE Title Port Number IP Address	userPC vieweri 103 192.16	: 		
	A	dd DICOM P	rovider		Add DICOM User	r		Delete	
						;	Save	Ca	ncel

6. Click "Save".

How to edit DICOM User

1. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.

2. Click the "Connection" tab.

me	Server Databas Connection License Localization	
Wi	ndows Service	
ſ	DICOMApp Stopped	Start
Vie	wer	
	Access from this PC	
	URL http://localhost/viewer/	Open the viewer
	Access from other PC	
	URL	Open the viewer
	Default Account	
	ID : admin	
	Password : password	
	For security purposes, please change your initial password.	
_ Im	port DICOM File	
		Browse
ł	∠ Include sub-folders	Import
		Close status nane

3. Click DICOM User.

PACS Manager		×
Home Server Database Connection	icense Localization	
DICOM Provider / DICOM User		
Add DICOM Provider	Add DICOM User	Delete
		Save Cancel
		Open status panel

4. Edit DICOM User.

PACS Manager	×
Home Server Database Connection Lice	anse Localization
DICOM Provider / DICOM User	
User (userPC)	Name userPC
Provider (Provider0002)	AE Title viewer001
	Port Number 103
	IP Address 192.168.20.15
Add DICOM Provider	Add DICOM User Delete
	Save Cancel
	Open status panel

5. Click "Save".

How to delete DICOM Provider/DICOM User

1. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.

2. Click the "Connection" tab.

14/6	ndows So	nico									
vvii	nuows se	ivice							_		
D	ОСОМАр	p Sto	pped							Start	
Vie	wer										
	-Access fi	rom this	PC								
	URL	http://l	ocalhost/\	viewer/				Op	oen the	e viewer	11
	Access fi	rom oth	er PC —								
	URL						\sim	Op	oen the	e viewer	۰.
	Default A	Account									
	ID		: admin								
	Passwo	ord	: passwoi	rd	200 100	r initial p	scword				
	FOT SEC	unty pu	rposes, pi	ease chai	ige you		assworu.				
Imp	port DICC	OM File									
										Browse.	
-	/ Include	sub-fol	ders							Import	

3. Click DICOM Provider/DICOM User to be deleted.

lome	Server	Database	Connection	License	Localization					
DI	COM Prov	vider / DICO	M User							
	⊡ Provic	ler (Provide er (userPC)	0001)		Name	userPC	:			
					AE Title	viewer	001			
					Port Number	103	•			
					IP Address	192.16	8.20.15			
	Ac	Id DICOM P	rovider		Add DICOM Use	r		Delete		
							Save	Ca	ncel	

4. Click "Delete".

lome Di	COM Prov	Database ider / DICO	M User	License	Localization		
	⊡ Provid	er (Provide er (userPC)	10001)		Name AE Title Port Number IP Address	userPC viewer001 103 💼 192.168.20.15	

5. Click "Save".

13. Activate

Make sure that database has been upgraded.

Before activating, make sure that the database has been upgraded to Microsoft SQL Server.

If the database has not been upgraded, please refer to the following link to upgrade to Microsoft SQL Server.

Also, change the type of database to be used to Microsoft SQL Server.

Reference Page

- Upgrade Database
- Switch Database

WARNING: Support will not be provided if the database has not been changed to Microsoft SQL Server.

Activation

1. Click the "License" tab.

Wi	ndows Se	ervice	
	ОСОМАр	p Stopped	Start
Vie	wer		
	Access f	rom this PC	
	URL	http://localhost/viewer/	Open the viewer
	Access f	rom other PC	
	URL		\sim Open the viewer
	-Default /	Account	
	ID	: admin	
	Passwo	ina : password	
	For sec	curity purposes, please change your initial pa:	ssword.
	ροπ Dicc	JM FILE	
			Browse
Б	🖉 Include	sub-folders	Import

2. Enter Activation Key in the field of "Activation Key".

lome	Server	Database	Connection	License	Localizat	ion		
Lie	cense							
	License ID)						
	License T	ype				Trial		
	Licensed	То						
	License E	xpiration						
	Support E	Expiration						
	Maximum	n number of	Studies			10		
	Maximum	n number of	Web Connec	tions		5		
	Maximum	n number of	DICOM Conr	ections		5		
	Activation	n Key						
							Activate	
								_

- 3. Click "Activate".
- 4. When activation is completed, the items in "License" will be updated.

ltem
License Type
Licensed To
License Expiration
Support Expiration
Maximum number of Studies
Maximum number of Web Connection
Maximum number of DICOM Connection

Advanced

1. Hardware Configuration

Most processes relating DICOM Viewer of SonicDICOM PACS is done on the PC/Server side where SonicDICOM PACS is installed.

It means you can expect overall performance will be improved by upgrading the hardware configuration of the PC/Server.

SSD/HDD

The followings are assumed that OS and SonicDICOM PACS is installed on C drive.

- 4. Please change C drive to SSD.
- 5. If possible, please set up RAID on C drive.
- Please add 2 internal HDDs and set them as store location of DICOM files (Data Path and Backup Path). The configuration of SSD/HDD will be followings.

C: (OS, SonicDICOM PACS)

Y: (Data Path)

Z: (Backup Path)

Changing C drive to SSD improves a performance dramatically. This is because SonicDICOM PACS frequently writes and reads the OS's temp folder.

Setting up RAID in C drive prevent that the system suddenly stops.

And this configuration enables you to avoid several potential problems.

By storing DICOM files in the added HDD, DICOM files will not be lost if C drive crashes.

Even if the added HDD crashes, there is another HDD. So, it can reduce risk to lose

DICOM files.

And if your Data Path (Y:) HDD crashes, you can immediately restore the system by changing Data Path to Backup Path (Z:) by using PACS Manager.

Info

- Data Path: Where to save/refer to a DICOM file
- Backup Path: Where to back up a DICOM file

CPU

CPU's clock speed affects a speed of image processing.

The number of CPU cores affects response if there are simultaneous accesses from multiple Web browsers frequency, and if the hardware simultaneously communicates with multiple modalities.

SonicDICOM PACS supports image processing by multi-core CPUs, so the bigger CPU core makes performance of image processing significantly improved.

Memory

Memory affects performance if there are simultaneous accesses from multiple Web browsers frequency, and if the hardware has big stress by communication with multiple modalities.

2. Upgrade Database

SonicDICOM PACS uses Microsoft SQL Server Compact as the default database. Since Microsoft SQL Server Compact is not necessary to be installed, it is suited for trial use of SonicDICOM PACS. However, it is not suited for the use in a production environment. And if you use this database in a production environment, we are unable to provide any support. Therefore, if you intend to use SonicDICOM PACS in a production environment, you need to upgrade it to Microsoft SQL Server. In this page, we provide information on how to upgrade to Microsoft SQL Server Express, which is a free edition, and Microsoft SQL Server Standard, which is a paid edition. Although Microsoft SQL Server Express is available free of charge, it has a 10GB limit on the size of the database file. If the size of the database file reaches its limit, errors may occur, such as not receiving DICOM files from modalities. In this case, you need to upgrade the database to a higher edition such as Microsoft SQL Server Standard. Also, depending on the environment and usage, the approximate number of images that can be stored with Microsoft SQL Server Express is two million. If there is a possibility of exceeding this, please consider upgrading to a higher edition such as Microsoft SQL Server Standard.

NOTE: Microsoft SQL Server Standard is a paid edition.

For more information on how to buy, prices, licensing details, etc., please contact Microsoft or a retailer of Microsoft products.

Install Microsoft SQL Server Express

- 1. Download Microsoft SQL Server 2022 Express from the following URL: https://www.microsoft.com/en-us/download/details.aspx?id=104781
- 2. Launch "SQL2022-SSEI-Expr.exe".

3. Click "Download Media".



4. Select "Express Core" and click "Download".



5. Click "Open folder".



- 6. Start up the installer "SQLEXPR_x64_ENU.exe" that is in the displayed folder.
- 7. Click "OK".



8. Click "New SQL Server stand-alone installation or add features to an existing installation".



9. Read through the "License Terms" and Privacy Statement then check "I accept the license terms." after confirming the contents.





Install Rules Supported a problems that might occur while running Setup. Failures must be corrected before Setup an ontinue. Ucense Terms Global Rules Microsoft Update Product Update Install Setup Files Install Rules Acure Extension for SQL Server Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Reture Rules Installation Progress Complete	📸 SQL Server 2022 Setup				-		
Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup License Terms Operation completed. Passed: 4. Failed 0. Warning 1. Skipped 0. Global Rules Microsoft Update Product Updates Hide details < Install Rules Re-run Azure Extension for SQL Server Feature Selection Feature Rules Install Rule Install Rules Machine Learning Server shared feature support Database Engine Configuration Passed Feature Configuration Rules Installation Progress Complete Complete	Install Rules						
License Terms Global Rules Microsoft Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Selection Server Configuration Server Configuration Result Rule Installation Progress Complete	Setup rules identify potential can continue.	problems that	t might occur while running Setup. Failures must be correct	ted before Setup	b		
Global Rules Microsoft Updates Product Updates Install Setup Files View detailed report Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Server Configuration Feature Configuration Feature Configuration Feature Configuration Installation Progress Complete	License Terms	Operation	completed. Passed: 4. Failed 0. Warning 1. Skipped 0.				
Microsoft Updates Product Updates Hide details << Re-run Install Setup Files View detailed report Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Reature R	Global Rules						
Product Updates Hide details <	Microsoft Update						
Install Setup Files View detailed report Install Rules Azure Extension for SQL Server Feature Selection Rule Status Feature Rules Machine Learning Server shared feature support Passed Instance Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete Status	Product Updates	Hide de	tails <<			Re-ru	ın
Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Install Setup Files	View deta	iled report				
Azure Extension for SQL Server Result Rule Status Feature Selection Machine Learning Server shared feature support Passed Instance Configuration Server Configuration Passed Seture Configuration Feature Configuration Feature Configuration Feature Configuration Rules Installation Progress Complete	Install Rules						
Feature Selection Machine Learning Server shared feature support Passed Feature Rules Instance Configuration Server Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete Complete	Azure Extension for SQL Server	Result	Rule	Status	;		_
Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Feature Selection		Machine Learning Server shared feature support	Passed	1		
Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Feature Rules						
Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Instance Configuration						
Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Server Configuration						
Feature Configuration Rules Installation Progress Complete	Database Engine Configuration						
Installation Progress Complete	Feature Configuration Rules						
Complete	Installation Progress						
	Complete						
< Back (Next >) Cancel			< Back	Next	>	Cancel	

NOTE: If the environment can use Microsoft Update, we recommend checking "Use Microsoft Update to check for updates (recommended)".

Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Extension for SQL Server Result Rule Stature Bules Stature Rules Server Configuration Server Server Server Server Configuration Server Server Server Server Server Server Server Server Server Server Server Server Server Server Server Server Server <td< th=""></td<>
Microsoft Update roduct Update Install Setup Files stall Setup Files txure Extension for SQL Server ieature Selection ieature Rules nstance Configuration ierver Configuration Natabase Engine Configuration Natabase Engine Configuration Natabase Engine Configuration ieature Configuration Natabase Engine Configuration ieature Configuration Natabase Engine Configuration ieature Configuration Natabase Ingine Configuration Natabase In
Product Updates Hide details <
Install Setup Files View detailed report Install Rules Azure Extension for SQL Server Azure Extension for SQL Server Result Ceature Selection Image: Consistency validation for SQL Server registry keys Instance Configuration Computer domain controller Server Configuration Output of domain controller Database Engine Configuration Freesure Configuration Rules Microsoft.NET Framework 4.7.2, or newer, is required Microsoft.NET Framework 4.7.2, or newer, is required Passed
Install Rules Rule Status Xaure Extension for SQL Server Result Rule Status Feature Rules Machine Learning Server shared feature support Passed Consistency validation for SQL Server registry keys Passed Computer domain controller Passed Consistency validation for SQL Server registry keys Passed Computer domain controller Passed Mindows Firewall Windows Firewall Microsoft .NET Framework 4.7.2, or newer, is required Passed
Result Rule Status Feature Selection Machine Learning Server shared feature support Passed Image: Server Configuration Consistency validation for SQL Server registry keys Passed Image: Server Configuration Computer domain controller Passed Image: Database Engine Configuration Reles Windows Firewall Warning Image: Database Engine Configuration Reles Microsoft .NET Framework 4.7.2, or newer, is required Passed
Feature Rules Image: Configuration Image: Configuration Image: Configuration Consistency validation for SQL Server registry keys Passed Server Configuration Image:
reature Rules Consistency validation for SQL Server registry keys Passed instance Configuration Computer domain controller Passed Server Configuration Mindows Firewall Warning Database Engine Configuration Rules Microsoft .NET Framework 4.7.2, or newer, is required Passed Somplete Server Configuration Rules Server Configuration Server Configuration
Instance Configuration Server Configuration Database Engine Configuration Reature Configuration Rules Installation Progress Complete
Jorden Server Configuration Image: Configuration Rules Scalabase Engine Configuration Rules Microsoft .NET Framework 4.7.2, or newer, is required Passed Scomplete Scalabase Engine Configuration Rules Microsoft .NET Framework 4.7.2, or newer, is required Passed
Oatabase Engine Configuration Wicrosoft.NET Framework 4.7.2, or newer, is required Passed Feature Configuration Rules Microsoft.NET Framework 4.7.2, or newer, is required Passed Statiliation Progress Complete Microsoft.NET Framework 4.7.2, or newer, is required Passed
reature Configuration Rules Installation Progress Complete
ormaliete
Uniplete

13. Click "Next".

License Terms Slobal Rules Wicrosoft Update Product Updates Install Setup Files Install Rules Extension for SQL Server Feature Rules Evature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	 Azure Extension for SQL Server Use Azure Login Use Service Principal Azure Service Principal ID* Azure Service Principal Secret* Azure Subscription ID* Azure Resource Group* Azure Region* Azure Tenant ID* Proxy Server URL (optional) 	To install Azure extension for SQL Server, provide your Azure account or a service principal to authenticate the SQL Server instance to Azure. You also need to provide the Subscription ID. Resource Group, Region, and Tenant ID where this instance will be registered. For more information for each parameter, visit https://aka.ms/arc-sql-server.

14. Check "Database Engine Services" and click "Next".

SQL Server 2022 Setup			- C	
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Looking for Reporting Servi Features: Instance Features Database Engine Services JSCL Server Replication Shared Features Redistributable Features	ces? <u>Download it f</u>	rom the web Feature description: The configuration and operation of each instance feature of a SQL Server instances isolated from other SQL Server instances. Server instances can operate side-by-side the same computer. Prerequisites for selected features: Already installed: — Windows PowerShell 3.0 or higher — Microsoft Visual C++ 2017 Redistribu Disk Space Requirements Drive C: 994 MB required, 41153 MB avail	table
	Select All Unselect All Instance root directory: Shared feature directory:	C:¥Program Files¥M C:¥Program Files¥M	Microsoft SQL Server¥ Microsoft SQL Server¥	
	Shared feature directory (x86):	C:¥Program Files (x	86)¥Microsoft SQL Server¥	

15. Select "Default instance".

髋 SQL Server 2022 Setup					-			\times
Instance Configuration								
Specify the name and instance	ID for the instance of S	QL Server. Instance ID I	becomes part	of the installatio	n path.			
License Terms	O Default instance	>						
Global Rules Microsoft Update	Named instance: *	MSSQLSERVER						
Product Updates								
Install Setup Files	Instance ID:	MSSQLSERVER						
Install Rules								
Azure Extension for SQL Server	SOL Sanuar directory	CXDrogram FilesXM	interest SOL S					
Feature Selection	SQL Server directory:	C:#Program Files#M	ICTOSOTE SQL 3	erver#IVISSQL10.	NISSQUSERVER			
Instance Configuration	Installed instances:							
Server Configuration	Instance Name	Instance ID	Features	Editio	n	Versio	n	
Database Engine Configuration	MSSQLSERVER	MSSQL15.MSSQLS	SQLEngine	Expres	5	15.0.20	00.5	
Feature Configuration Rules								
Installation Progress								
comprete								
				< Back	Next >		Cancel	



17. Click "Next".

Specify Database Engine Contra	entiration exclusive mode administratory data directories TempDB. May decree of
parallelism, Memory limits, an	d Filestream settings.
License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Rules Instance Configuration Beature Rules Enver Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Server Configuration Data Directories TempD8 Memory User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Windows authentication mode Windows authentication mode Windows authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account. Enter password: Specify SQL Server administrators Specify SQL Server administrators SQL Server administrators have unrestricted access to the Database Engine.
	Add Current User Add Remove

18. Click "Close".

Vour SQL Server 2022 installation completed successfully with product updates. License Terms Global Rules Microsoft Update Product Updates Install Setup Files Install Rules Anze Extension for SQL Server Feature Secure Configuration Database Engine Configuration Server Configuration Database Engine Configuration Database Engine Configuration Server Configuration Database Engine Configuration Server Configuration Details: Install successful. Details: Install successful. Summary log file has been saved to the following location:: CxProgram Files/Microsoft SQL Server*160¥Setup Bootstrap¥Log¥20230306_105645¥*	Complete			
License Terms Global Rules Microsoft Update Product Updates Information about the Setup operation or possible next steps: Feature Seture Setup Status Configuration FSQL Server Feature Setuce Setup Install Setup Support Files Database Engine Configuration Feature Configuration Reature Configuration Reature Configuration Reature Configuration Reature Configuration Reature Configuration Feature Configuration Feature Configuration Reature Configuration Feature Configuration Server Configuration Details: Install successful. Summary log file has been saved to the following location: C.\\Program Files\/\Licensoft.SQL Server\/160\/Setup Bootstrap\/Log\/20230306_105645\/ _20230306_105645.ad	Your SQL Server 2022 installa	ation completed successfully with product upd	ates.	
Siloda Rules Feature Status Microsoft Update Product Updates Silicite Rules Install Setup Files SQL Server Succeeded Install Setup Files SQL Writer Succeeded SQL Writer Succeeded Succeeded Arure Extension for SQL Server Setup Support Files Succeeded Install Rules Setup Support Files Succeeded Server Configuration Server Configuration Server Configuration Server Configuration Details: Install successful. Database Engine Configuration Details: Install successful. Summary log file has been saved to the following location:: C+¥Program Files/Microsoft.SQL Server¥160¥Setup Bootstrap¥Log¥20230306.105645¥ 20230306.103645.ad 20230306.103645.ad Summary Log ¥20230306.105645¥	License Terms	Information about the Setup operation or	possible next steps:	
Microsoft Updates Outabase Engine Services SQL Browser Succeeded SQL Postalls Brotall Browser Details: Details: Install sourcessful. Summary log file has been saved to the following location: C:\@Togram Files/Microsoft SQL Server/160%Setup BootstrapkLog%20230306_105645% _20230306_105645.txd SQL Server/160%Setup BootstrapkLog%20230306_105645%	Giobal Rules	Feature	Status	
Product Updates Install Setup Files Install Setup Files SQL Browser SQL Writer SQL Write	Microsoft Update	Database Engine Services	Succeeded	
Install Stup Files SQL Writer Succeeded Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Database Engine Configuration Database Engine Configuration Feature Configuration Details: Install successful. Install successful. Summary log file has been saved to the following location:: C:\\Program Files\Microsoft.SQL Server\160\\Setup Bootstrap\Uog\\20230306_105645\\ 20230306_105645.ad	Product Updates	SQL Browser	Succeeded	
Install Rules Succeeded Azure Extension for SQL Server Feature Sectors Feature Rules Instance Configuration Server Configuration Peature Configuration Sector Peature Configuration Sector Peature Configuration Peature Con	Install Setup Files	SQL Writer	Succeeded	
Azure Extension for SQL Server Feature Selection Feature Selection Feature Sules Instance Configuration Database Engine Configuration Poture Configuration Details: Installation Progress Complete Summary log file has been saved to the following location: C:\VTrogram FilesYMicrosoft SQL ServerV160VSetup BootstrapVLogV20230306.105645Y 20230306.105645.bd	Install Rules	Setup Support Files	Succeeded	
Feature Selection Instance Configuration Instance Configuration Details Database Engine Configuration Details Installation Progress Install successful. Complete Summary log file has been saved to the following location:: CxWProgram File#Microsoft.SQL Server¥160¥Setup Bootstrap¥Log¥20230306_105645¥	Azure Extension for SQL Server			
Feature Rules Instance Configuration Server Configuration Details: Database Engine Configuration Details: Installation Progress Install successful. Complete Summary log file has been saved to the following location:: C+VForgram Files/Microsoft SQL Server¥160¥Setup Bootstrap¥Log¥20230306.105645¥ 20230306.105645×	Feature Selection			
Instance Configuration Server Configuration Database Engine Configuration Details Details Details Install auccessful Install auccessful Install auccessful Summary log file has been saved to the following location: C+¥Program Files#Microsoft.SQL Server¥160¥Setup Bootstrap¥Log¥20230306.105645¥ _20230306.105645.tsd	Feature Rules			
Server Configuration Database Engine Configuration Feature Configuration Installation Progress Complete Details: Details: Details: Details: Summary log file has been saved to the following location: C+¥Program File#Microsoft SQL Server¥ 160¥Setup Bootstrap¥Log¥20220306-105645¥ 20230306-105645.tet	Instance Configuration			
Database Engine Configuration Details: Feature Configuration Rules Install successful. Installation Progress Summary log file has been saved to the following location: Summary log file has been saved to the following location: CVProgram Files/Microsoft.SQL Server¥160¥Setup Bootstrap¥Log¥20230306.105645¥	Server Configuration			
Texture Configuration Rules Details Installation Progress Fistall successful. Complete Summary log file has been saved to the following location: Summary log file has been saved to the following location: CVPFrogram Files#Microsoft.SQL Server#160#Setup Bootstrap#Log#20230306.105645¥	Database Engine Configuration			
Complete Install successful. Summary log file has been saved to the following location: CVProgram File¥Microsoft SQL Servet¥ 160¥Setup Bootstrap¥Log¥20220306.105645¥ 20220306.105645.tet 20220306.105645.tet	Feature Configuration Rules	Details:		
Summary log file has been saved to the following location: <u>CVProgram File#Microsoft SQL Serve#160#Setup Bootstrap#Log#20230306-105645¥</u> 20230306-105645.td	lestallation Drogmers	Install successful.		
Summary log file has been saved to the following location: <u>CVPProgram Files#Microsoft.SQL Server#160#Setup Bootstrap#Log#20230306.105645¥</u> 20230306_105645.td	Complete			
Summary log file has been saved to the following location: <u>C+¥Program Filey¥Microsoft SQL Serve¥1604Setup Bootstrap¥Log¥20220306:105645¥</u> 20230306:105645.td	complete			
Summary log file has been saved to the following location: CVProgram File#Microsoft SQL Server#160#Setup Bootstrap#Log#20220306.105645¥ 20230306.105645.td				
Summary log file has been saved to the following location: <u>C\PProgram File\$\UncreasedFiscal_Serve{\IsoPSctup Bootstrap\Log\20230306_105645\u00e9 20230306_105645.tst</u>				
Summary log file has been saved to the following location: C¥Program Files¥Microsoft SQL Server¥160¥Setup Bootstrap¥Log¥20230306-105645¥ 20230306-105645.td				
Summary log file has been saved to the following location: C+PProgram Files#Microsoft SQL Server#160#Setup Bootstrap#Log#20220306: 105645¥ 20220306: 105645.td				
Summary log file has been saved to the following location: <u>CVProgram File#Microsoft SQL Server¥I60¥Setup Bootstrap¥Log¥20230306:105645¥</u> 20230306:105645.tst				
Summary log file has been saved to the following location: <u>CVProgram Files#MicrosoftSQL Server#160#Setup Bootstrap#Log#20230306_105645¥</u> 20230306_105645.txt				
C#Program File#Microsoft SQL Server#160#Setup Bootstrap#Log#20230306-105645# 20230306-105645.td		Summary log file has been saved to the fo	llowing location:	
20230306 105645.bt		C:¥Program Files¥Microsoft SQL Server¥1	60¥Setup Bootstrap¥Log¥20230306_105645¥	
		20230306 105645.txt		

19. Click "Install SQL Server Management Tools".



20. Download the installer.



21. Start up the downloaded installer "SSMS-Setup-ENU.exe".

22. Read through the Privacy Statement and the License Terms and click "Install".

		-
	RELEASE 19.0.2	
	Microsoft SQL Server Management Studio	
%	with Azure Data Studio	
Welco	me. Click "Install" to begin.	
Location:	:	
C:¥Program	n Files (x86)¥Microsoft SQL Server Management Studio 19 Change	
By clicking	g the "Install" button, I acknowledge that I accept the <u>Privacy Statement</u> and	
the Licens	e Terms for <u>SQL Server Management Studio</u> and <u>Azure Data Studio</u>	
SQL Server I usage and p and privacy documentat	Management Studio transmits information about your installation experience, as well as other performance data, to Microsoft to help improve the product. To learn more about data processi controls, and to turn off the collection of this information after installation, see the tion	ing
documentat		
	Install Close	

23. Click "Close".



24. Launch SQL Server Management Studio. Open ■ Start Menu and type "sql server" in the search bar. Then click "Run as administrator" on SQL Server Management Studio.

sql server		
- All Work Apps Document	s Web	Settings People ▶ iiun.co.ip K ···
Rest match		
		7
Studio 18		2 * *
Apps		Microsoft SQL Server Management Studio 18
🛃 SQL Server Profiler 18	>	Арр
SQL Server 2022 Configuration Manager	>	C Open
SQL Server 2022 Error and Usage Reporting	>	Run as administratorOpen file location
🛃 SQL Server Profiler 19	>	 Pin to Start Pin to taskbar
Search work and web		ີ່ເພັ Uninstall
See work and web results	>	
,∕⊃ sql server	>	
	>	
β sql server configuration manager	>	

25. Click "Connect".

🖵 Connect to Server		×
	SQL Server	
Server type:	Database Engine	\sim
Server name:		~
Authentication:	Windows Authentication	\sim
User name:		\sim
Password:		
	Remember password	
	Connect Cancel Help Opt	tions >>

26. From the left pane, click "Security".



27. Click "Logins".



28. Right-click "NT AUTHORITY" and click "Properties".



Info: When SonicDICOM PACS accesses the database, "NT AUTHORITY" is the user name because SonicDICOM PACS operates as a Windows service.

29. From the left pane, click "Server Roles" and check "sysadmin" then click "OK".

Login Properties - NT AUTH	ORITY\SYSTEM	—		Х
ciect a page	I Script ▼ 0 Help			
 Server Roles User Mapping Securables Status 	Server role is used to grant server-wide security privileges to a user.			
	Server roles:			
	##MS_DatabaseConnector## ##MS_DatabaseManager## ##MS_DefinitionReader## ##MS_PerformanceDefinitionReader## ##MS_ServerPerformanceStateReader## ##MS_ServerPerformanceStateReader## ##MS_ServerStateManager## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## ##MS_ServerStateReader## bulkadmin oprocessadmin processadmin public servertion			
Connection				
Server:	Z Isoturedmin			
Connection:				
View connection properties				
Progress				
Ready				
		эк	Can	cel

Info: When SonicDICOM PACS starts up, it needs to build database file. So "sysadmin" permission is necessary.

Change the database to Microsoft SQL Server

7. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop SonicDICOM PACS.

2S Mana	ger							
lome	Server	Databas	e Connection	License	Localization			
Wi	indows S	ervice						
C	DICOMAp	p Stop	ped					Start
Vie	ewer							
	-Access t	from this I	PC					
	URL	http://loo	alhost/viewer/				Open t	he viewer
	-Access 1	from othe	r PC					
	URL					\sim	Open t	he viewer
	Default	Account						
	ID	:	admin					
	For co	ora :		hange ver	in initial passi	word		
	10136	curry purp	oses, piease c	nange you	ar initial passi	iora.		
_ Im	port DIC	DM File —						
								Browse
F	기 Include	e sub-fold	ers					Import
								,
								Close status panel
8. Click the "Database" tab.

-Win Di	dows Service	topped		Start
Viev	wer			
	Access from t	his PC		
	URL http:	//localhost/viewer/		Open the viewer
	Access from (other PC		
	URL		~	Open the viewer
	Default Accou	nt		
	ID	: admin		
	Password For security	: password purposes, please change your initi	ial password.	
- Imp	ort DICOM Fi	P		
				Browse
	Include sub-	folders		Import

9. Select "Microsoft SQL Server".

S Mana	ager
ome	Server Database Connection License Localization
Da	atabase
	O Microsoft SQL Server Compact
Г	Microsoft SQL Server Source localhost
	Authentication
	Windows Authentication
	O SQL Server Authentication ID Password
	Daily Backup
	12:00 AM 💛 🗌 Data Path 📄 Backup Path 1 📄 Backup Path 2
	Save Cancel
	Close status panel

10. Enter the instance name in "Source". If you selected the "Default instance" when you installed Microsoft SQL Server, enter "localhost".

×

PACS Manager	
Home Server Database Connection License Localization	
Home Server Database O Microsoft SQL Server Compact Microsoft SQL Server Source Icoalhost Authentication SQL Server Authentication ID Daily Backup ID ala Path I2:00 AM ID ala Path Backup Path 1 Backup Path 2	
Open status panel	

11. Under "Authentication", select the authentication method.

If you select "SQL Server Authentication", enter relevant "ID" and "Password".

×

ACS Manager										
Home Se	erver	Database	Connection	License	Localization					
Datab	ase									
0	Micros	off SOL Sor	vor Compact							
0	WICTOS	on sqr ser	ver compact							_
۲	Micros	oft SQL Ser	ver Sour	ce local	host					
A	uthenti	cation								
	() Wi	Indows Auth	nentication	1 10			T			1
	0 50	L Server Au	Inenucation			Pd	ssworu			
D	aily Bao	ckup			_	_				
	12:00	MA 0	✓ □ Dat	a Path [Backup Path	n 1 □ B	ackup Path	2		
							Save		Cance	l -
								Oper	status r	anel
								oper	r status p	in inter

12. Click "Save".

Upgrade to Microsoft SQL Server Standard

- 1. Start "setup.exe" of Microsoft SQL Server Standard you obtained.
- 2. Click "Maintenance".

3.

📸 SQL Server Installation Center			-		×
Planning Installation Maintenance Tools Resources	*	New SQL Server stand-alone installation or add features to an existin Launch a wizard to install SQL Server 2019 in a non-clustered enviror features to an existing SQL Server 2019 instance. Install SQL Server Reporting Services Launch a download page that provides a link to install SQL Server Re An internet connection is required to install SSRS.	g insta iment o porting	llation or to add	d es.
Click "Edition upgrade".			_		×
Planning	5	Edition Upgrade			

Planning Installation		Launch a wizard to change your edition of SQL Server 2019, like changing from Developer to Enterprise.
Maintenance	_	
Tools	-5T	Repair
Resources		Launen a wizara to repair a contupt sige server 2019 installation.

4. Enter the Product Key

5. Click "Next".

🗑 Upgrade the Edition for SQL Serv	ver 2019	_		×
Product Key Specify the desired edition of S	QL Server 2019 for upgrade.			
Product Key License Terms Global Rules Edition Upgrade Rules Select Instance Feature Rules Ready to upgrade edition Complete	Select the edition of SQL Server 2019 you would like to upgrade to by entering the 2 the Microsoft certificate of authenticity or product packaging. Search Edition Upgrad Books Online if you need help or to determine the supported upgrade paths for this is of Specify a free edition: Express > Enter the product key: - - - 	5-charac	ter key fr . Server i	om n
	< Back Next :		Cance	

- 6. Read through the "License Terms" and check "I accept the license terms." after confirming the content.
- 7. Click "Next".
- 8. Select an instance of SQL Server.

If you selected the "Default instance" in step 17., select "MSSQLSERVER".

- 9. Click "Next".
- 10. Click "Upgrade".
- 11. Click "Close".

2. Store Data in NAS

You can change storage locations of DICOM files and log files to a network path such as NAS.

Enable to use network path

SonicDICOM PACS runs as a Windows service "DICOMApp". By default, the Windows user who executes "DICOMApp" is "Local System". With the Windows OS specifications, this default user "Local System" cannot use network path. So in order to enable SonicDICOM PACS to use network path, you need to change the Windows user who executes "DICOMApp".

- 1. Open the Control Panel.
- 2. Click "Administrative Tools > Services".



🚔 🕑 📕 🖛 Administrative Tools				_	
File Home Share View					~ 🕐
← → · · ↑ 🖄 > Control Panel	> All Control Panel Items > Administrative Too	ls	√ Ö	Search Administrative Tools	م
🕈 Ouick access	Name	Date modified	Туре	Size	
	🌮 Component Services	9/29/2017 10:41 PM	Shortcut	2 KB	
le OneDrive	🎥 Computer Management	9/29/2017 10:41 PM	Shortcut	2 KB	
This PC	ڬ Defragment and Optimize Drives	9/29/2017 10:41 PM	Shortcut	2 KB	
2D Objects	📻 Disk Cleanup	9/29/2017 10:41 PM	Shortcut	2 KB	
	🧱 Event Viewer	9/29/2017 10:41 PM	Shortcut	2 KB	
Desktop	👧 iSCSI Initiator	9/29/2017 10:41 PM	Shortcut	2 KB	
Documents	ᅯ Local Security Policy	9/29/2017 10:42 PM	Shortcut	2 KB	
👆 Downloads	📷 ODBC Data Sources (32-bit)	9/29/2017 10:42 PM	Shortcut	2 KB	
👌 Music	📷 ODBC Data Sources (64-bit)	9/29/2017 10:41 PM	Shortcut	2 KB	
Pictures	🔊 Performance Monitor	9/29/2017 10:41 PM	Shortcut	2 KB	
Videos	🔚 Print Management	9/29/2017 10:42 PM	Shortcut	2 KB	
- OS (C)	📷 Recovery Drive	9/29/2017 10:42 PM	Shortcut	2 KB	
	Resource Monitor	9/29/2017 10:41 PM	Shortcut	2 KB	
HP_RECOVERY (D:)	Services	9/29/2017 10:42 PM	Shortcut	2 KB	
Network	System Computation	9/29/2017 10:41 PM	Shortcut	2 KB	
	👰 System Information	9/29/2017 10:42 PM	Shortcut	2 KB	
•• Homegroup	😥 Task Scheduler	9/29/2017 10:42 PM	Shortcut	2 KB	
	🔗 Windows Defender Firewall with Advanc	9/29/2017 10:41 PM	Shortcut	2 KB	
	📷 Windows Memory Diagnostic	9/29/2017 10:42 PM	Shortcut	2 KB	
19 items					

Services \times File Action View Help 🦛 🔿 🔚 📰 🙆 📑 🛛 🖬 🕨 💷 💵 🔍 Services (Local) Services (Local) Log On 🗸 ^ DICOMApp Name Description Status Startup Type RevQuery Background Disc... Enables app... Manual (Trig... Local Sy: Stop the service Restart the service DHCP Client Automatic Local Se Registers an... Running Q Diagnostic Execution Service Executes dia... Manual (Trig... Local Sy: Q Diagnostic Policy Service The Diagno... Local Se Running Automatic Description: DICOM Server Diagnostic Service Host The Diagno... Running Manual Local Se Diagnostic System Host The Diagno... Running Manual Local Sy: DICOMApp Local Sy Auto Start Distributed Link Tra Running Automatic Local Sy: Stop Distributed Transact Manual Network Pause k dmwappushsvc Manual (Trig... Local Sy: Q DNS Client Automatic (T... Network Resume Running Downloaded Maps I Automatic (D... Network Restart Embedded Mode Manual (Trig... Local Sy: All Tasks > 🖏 Encrypting File Syste Manual (Trig... Local Sy: 🖏 Enterprise App Man Manual Local Sy: Refresh ESET Service inning Automatic Local Sy: Properties 企 🔍 Extensible Authent Manual Local Sy: 🖏 Fax Manual Network ¥ Help < > Extended / Standard / Opens the properties dialog box for the current selection.

3. Right-click "DICOMApp" and click "Properties".

- 4. Click "Log On" tab.
- 5. Select "This account".
- 6. Click "Browse...".



7. Select the name of Windows user who executes DICOMApp.

8. Click "Check Names" and click "OK".

Select User or Group	×
<u>S</u> elect this object type: User or Built-in security principal	Object Types
From this location:	
JIUN-WIN10	Locations
Enter the object name to select (<u>examples</u>):	
JIUN-WIN10\JIUN	Check Names
Advanced	Cancel

NOTE: This Windows user need to have Administrator authorization.

- 9. Enter the password of Windows user that you entered just now
- 10. Click "Apply".

DICOMApp Properties	(Local Computer)	×
General Log On Re	covery Dependencies	
Log on as:		
Local System acco Allow service to	unt interact with desktop	
This account:	.\JIUN Bro	wse
Password:	•••••	
Confirm password:	•••••	
	OK Cancel	Apply

11. Right-click "DICOMApp" and click "Restart".

File Action View	v Help Q 🕞 🛛 📷 🕨 ■ Ⅱ 🕨					
Services (Local)	Services (Local)					
	DICOMApp	Name	Description	Status	Startup Type	Log On , ^
	Stop the service Restart the service Description: DICOM Server	DevQuery Background Disc DHCP Client Diagnostic Execution Service Diagnostic Policy Service Diagnostic Service Host Diagnostic System Host DicOMApp Distributed Link Tracking CL Distributed Transaction Coo dmwappushsvc DNS Client Downloaded Maps Manager Embedded Mode Encrypting File System (EFS) Enterprise App Managemen ESET Service Extensible Authentication P	Enables app Registers an Executes dia The Diagno The Diagno Dic OVS Mai Sta Coc Sto WA Par The Bro Wi Res The Pro All Ena Ret ESE The Pro	Running Running Running Running Running Running Runsion art pp use start Tasks fresh operties	Manual (Trig Automatic Manual (Trig Automatic Manual Automatic (D Automatic (D Automatic (Trig Automatic (Trig Manual (Trig Manual (Trig Manual Automatic Manual	Local Sy Local Se Local Sy Local Se Local Se Local Sy Local Sy Network Local Sy Network Network Local Sy Local Sy Local Sy Local Sy Local Sy
	Estended (Standard	≪ rdx	He	lp	wanuai	Network *

- 12. Change NAS settings to permit the Windows user access who is specified in step 8.
- 13. Check whether the Windows user specified in step 8. can access to optional folders in NAS.
- Change store locations of files to network path by using PACS Manager. At this time, you need to be already logged in Windows OS as the user that executes PACS Manager.

Set up permission in Microsoft SQL Server

If you have upgraded Microsoft SQL Server Compact to Microsoft SQL Server for SonicDICOM PACS database, you need to set up additionally.

1. Start up Microsoft SQL Server Management Studio.

2. Click "Connect".

	SQL Server	
Server type:	Database Engine	~
Server name:	JIUN-WIN10	~
Authentication:	Windows Authentication	~
User name:	JIUN-WIN10\JIUN	~
Password:	Remember password	

3. Open the left pane Security > Logins.



4. If there is not the Windows user specified in step 8. in this list, add with the following process.

If there is, right-click the user, and click "Properties", and then continue with



5. Open the left pane "Security" and right-click "Logins".

6. Click "New Login...".



7. Click "Search...".

🔒 Login - New				-		×
Select a page	Script 🔻 📑 Help					
General Server Roles User Mapping	Login name:			(Search	7
Securables	Windows authentication					~~~
	Password:					
	Confirm password:					
	Old password:					
	Enforce password policy Enforce password expiration	tion				
	User must change passv	vord at next login				
	 Mapped to certificate 			\sim		
	Mapped to asymmetric key			\sim		
Connection	Map to Credential			\sim	Add	
Server: JIUN-WIN10	Mapped Credentials	Credential	Provider			
Connection: JIUN-WIN10\JIUN						
View connection properties						
Progress					Remove	
Ready	Default database:	master		~		
4 ^{4 b} A	Default language:	<default></default>		~		
				ОК	Cancel	

- 8. Enter the name of Windows user.
- 9. Click "Check Names".
- 10. Click "OK".

Select User or Group	×
<u>S</u> elect this object type: User or Built-in security principal	<u>O</u> bject Types
From this location: JIUN-WIN10	Locations
Enter the object name to select (<u>examples</u>): JIUN-WIN10\JIUN	Check Names
<u>A</u> dvanced	OK Cancel

11. Click "Server Roles" on the left pane.

12. Check "sysadmin".

Login Properties - JIUN-WIN	10\JIUN	-		×
Select a page	🖵 Script 🔻 😮 Help			
Server Roles	Server role is used to grant server-wide security privileges to a user.			
 Status 	Server roles:			
	bulkadmin dbcreator diskadmin			
	□ processadmin ☑ public □ securityadmin			
	Serveraamin Stapodinin Sysadmin			
a				
Connection				
Server: JIUN-WIN10				
Connection: JIUN-WIN10\JIUN				
₩ <u>View connection properties</u>				
Progress				
Ready				
	0	ιK	Can	cel

13. Select "User Mapping" on the left pane.

14. If "dicom" is in the database, check "db_owner".

If "dicom" does not exist, you do not need do anything.

Login Properties - JIUN-WIN	N10/JIUN		_		\times
Select a page Page General	🔄 Script 🔻 📑 Help				
Server Roles	Users mapped to this login:				
	Map Database	User	Default Schema		
Er Status	dicom	JIUN-WIN10\JIUN			
	√č master				
	model				
	msdb				
	report				
	tempdb				
Connection	Guest account enabled for: dicom				
Connection	db_accessadmin				
Server:	db_backupoperator				
31014-WINTO	b_datareader				
Connection: JIUN-WIN10\JIUN	db_ddladmin				
View connection properties	db_denydatareader db_denydatawriter ✓ db_owner				
Progress	db_securityadmin				
Ready	Public				
			ОК	Canc	el

15. Click "OK".

Specify NAS as the storage location for DICOM files and log files

- Make sure that the status of DICOMApp is "Stopped".
 If the status of DICOMApp is "Running", click "Stop" to stop PACS.
- 4. Click the "Server" tab.

DICOMApp	Stopped	Start
iewer		
Access from	this PC	
URL http	://localhost/viewer/	Open the viewer
Access from	other PC	
URL	~	Open the viewer
Default Acco	unt	
ID	: admin	
Password For security	: password purposes, please change your initial password.	
nport DICOM F	ile	
		Browse
🗹 Include sub	-folders	Import

5. Under the "DICOM Server", click "Browse..." of Data Path or Log Path.

DICOM Server		
Data Path		Browse
Backup Path 1		Browse
Backup Path 2		Browse
Default Character Set	Japanese	~
Log Path		Browse
	○ Information	
Web Server		
🗹 Enable HTTP	Port Number 80	
Enable HTTPS	Port Number 443	
SSL Cert (Store:	Local Machine - My)	~
		Save Cancel

- 5. Select NAS.
- 7. Click "Save".
- Import DICOM files and check it can be stored properly.
 If you changed Log Path to network path, perform any operation and check that the log file can be created in the specified path properly.

If you do not have DICOM files, you can download sample DICOM files from following URL: https://files.sonicdicom.com/sonicdicom_sample.zip

4. Restore Database

You can restore the database using the database file you backed up. For information on how to set up backup, please refer to the following link.

Reference Link: PACS Manager > Set up Database Backup

7. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop PACS.

ne	Server	Database	Connection	License	Localization		
Wi	ndows Se	ervice					
(ОІСОМАр	p Stoppe				Start	
1.6							
VI	ewer						
	-Access f	rom this PC					
	URL	http://local	host/viewer/			Open the viewer	
	Access f	rom other P	С				
	URL				~	Open the viewer	
	Default	Account					
	ID	: ac	lmin				
	Passwo	ord : pa	assword				
	For sec	curity purpo	ses, please ch	ange you	ır initial password.		
luna	nort DICC	DM File					
	port bicc	JIVI FILE					
						Browse	
[🗹 Include	sub-folder	5			Import	

Click the "Database" tab to see the backup location for the database file. If
 "Data Path" is checked, database files are stored in Data Path.

Home Server Database Connection License Localization Database O Microsoft SQL Server Compact O Microsoft SQL Server Source localhost Authentication O SQL Server Authentication D Password Daily Backup 12:00 AM O Data Path Ø Backup Path 1 Backup Path 2 Save Cancel	S Manager	
Database Microsoft SQL Server Compact Microsoft SQL Server Source localhost Authentication Ø Windows Authentication O SQL Server Authentication Daily Backup 12:00 AM Ø Data Path Backup Path 1 Backup Cancel	Iome Server Database Connection License Localization	
O SQL Server Authentication ID Password Daily Backup Image: Constraint of the service of th	Database O Microsoft SQL Server Compact Microsoft SQL Server Source localhost Authentication Windows Authentication	
Save Cancel	O SQL Server Authentication ID Password Daily Backup 12:00 AM V Data Path Backup Path 1 Backup Path 2	
	Save Cancel	

9. Click the "Server" tab to see where the path (Data Path, Backup Path1, Backup Path2) is set.

Data Path	C:\Program Files\SonicDICOM PACS\Data Browse
Backup Path 1	Y:\Backup1 Browse
Backup Path 2	Z:\Backup2 Browse
Default Character Set	ASCII
Log Path	C:\Program Files\SonicDICOM PACS\Log Browse
	○ Information
Web Server	
Enable HTTP Po	rt Number 80 🙀
Enable HTTPS Po	rt Number 443 🔹
SSL Cert (Store: Loo	cal Machine - My) 🗸 🗸
	Save Cancel

- 10. Launch Microsoft SQL Server Management Studio.
- 11. Make sure the displayed "Server Name" is the same as the instance that PACS is using and click "Connect".

🖵 Connect to Serv	er	\times
3	SQL Server	
Server type:	Database Engine	\sim
Server name:		~
Authentication:	Windows Authentication	\sim
User name:		~
Password:		
	Remember password	
	Connect Cancel Help Options >>	

Info: If you use "Default instance", Computer Name will be displayed.

If you use an instance other than "Default instance", Computer Name¥Instance Name will be displayed.

12. Right click "Database" and Click "Restore Database".



13. Click "Device" and click "...".

😣 Restore Database -										_		×
😵 No backupset selected to be restore	:d.											
Select a page © General Files © Options	Script Source Source Data C Destination Databas Restore Restore pl. Backup si Restore	Help base: ce: to: an Name	estore: Component	Туре	Server	Database	Position	First LSN	Last LSN	Checkpoin	Time tt LSN	Full LS
Connection v View connection properties Progress Ready	<											>
New P									ОК	Verify E	Backup	Media lelp

14. Click "Add".

🖛 Select backup devices					×
Specify the backup media and its I	location for your	restore operatio	n.		
Backup media type:	File	~			
Backup media:					
C:¥Program Files¥SonicDICOM PA	CS¥Data¥db_bac	kup¥dicom_Mon		Add	
				Remove	
			(Contents	
<		>			
	0	K Car	ncel	Help	

15. Select the database file to be restored and click "OK".

🛢 Locate Backup File - JIUN-INAMURA		_		×
Backup File location: C#Program Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services Image: Contrast of the services	Files¥SonicDICOM PACS¥Dat			
File name: dicom_Mon.bak	Backup Files(*bak;*.trn;*.log	g) ancel	~

Info: A backup of the database files is created for each day of the week.

The backed up file names will be <original file name>_<day of the week>.bak. E.g. dicom_Mon.bak, log_Mon.bak, etc.

16. Click "OK"

💀 Restore Database - dicom								_		×
🕕 Ready										
 Peady Select a page ✓ General ✓ Files ✓ Options 	Script - € Help Source ○ Database: ● Device: Database: Destination Database: Restore to: Restore plan Backup sets to restore: Restore Name Example Full Database	C:¥Pro dicom dicom The las	gram Files¥S st backup tak Component Database	onicDIC	OM PACS¥Data¥dt nday, January 24, 2 Server JIUN-INAMURA	022 5:06:03 1 022 5:06:03 1 Database dicom	om_Mon.ba PM) Position 1	k First LSN 2830000] [Timeline 0266620	······································
View connection properties Progress Image: Connection properties	<		_					Verify Ba	ckup Me	> edia
						ОК	Ci	ancel	Hel	p

17. When the selected database file has been successfully restored, the following dialog will be displayed.



18. Repeat the steps from 8. to 11. with all the database files created on the same day of the week as the one selected in 8. to restore.

WARNING: Be sure to use all database files created on the specific day of the week. Restoring with only a part of database files may cause unexpected behavior. Also, please be careful not to mix files created on different days of the week.

5. Enable HTTPS

You can enable HTTPS communication using PACS Manager. To enable HTTPS communication, you need to install IIS (Internet Information Services) and issue a server certificate.

How to install ISS (Internet Information Services)

- 1. Open "Control Panel".
- 2. Click "Programs and Features".



3. Click "Turn Windows features on or off".



4. Expand the "Internet Information Services" folder. As shown in the image below, check the features you want to use in IIS. Then click "OK".



- 5. Right click "**H** Start".
- 6. Click "Computer Management".



7. See "Internet Information Services (IIS) Manager" under the group of

"Services and Applications". 🛃 Computer Management File Action View Help 🗢 🔿 🖄 🖬 👔 Computer Management (Local) 🗸 🎁 System Tools > 🕘 Task Scheduler > 🚼 Event Viewer > 👸 Shared Folders > 🌆 Local Users and Groups > 🔊 Performance 🛔 Device Manager 🗸 🚰 Storage 📅 Disk Management Services and Applications 🖏 Internet Information Services (IIS) Manager SQL Server Configuration Manager Services 🚔 WMI Control

Creating a Server Certificate

Creating a Self-Signed Certificate

 Click "Windows Administrative Tools > Internet Information Services (IIS) Manager". 20. Click "Server Certificates".



6. Click "Create Self-Signed Certificate".



6. Enter any given name in the field of "Specify a friendly name for the certificate".

7. Click "OK".

Create Self-Signed Certificate	?	×
Specify Friendly Name		
Specify a file name for the certificate request. This information can be sent to a certificate authority for signing:		
Specify a friendly name for the certificate:		
Select a certificate store for the new certificate:		
Personal ~		
ОК	Cancel	

NOTE: The created certificate is valid for one year.

Using a certificate purchased from Certification Authority

Please refer to the following URL.

https://www.digicert.com/kb/csr-creation-ssl-installation-iis-10.htm

 Create a CSR using IIS.
 For creating a CSR, please refer to the article "1. IIS 10: How to Create Your CSR on Windows Server 2016" Purchase a Server Certificate from Certification Authority and install it.
 For the installation procedure, please refer to the article "2. IIS 10: How to Install and Configure Your SSL Certificate on Windows Server 2016"

Enabling HTTPS communication

1. Make sure that the status of DICOMApp is "Stopped".

If the status of DICOMApp is "Running", click "Stop" to stop PACS.

PACS Manager	
Home Server Database Connection License Localization	
Windows Service DICOMApp Stopped	Start
Viewer	
Access from this PC URL http://localhost/viewer/	Open the viewer
Access from other PC	Open the viewer
Default Account	
ID : admin Password : password For security purposes, please change your initial password.	
- Import DICOM File	Browse
Include sub-folders	Import
	Close status panel

2. Click the "Server" tab.

DICOMApp St	opped	Start
ewer		
Access from th	nis PC	
URL http:/	/localhost/viewer/	Open the viewer
Access from o	ther PC	
URL		Open the viewer
Default Accour	nt	
ID	: admin	
Password	: password	
For security p	purposes, please change your initial password.	
nport DICOM File	2	
		Browse
🗹 Include sub-f	olders	Import

3. Check "Enable HTTPS".

Lione Server Database Connection License Localization
Home Server Database Connection License Localization
DICOM Server
Data Path Browse
Backup Path 1 Browse
Backup Path 2 Browse
Default Character Set
Log Path Browse
○ Information
Web Server
🗹 Enable HTTPS Port Number 443 👻
SSL Cert (Store: Local Machine - My)
Save Cancel
Open status panel

- 4. In the select menu "SSL Cert", select the Server Certificate that has been issued.
- 5. Click "Save".

TIPS

How to check your IP Address

- 1. Press [Win] + [R]. Then "Run" will appear.
- 2. Enter cmd in this field, press [Enter]. Command Prompt will start up.
- 3. Enter ipconfig in Command Prompt, and press [Enter]. IP Address will be displayed.



How to set IP Address

To set IP Address, knowledge of network is necessary.

Changing IP Address settings could be a cause problem to other computers that are connected in the same network.

Please make sure you understand network and please set IP Address properly. If you do not understand, please ask your network administrator or another person who can assist.

- 1. Press [Win] and open Control Panel.
- 2. In the search box, enter "adapter", and then click "View network connections" that is under Network and Sharing Center.
- Right-click the connection that you want to change, and then click "Properties".
- 4. Click "Networking" tab.
- 5. Click "Internet Protocol Version 4 (TCP/IPv4)" that is under "This connection uses the following items", and then click "Properties".
- 6. In the window of "Internet Protocol Version 4 (TCP/IPv4) Properties", click "Use the following IP address". And then, enter IP address that you want to use in fields of "IP address", "Subnet mask", and "Default gateway".

Internet Protocol Version 4 (TCP/IPv4) Properties						
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
Obtain an IP address automatical	ly					
Use the following IP address:						
IP address:	192 . 168 . 10 . 40					
Subnet mask:	255.255.255.0					
Default gateway:	192 . 168 . 10 . 1					
○ O <u>b</u> tain DNS server address automatically						
• Use the following DNS server add	resses:					
Preferred DNS server:	192 . 168 . 10 . 1					
<u>A</u> lternate DNS server:						
Validate settings upon exit	Ad <u>v</u> anced					
	OK Cancel					