DTX Studio™ Core
Version 4.0

Instructions for Use

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Welcome

Disclaimer of Liability

This product is part of an overall concept and may only be used in conjunction with the associated original products according to the instructions and recommendations of Nobel Biocare, hereinafter referred to as 'the Company'. Non-recommended use of products made by third parties in conjunction with products of the Company will void any warranty or other obligation, express or implied. The user has the duty to determine whether or not any product is suitable for the particular patient and circumstances. The Company disclaims any liability, express or implied, and shall have no responsibility for any direct, indirect, punitive or other damages, arising out of or in connection with any errors in professional judgment or practice in the use of these products. The user is also obliged to study the latest developments in regard to this product and its applications regularly. In cases of doubt, the user has to contact the Company. Since the utilization of this product is under the control of the user, it is his/her responsibility. The Company does not assume any liability whatsoever for damage arising thereof.

Before using DTX Studio Core, please read these Instructions for Use and retain it for future reference. Please note that the information provided in this document is intended to get you up and running.

Please note that some products detailed in this Instructions for Use may not be regulatory cleared, released or licensed for sale in all markets.

Device Description

DTX Studio Core is a solution to store and transfer image requests and data of different types (2D X-ray, 3D X-ray, surface data, texture data, ...) in a structured and centralized way so that captured data is immediately accessible anywhere in a dental clinic.

Intended Purpose

DTX Studio Core software is intended to provide easy storage and retrieval of data (patient data, clinical images and related metadata) through various front-end software applications using centralized storage in the dental practice or clinic.

Intended Use / Indications for Use

DTX Studio Core software is intended to provide easy storage and retrieval of data (patient data, clinical images and related metadata) through various front-end software applications using centralized storage in the dental practice or clinic.

Intended User and Intended Patient Target Group

DTX Studio Core is used by an interdisciplinary treatment team, to support them in treating patients who are subject to dental, cranio-maxillofacial or related treatments.

Required Compatibility with Other Devices

DTX Studio Core shall be compatible with the most used operating systems for Windows including the latest releases for desktop and server.

DTX Studio Core shall be compatible with the DTX Studio Driver. The DTX Studio Driver is a high-level imaging device interface protocol. The DTX Studio Driver includes a package of device drivers and image reconstruction libraries.

Cybersecurity

Protecting your practice against cybersecurity threats is a shared responsibility between us as the manufacturer and you as the health care provider. Nobel Biocare has taken precautions to ensure that the software is protected against such threats.

It is recommended that active and up-to-date antivirus and anti-malware software, together with a correctly configured firewall, are installed on the computer where DTX Studio Core is to be used. Failure to do so may lead to unauthorized access.

Make sure the office network is protected from unauthorized access and separated from the visitor network. Failure to do so may lead to unauthorized access.

To quickly recover from any unexpected system failure or malicious event that may cause data loss, it is advised to regularly back up the patient data.

It is recommended to always update DTX Studio Core to the latest available software version. Failure to do so may lead to unauthorized access.

For more technical details concerning back-ups, firewall and security settings during installation, please refer to the DTX Studio Core installation guide.

What to Do in Case of a Cybersecurity Event?

In the event of a potential system compromise by intrusion or malicious software, the user may note unfamiliar product behavior and/or performance impact. In this case the user is advised to contact customer support immediately

(www.dtxstudio.com/en-int/support).

Decommissioning and Disposal

When terminating the use of DTX Studio Core on your computer or when disposing your computer on which DTX Studio Core is installed:

– Make sure to back up all necessary data from the application in accordance with local laws and regulations concerning data protection and data privacy to avoid any loss of relevant information.

– Uninstall the application: You should uninstall the application from your device by following the instructions of your operating system provider to prevent unauthorized access to DTX Studio Core and the data stored in the software.

Interoperability

DTX Studio Core is interoperable with: see "Compatibility with Other Software Components" on page 9.

Intended Lifetime

For software the intended lifetime is three years. When used on the supported operating systems, the software will keep performing according to its intended use.

Performance Requirements and Limitations

It is important to make sure DTX Studio Core is used only with approved operating systems. See the system requirements in the IFU for more information.

Facilities and Training

DTX Studio Core is a data backend software and requires no specific training for end users.

Installation of the Software

Information on how to install the software, can be found in the DTX Studio Core Installation Guide. This document can be downloaded from the User Documentation Library (ifu.dtxstudio.com). If any issues occur or you need assistance, please contact an authorized technician or customer support (support@dtxstudio.com).

Handling Instructions

For detailed information on how to use the software, please refer to the detailed instructions further on in this IFU.

System Requirements

Operating System[1]	Windows® 11 or 10 64-bit (Pro and Enterprise edition)	
	Windows® Server[2] 2022, 2019 or 2016	

	Basic setup	**Recommended setup**
	For 2D imaging only, in dental clinics with 10 computers or less, running DTX Studio Clinic.	**For 2D / 3D imaging and dental clinics with up to 40 simultaneously connected DTX Studio Clinic clients.**
CPU	2.5 GHz dual-core processor	3.0 GHz 4-core or 2.0 GHz 8-core processor
RAM	A minimum of 8 GB for a dedicated[3] installation.	16 GB. 32 GB or more is recommended if other applications are running on the same computer.
Network	Minimum 100 Mbps wired Ethernet. 1 Gbps wired Ethernet is strongly recommended.	1 Gbps wired Ethernet.
	Ethernet-connected imaging devices must be connected to the same local network (subnet) where DTX Studio Core is installed. Only IPv4 addresses are supported.	
Internet	A broadband Internet connection is recommended for activating the software license. When connected to the Internet, the license information is updated automatically. In offline mode, a license activation file can be created in the DTX Studio Go web portal and uploaded to DTX Studio Core.	
Disk	DTX Studio Core data and media files (images) must be stored on internal drives in the computer where DTX Studio Core is installed. Do not store DTX Studio Core data and media files on external drives, remote computers or NAS devices.	
Disk space	2 GB of free disc space is required for installation. Additional disk space is required for saving user-created data. 100 GB or more is recommended, depending on user needs.	
Browser	The web-based user interface is optimized for Google Chrome.	
Backup	A suitable backup system is required to safeguard user-created data. Backup of user-created data is solely the responsibility of the user. The manufacturer disclaims responsibility for backup of user-created data. Contact your IT provider regarding the selection of a suitable backup system according to your data storage needs.	
UPS	A UPS (uninterruptible power supply) is recommended to prevent data corruption or loss in the event of a power failure.	

1 It is strongly recommended to install the latest available update of your Operating System (OS) version.
2 Windows 10/11 Pro and Enterprise editions have an internal limitation on the number of concurrent connections. These editions should only be used in small setups. Windows Server editions are optimized for background applications and are strongly recommended for all installations.
3 DTX Studio Driver can be installed for image acquisition.

Compatibility with Other Software Components

This release is compatible with the following software components:

DTX Studio Clinic	4.3, 4.2, 4.1, 3.4, 3.3, 3.2, 3.1
DTX Studio Driver	24.1 (recommended) , 21.1 (minimum)
CLINIVIEW™	11.11, 11.10, 11.9
SCANORA™	6.11, 6.10, 6.9

Special Configuration

Microsoft® SQL Server

In larger managed IT environments where Microsoft® SQL Server is available, we also support deployment of the DTX Studio Core database using SQL Server. Please refer to the DTX Studio Core installation guide that can be found on https://ifu.dtxstudio.com/dtx-studio-core, or contact support@dtxstudio.com for details.

Virtual Servers

On-premise virtual servers are supported if the virtualized operating system is configured to meet the CPU, RAM and other requirements as defined in this document.

Please note that due to virtualization overhead, performance may be lower compared to equivalent hardware running on a non-virtualized server. Running additional processor-intensive workloads on the same server is therefore not recommended.

Get Started

Steps to Get Started

1. Install the software according to the 'DTX Studio Core installation guide', which can be found on https://ifu.dtxstudio.com/dtx-studio-core.

2. Log in to DTX Studio Core.

3. If applicable, migrate an old database to DTX Studio Core (see "Access Migration Control Center" on page 25).

4. Manage the devices in the dental clinic (see "Devices" on page 15).

5. Scan requests can be viewed and handled within the scan center (see "Access the Scan Center" on page 13).

Log in to DTX Studio Core

1. Double-click the DTX Studio Core desktop icon ⬡. Alternatively, visit the DTX Studio Core URL in your web browser.
   Note
   DTX Studio Core can also be opened from within DTX Studio Clinic.

2. Enter your username and password.

   – Click ⊙ at the end of the password field to reveal the hidden characters. To mask the password again, click ⊘.

   – If you forgot your username or password, contact customer support. Make sure you synchronize the license information: Click Forgot username or password? and then click Sync license.

   – Select Keep me logged in to enable automatic login. The next time DTX Studio Core is opened, the login dialog will not be shown anymore on the computer used.

3. Click Log in.

Log out

To log out, click Log out in the sidebar. Click Log out to confirm.

Explore the Interface

The image below shows the different components of the DTX Studio Core interface:
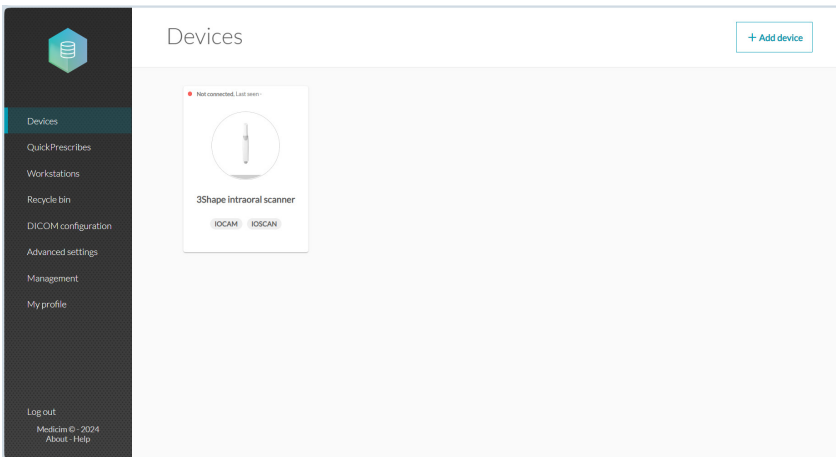
1	The sidebar provides access to:

– **Devices**: to add, set up and manage devices.

– **QuickPrescribes**: to configure imaging prescriptions.

– **Workstations**: to allow workstations on which DTX Studio Clinic version 4.3.10 or later is installed to connect to DTX Studio Core, and to see which DTX Studio Clinic workstations have been connected to DTX Studio Core.

– **Recycle bin**: to manage patients and media moved to the recycle bin.

Note

The recycle bin is disabled and hidden when DTX Studio Core is configured to synchronize patient data with the Cloud. Removed data will be managed in the Cloud.

– **DICOM configuration**: to configure DTX Studio Core as a DICOM node in a DICOM communication network by turning on the DICOM service you want to support.

Note

This option is only available if the DICOM node is installed.

– **Advanced settings**: to access Core Manager, Migration Control Center, Scan center, backups, reports or other settings.

– **Management**: to bulk update patient information.

– **My profile**: to change the DTX Studio Core language or to see the user information. To change your credentials or other user information, please contact customer support.

– The log out option, the about window and access to this help file.

2	On the details pane the options are displayed.

Change the Language

1. In the sidebar, click My profile.

2. User and account information is shown. To change the language for DTX Studio Core, select the preferred language from the Language drop-down list.

   Note

   To change your credentials or other user information, please contact customer support.

Find Information on DTX Studio™ Core

1. In the lower-left corner of the sidebar, click About.

2. The DTX Studio Core version and legal information are shown. Click More details for an overview of the open source libraries used in the software.

3. Click Close.

Information Reports

Usage data information is generated every 24 hours at night. The information reports are stored in the DTX Studio Core data location, in the "data" subfolder. Information reports include e.g. the software version, disk usage, device information, info about all created patient records, all media acquired in the last months, …

Scan Center

The scan center is an optional service that can be installed when installing DTX Studio Core and allows you to scan remotely. It can be opened on a mobile device or in a web browser. It displays the pending scan requests and their statuses.

Access the Scan Center

There are multiple options to access the Scan center:

– Click the app icon on your desktop. Alternatively, if you followed the instructions in the installation guide, click the icon on the home screen of your mobile device.

– In DTX Studio Go, click Scan center in the sidebar.

– In DTX Studio Core, click Advanced Settings in the sidebar and click Scan center in the Additional modules group.

– Visit the scan center URL directly in your web browser.

Enter your username and password to log in.

> **Note**
>
> Select Keep me logged in to enable automatic login. The next time Scan center is opened, the login dialog will not be shown anymore on the computer used.

Via the Menu ≡ you can Log out ⇨ or access this help file.

Scan Requests

Devices that are controlled by brokers offer the functionality to directly start a scan from the Scan center.

> **Note**
>
> For static devices (not controlled by brokers), as for example i-CAT, a scan cannot be started. Only the Archive button is shown.

Start a Scan

1. In the Scan center, the Scan requests tab 👥 lists all the pending scan requests.

2. By default, the Recent tab with recent scan requests is shown.
   Click on the All tab to list all scan requests.

3. Search for the scan request by entering (a part of) the patient name or other value that is displayed on the scan request card.

   > **Note**
   >
   > Only scan requests on the opened tab will be searched for.

4. Click a scan request card to view the scan request details. For scan requests based on a QuickPrescribe, the parameters are also shown here.

5. Depending on the type of scanner device you select, either the option to Start or to Archive the scan request will be shown. Click Archive to mark the scan request as completed. Click Start to start scanning and continue with step 6.

   > **Note**
   >
   > If the preselected device is not available (🔴), you will be requested to select another device. You could also change the device in the previous step by clicking ••• on the Selected device card and select Change scanner.

6.   Depending on the functionality of the device, follow the instructions on the device, or in the user interface opened in the browser.

7.   Once the scanning is completed, click Finish.

   Note

   Completed scans are no longer shown in the scan requests list.

Devices

Click Devices in the sidebar to display all the devices and their available modalities.

Scan requests cannot be handled or processed before devices have been added to DTX Studio Core.

Add a Device

1. In the sidebar, click Devices. The devices that have been added to DTX Studio Core are shown.

2. Click Add device in the upper-right corner of the screen.

    Note

    To make sure the list of available devices is up to date, search for brokers again by clicking Scan network in the upper-right corner of the page.

3. Select a device:

    – If your device is found, hover over the device tile and click Add device.

    – Some devices are not controlled by brokers and are not listed in the device catalog: see Adding a Device Manually below.

    – If you are adding a 3D scanner, an overview of preferred image processing computers (brokers) is shown. Click Select next to the broker and click OK. This broker will be used to transfer and process the images from the device to DTX Studio Core.

    – A default device broker for 2D devices can be set in the advanced settings.

4. The device details of the added device are displayed. To return to the devices overview, click Manage devices.

Add a Device Manually

To be able to register a device that is not controlled by a broker, like an i-CAT device or a device that is not listed in the device catalog, the device needs to be added manually.

    Note

    For these devices, the scan UI will not appear in the scan center.

1. In the sidebar, click Devices.

2. Click Add device in the upper-right corner of the screen.

3. Click Manually add device.

4. Provide the requested information.

5. Click Save.

    Note

    For i-CAT™ devices that are listed in the device catalog, the modalities will be retrieved from the catalog and cannot be changed.

6. If required, provide your login credentials and click OK.

7. The device is automatically registered on DTX Studio Go.

Remove a Device

If a device is no longer in use in the practice, it can be removed from DTX Studio Core. A removed device will no longer be visible in the Manage devices overview.

1.   In the sidebar, click Devices.

2.   Click a device.

3.   Click •••.

4.   Click Remove device.

5.   Click Remove device to confirm.

Release a Device

To release a reserved device:

1.   In the sidebar, click Devices.

2.   Click the device.

3.   Click •••.

4.   Click Release device.

Disable a Device

Devices can be disabled to temporarily block the usage of a device. The device will remain connected to DTX Studio Core, but it cannot be used to capture data through DTX Studio Clinic.

1.   In the sidebar, click Devices.

2.   Click a device.

3.   Click •••.

4.   Select Disable device.

5.   Click Disable device to confirm.

6.   In the Devices overview, the device is labeled as 'Disabled'.

Enable a Device

1.   In the sidebar, click Devices.

2.   Click a disabled device.

3.   Click •••.

4.   Select Enable device.

5.   Click Enable device to confirm.

Integrate 3Shape Intraoral Scanner Devices

To integrate a 3Shape intraoral scanner device with DTX Studio Core:

1. In the 3Shape software, make sure integration with DTX Studio™ is enabled to begin the pairing process.

2. In the DTX Studio Core sidebar, click Devices.

3. Click the 3Shape intraoral scanner device.

4. Click Complete pairing.

5. The 3Shape device is now available and can be used in DTX Studio Clinic.

Device Details and Settings

In the sidebar, click Devices.

On the device card, a colored dot indicates the device status:

●	Online
●	Busy
●	Offline or an error occurred

Click a device to display the device details and settings.

– Click ●●● and select About device to display the serial number and the firmware version of the device.

– The option to reset a device to factory settings is only available if the device offers this functionality. To do so, click ●●● and select Reset. Click Reset to confirm.

The device settings are device-specific. Therefore, not all settings below might be applicable.

– When the device is not available or in use, not all settings will be displayed. Make sure the device is switched on and not in use if you need to check the device details and settings.

– Editable entries are displayed in blue.

– Click the switch next to a setting to either disable or enable it.

– Please refer to the documentation of the device for more information on its configuration options.

Depending on the device type, you can change the following settings:

Device settings	If needed, change the device name, the broker, the device color, or set the auto-release time-out (the time the device will remain reserved and unused before it is released to be used for another scan request).
	To see the changes on DTX Studio Go, you might need to force synchronization (see "Update the License Information" on page 26).

Power settings	Enable or disable the Stand-by mode. When Stand-by mode is activated, determine the required idle time by selecting the period the device needs to be idle before it will enter stand-by mode.
	If you want to get an auditive signal when the device enters stand-by mode, keep the Beep before entering stand-by mode switched on.
	To use the touchless operation sensor, keep the Use touchless operation sensor functionality activated. When you wave in front of the sensor, the device will wake up from its stand-by mode.
	Determine when the device will switch from the stand-by mode to a complete shutdown. From the drop-down list box, select the amount of time the device needs to be in stand-by mode. When the device reaches the set idle time, it will automatically shut down.
Image settings	Enable or disable adding the device serial number to new images, enable or disable adding the default exposure values to metadata.
	To set the image resolution, select the option from the Resolution drop-down list. Keep in mind that the higher the resolution, the more memory is required to store the images.
	Enable or disable the Noise filtering to reduce noise on your image. This may affect the number of line pairs.
Workflow settings	Adjust the following items:
	– Readout start: Define when and how to start the processing of the image. This can be done automatically after the plate has been inserted (with or without a set delay) or after the protective cover has been removed from the inserted image plate. Click Start to start the readout of the plate manually.
	– Plate ejection mode: Decide what will be done with the image plate after processing. Will it be ejected and dropped into the plate collector or will it stay in the plate carrier?
	– Size 3 / occlusal section: Decide whether the size 3 image plates will be processed as individual images or whether two sequential images will be stitched together and thus create a single occlusal image.
	– From the Preview time drop-down list, select the period of time for preview images to be shown on the device.
Hygiene settings	For devices with automatic UV disinfection, enable or disable the automatic UV disinfection. When automatic UV disinfection is activated, set the frequency by selecting an option from the list.

Calibrate a Device

For certain devices you can start the device calibration from within DTX Studio Core.

1. In the sidebar, click Devices.

2. Select the device.

3. Click ●●● and select Calibrate.

   Note

   If the device is calibrated for the first time, you will find the Calibrate action on the device details page. This action will change in a download action as soon as the device has been calibrated.

4. Click Calibrate to confirm.

5. Go to the device and calibrate it. For some types of devices the user interface of the device is opened in the browser from where you can start the calibration.

   Note

   The image must be taken within 40 seconds, otherwise you have to start the calibration again.

6. Click Finish.

7. After the calibration has been done, the calibration data can be downloaded by clicking Download.

Deal with Unassigned Images

Sometimes images cannot be assigned to a patient or scan request due to a communication or network error between a device and DTX Studio Core.

When the Manage devices page is displayed, a message pops up to inform you that unassigned images have been found. Assign these images to the correct patient or remove them. As long as there are unassigned images, the pop-up message is displayed.

Assign Images to a Patient

1. Click Assign in the pop-up message.

2. The Assign image to patient card appears, with a preview of the images, and details about the device, modality and acquisition time. Search for the patient by typing a number of characters in the search field. You can search on patient ID, on patient name or on a combination of these fields. Enter at least three characters.

3. Select the patient.

4. Click Assign.

5. A confirmation is shown in a bottom pop-up bar.

Remove Unassigned Images

1. Click Assign in the pop-up message.

2. Click Discard on the Assign image to patient card.

3. The discarded images are moved into the recycle bin (see "Recycle Bin" on page 22).

Manage QuickPrescribes™ or Imaging Prescription Templates

Click QuickPrescribes in the sidebar to display all the imaging prescription templates.

To simplify scheduling scan requests for standard or repetitive patient treatments, create scan prescription templates called 'QuickPrescribes':

Add a QuickPrescribe™

1. In the sidebar, click QuickPrescribes. The scan prescription templates that have been added to DTX Studio Core are shown.

2. Click New QuickPrescribe.

3. Enter the Name. Optionally, add prescription notes. Click Add.

   Note

   These prescription notes will also be shown in DTX Studio Clinic.

4. The new QuickPrescribe is added to the list.

   Deselect Show diagnostic region setup dialog to disable the step in DTX Studio Clinic to set the scan region based on this QuickPrescribe.

   Click Add modality and select the modality to be used for scan requests based on this QuickPrescribe. Click Add.

5. Select a Preferred device from the list.

6. If your practice works with multi-modality acquisition templates (standard arrangements of scans and images in a specific layout), link that template with a QuickPrescribe by selecting the Template from the list.

7. Click Add parameter.

   – For the selected device, only the device specific parameters are shown.

   – To select parameters that are not device specific, select Any device from the device list.

8. Select the parameters for which you would like to pre-set a value and click Add.

9. Select or enter a value.

   – At acquisition time, the user can overwrite the parameters.

   – To add more parameters, click Add parameter.

   – To remove a parameter, click ✕.

10. Click Save changes.

Remove a Modality

1. Click ●●●.

2. Select Remove modality.

Edit a QuickPrescribe™ Name

1. Click ●●●.

2. Select Edit QuickPrescribe.

Workstations

To connect a DTX Studio Clinic workstation to DTX Studio Core, DTX Studio Core needs to be configured in the DTX Studio Clinic settings.

– In DTX Studio Clinic versions prior to 4.3.10, the DTX Studio Core login and password are entered in the DTX Studio Clinic settings.

– In DTX Studio Clinic version 4.3.10 or later, a connection request is sent to DTX Studio Core via the DTX Studio Clinic settings.

Approve a connection request

1. Click Workstations in the sidebar.

2. Select the workstation in the list of Pending Connection Requests, and click Approve.

   To reject the connection request, click Delete.

3. The workstation is added to the list of Connected Workstations.

   To revoke a connection, click Delete.

   Note

   DTX Studio Clinic versions prior to 4.3.10 are automatically connected.

Recycle Bin

When deleting images or patient files, the data end up in the recycle bin. This offers the possibility to restore the image or patient data or to remove the data permanently.

Note

The recycle bin is disabled and hidden when DTX Studio Core is configured to synchronize patient data with the Cloud. Removed data will be managed in the Cloud.

Click **Recycle bin** in the sidebar.

Search for an Image

To search an image, enter (a part of) the name of the patient in the **Find a patient** field.

Sort the List

To sort the list, click the arrows ⇕ next to a column heading. An up arrow ⌃ indicates the column is listed in ascending order. Click the arrow again to sort the list in descending order ⌄.

Restore Removed Data

1. Select the image(s) to be restored. Select the box at the top of the list to select all items in the recycle bin.
2. Click **Restore**.

Permanently Delete Removed Data

1. Select the image(s) to be deleted.
2. Click **Delete**. To delete all images in the recycle bin simultaneously, click **Delete all**.
3. Click **OK** to confirm.
4. The selected items are permanently deleted and can no longer be restored.

DICOM Configuration

Enable DICOM communication between DTX Studio Core and a Picture Archiving and Communication System (PACS) or a Modality Worklist (MWL) server.

Notes

DICOM configuration is only available if the DICOM node has been installed (see the installation guide, which can be found on https://ifu.dtxstudio.com/dtx-studio-core).

It is recommended to keep PACS integration disabled when DTX Studio Core is configured to synchronize patient data with the Cloud.

The audit logging file can be found here: C:/DTX Studio/core/data/logs/dicomnode.

Sending Patient Images to a PACS

1. Click DICOM configuration in the sidebar.

2. On the Storage SCU tab, click the Storage SCU service switch ⬤ to enable the service. The switch turns blue ⬤. DTX Studio Core is now a PACS user.

    Note

    The Local application entity title will appear as soon as the service is enabled. This is the name of the Core DICOM node, which needs to be filled in to the PACS. The entity title cannot be changed here.

3. Click Add storage destination.

4. Enter PACS information like Display Name, Application entity title, Host Name or IP address and Port number. Select the Modalities that are to be sent to the PACS. To secure the communication, select Use TLS. Should you want to use a TLS certificate, click Upload certificate, and enter the Password.

5. To be able to send Radiation Dose Structured Reports (RDSR) to the PACS, select Use storage destination for RDSR.

6. Click Add.

7. The communication between the storage destination and DTX Studio Core is verified.

    An icon indicates the status:

⊘	The DICOM node is connected to the PACS.
⊗ or ⚠	There is an issue with the connection. Hover over the error or warning icon to get more information on the association or network error.

    Notes

    The status is checked every time the page is refreshed.

    To add another storage location, click Add storage location once more, and fill in the fields.

    To delete a storage location, click ●●● and select Delete.

8. Configure the Poll interval, the interval at which the DICOM node will poll for new media. By default, this is set to one minute.

9. Set the Send Timeout, the time between finding a new media and sending it to the PACS. By default, this is set to one minute.

10. Configure the Default patient ID, the ID that will be entered in the DICOM file. By default, the PMS ID will be used.

11. Select Send imported media from disk to be able to send media files imported from a disk.

12. Enter the Institution fields. These will be entered in the DICOM file.

13. Click Save changes.

Your DTX Studio Core will be recognized as a DICOM node in a DICOM communication network, using the local application entity title.

New media files in DTX Studio Clinic are picked up by the DICOM node, and will be shown as Pending under the Error log on this page until the files have been converted to a DICOM file and sent to the PACS.

If the DICOM node was not able to convert a file to a DICOM file or could not send it to the storage destination, an error will be displayed. Try to resend the file, by clicking ••• and selecting Retry. If that does not work, the line from the error log can be erased by clicking ••• and selecting Delete.

Receiving Scan Requests from a MWL

The DICOM node will communicate with a Radiation Information System (RIS) or Hospital Information System (HIS). The HIS or RIS will act as a modality worklist server, which creates modality worklist items. The DICOM node will poll the MWL server and convert the MWL items to scan requests.

1. Click DICOM configuration in the sidebar.

2. On the Modality worklist SCU tab, click the MWL SCU service switch ⬭ to enable the service. The switch turns blue ⬭. DTX Studio Core is now a modality worklist user.

3. Click Add modality worklist server.

4. Enter the Application entity title, Host Name or IP address and Port number.
To secure the communication, select Use TLS. Should you want to use a TLS certificate, click Upload certificate, and enter the Password.

5. Click Add

6. The communication between the MWL server and DTX Studio Core is verified.

   An icon indicates the status:

⊘	The DICOM node is connected to the MWL server.
⊗	There is an issue with the connection. Hover over the error icon to get more information on the error.

   Note

   Only one modality worklist server can be set. To set another one, click Replace modality worklist server.

7. Configure the Poll interval. That is the interval with wich the DCIOM node will poll for new worklist items. By default, that is one minute.

8. Map the supported DICOM modalities with the DTX Studio Core or DTX Studio Clinic modalities, by selecting the DTX Studio Clinic modality from the list for the corresponding DICOM modality.

9. Deselect the modality for which the DICOM node should not receive any modality worklist items.

10. Click Save Changes.

    Notes

    A patient record is created for a scan request for which the patient record does not yet exist.

    If media failed or are pending, there will be errors in the Error log.

Advanced Settings

Access Migration Control Center

The Migration Control Center is an optional service that can be installed when installing DTX Studio Core and allows you to migrate an existing database (related to a supported existing application) to a new DTX Studio Core database.

1. In the sidebar, click Advanced settings.

2. In the Additional modules group, click Migration Control Center.

3. Enter your credentials and click Log in.

More information on how to work with Migration Control Center and how to follow up on the migration process can be found in the DTX Studio Core Installation Guide.

Select the Default Broker for 2D Devices

It is advised to select a computer that is always available. To select the image processing computer (broker) that will discover new 2D devices in your network:

1. In the sidebar, click Advanced settings.

2. In the Device discovery group, click Edit.

3. Click Select next to the preferred broker to select the new default broker.

4. Click OK.

Set the PMS Practice ID

This setting is only relevant if DTX Studio Core is configured to synchronize patient data with the Cloud. If a PMS is used across multiple practices, you can change the autogenerated ID to another PMS practice ID.

1. In the sidebar, click Advanced settings.

2. In the PMS Practice ID group, click Edit.

3. Enter the new PMS ID.

   Note

   The ID must be at least 6 characters long.

4. Select the check box confirming that you know that when changing the PMS practice ID into an already used PMS practice ID, this will result in a merge of patients with the same PMS IDs.

5. Click OK.

Use DTX Studio™ Core in Off-line Mode

To use DTX Studio Core in off-line mode, i.e. without Internet connection:

1. In the sidebar, click Advanced settings.

2. In the Off-line mode group, click the switch . It will turn blue.

3. DTX Studio Core is now in off-line mode. Keep in mind that no automatic software updates or notifications are received.

Switch Back to Online Mode

To switch back to online mode, click the blue switch ⬤. It will turn gray again. You will be asked to log in.

Update the License Information

When your computer is connected to the Internet, the user license information is synchronized automatically. At any time you have the possibility to use the update action to keep the information in sync.

1. In the sidebar, click Advanced settings.

2. In the Update license information group, click Update.

3. When synchronized, a check mark is displayed and the time stamp changes, reflecting the last time the information was synchronized.

   When working in off-line mode, a dialog is displayed to upload a more recent license file, created in DTX Studio Go.

Security

Edit PMS Token

When setting up a connection from your PMS directly to DTX Studio Core, a PMS token is generated. This token can be changed, for example when DTX Studio Core is installed on a new computer.

1. In the sidebar, click Advanced settings.

2. Click the Security tab.

3. To change the PMS token, click Edit.

   Note

   The token requires a minimum of six characters.

Download and Install Root Certificate

To set up a full HTTPS connection for DTX Studio Clinic and DTX Studio Go, an SSL certificate is needed. If during the installation of DTX Studio Core you chose a Self-signed certificate (default), you can download and install your own root SSL certificate if needed.

1. In the sidebar, click Advanced settings.

2. Click the Security tab.

3. Under Root certificate, click Download.

4. Double-click the downloaded root-certificate.cer file.

5. Click Install Certificate...

6. Select Local Machine and click Next.

7. If User Account Control is active, a message dialog appears asking you to allow this application to make changes to your computer. Click Yes.

8. Select Place all certificates in the following store and click Browse...

9. Select Trusted Root Certification Authorities and click OK.

10. Click Next and click Finish.

11. Close and reopen the browser you use for DTX Studio Core to make sure the certificate is retrieved by the browser.

Snapshots

A snapshot is a copy of the patient information (database) and image metadata but not a copy of the actual image data. This snapshot and restore functionality is only applicable if DTX Studio Core is linked to a private database.

Access the Snapshot Functionality

1. In the sidebar, click Advanced settings.

2. Click the Backup tab.

    – In the Database snapshot group, you can see the snapshot schedule and all previously created snapshots.

    – Click a column header to sort it according to column entries.

Set the Default Snapshot Folder

1. In the How to back up group, click Change location.

2. Specify a new snapshot folder location.

3. Click Save.

Create Snapshots

To immediately create a snapshot, click Take snapshot now in the Database snapshot group. Click OK to confirm.

Schedule Snapshots

1. In the Database snapshot group, click Edit snapshot schedule.

2. Select the preferred schedule option.

3. Click Save.

Restore Snapshots

Keep in mind that all patient and image data added to the database after the snapshot was taken, will be lost (including the users).

1. In the Database snapshot table, click Restore next to a snapshot file entry.

2. Click I understand.

3. Once the database is restored, you are automatically logged out.

4. Restart DTX Studio Core.

5. Log in to return to the restored snapshot.

Reports

A number of reports are available on DTX Studio Core.

Enable Activity Logging

1. In the sidebar, click Advanced settings.

2. Click the Reports tab.

3. Click the Enable activity logging switch ⬜ to start the activity logging functionality. The switch turns blue.

4. Set the Max. number of days that the logs will be preserved.

5. Set the Max. size of the log table. The oldest logs will be deleted if the log table exceeds this set amount.

6. Click Save.

To disable activity logging, click the Enable activity logging switch 🔵. The switch turns grey.

Radiation Dose Structured Reports (RSDR)

To generate a list of all dosage exposures for each patient:

1. In the sidebar, click Advanced settings.

2. Click the Reports tab.

3. In the Exposure report group, click Export report.

4. Select a time period and specify the report's sort order.

5. Click Export to download the Excel spreadsheet.

View Database Details

To view the DTX Studio Core database information:

1. In the sidebar, click Advanced settings.

2. Click the Reports tab.

3. In the Database details group, you will see basic information on data stored in the DTX Studio Core database, like number of patients and total media size.

DTX Studio™ Core Management

Uploading Installation Files

To facilitate the installation of DTX Studio Clinic version 4.3 or later on several computers or locations of your practice, the DTX Studio Core administrator can manage and distribute the files you need for the installation via DTX Studio Core. For large practices it is recommended to use silent installation (refer to the silent installation documentation).

1. First collect the files you need:

    – Download the DTX Studio Clinic **installer files** for Windows or Mac from DTX Studio Go.

    – Get the DTX Studio Clinic **settings file**, containing the set preferences for DTX Studio Clinic: Open DTX Studio Clinic and go to Settings > Share settings.

    – Download the **Implant libraries** from DTX Studio Go.

2. In the DTX Studio Core sidebar, click Management.

3. On the Software tab, upload the files you collected in step 1:

    Click Upload and drag and drop the file, or select the file from your computer.

    Notes

    When uploading a new installer or setting file, the old one will be replaced.

    For implant libraries, upload one file per brand.

    To remove a file, click Delete. This has no effect on the current installations.

4. When DTX Studio Clinic is launched, the system will check whether new files are available on DTX Studio Core. If so, the new files will overwrite the current ones, prompting the user to upgrade DTX Studio Clinic, setting the new settings, or installing the downloaded implant packages.

Update Patient Information

When a database migration leads to erroneous values for PMS IDs due to incorrect or missing fields, the DTX Studio Core administrator can adjust the patient information for those patients.

> **Note**
>
> This option is only available if DTX Studio Core is not connected to the Cloud.

1. In the sidebar, click Management.

2. Click the Patient info tab.

3. To export the CSV file with the relevant patient fields, click Export patient info.

4. On the exported file, make the necessary adjustments manually.

    Note

    When importing the file into DTX Studio Core, 'DateOfBirth' needs to be in the YYYY-MM-DD format, where 'YYYY' is the year, 'MM' is the month and 'DD' is the day.

    If Microsft Excel is used to modify the file, it might change the format of the DateOfBirth field depending on user settings. Please make sure the correct format is used when saving the updated file.

5. To apply these changes to the database, click Import patient info. Drag and drop the adjusted CSV file, or select the file from your computer.

6. If everything went well, a pop-up message will confirm that the import was successful. If not, you will be notified that invalid patient information has been detected. This may be caused by duplicate PMS IDs or invalid patient records. Click Export invalid info to download the CSV file with the records that failed and the reason for the failure. You will have the choice to continue importing the adjusted patient information exclusive of the ones that are invalid, or to continue without the corrections.

Core Manager

Core Manager is an optional service that can be installed when installing DTX Studio Core and allows you to manage legacy configurations.

Core Manager offers more advanced configuration options. These settings are especially relevant when using DTX Studio Core in combination with CLINIVIEW and SCANORA.

Access Core Manager with Configuration Settings for Administrators

1. In the sidebar, click Advanced settings.

2. In the Additional modules group, click Core Manager.

In this section only the most relevant settings will be discussed.

Log in to Core Manager

1. In the sidebar, click Advanced settings.

2. In the Additional modules group, click Core Manager.

3. Enter your username and password.

4. Click Login.

    If you log in for the first time, enter a practice name and provide the required account information.

To log out, click Logout in the upper-right corner of the Core Manager window.

Explore the Core Manager Interface

The image below shows the different components of the Core Manager interface:

1   The menu bar provides access to:

–   Dashboard Home: Displaying a status overview of the server characteristics.

–   Configuration: To configure users, the practice name and contact details, take snapshots to back up the DTX Studio Core database, migrate databases and upload files containing implant/mount definitions.

–   Monitoring: Displaying an overview of the system logs, the health reports with feedback about issues that have occurred with DTX Studio Core, and the recycle bin of deleted patients and deleted media.

–   Mobile: To generate a link to access DTX Studio Core from mobile devices.

2   On the details pane the options are displayed.

Create an Additional User Account

This topic is only applicable if you installed DTX Studio Core in combination with a legacy CLINIVIEW database.

1. Log in to Core Manager.

2. On the Configuration tab, click Users.

3. Click Create New Account.

4. Fill out the required information.

5. Click Create Account.

6. If required, change the user role by selecting User or Administrator in the Change Role section of the user card.

    User roles are only applicable for legacy databases and can either be set to User or Administrator.

    – The User role has only access to the users of the own account, practice, brokers, import and health reports.

    – The Administrator has also access to users of other accounts, snapshot, and migration (Migration Control Center).

Update Practice Information

This topic is only applicable if you installed DTX Studio Core in combination with a legacy CLINIVIEW database.

1. Log in to Core Manager.

2. On the Configuration tab, click Practice.

3. Modify the information.

    Note

    When modifying the practice name, keep in mind that you may need to reconfigure access to DTX Studio Core from the client software and PMS.

4. Click Save Changes.

Legacy Snapshots

Legacy snapshots are only applicable if you installed DTX Studio Core in combination with a legacy database. For DTX Studio Core databases, all the functionalities below are fully implemented in the DTX Studio Core web interface. Refer to the topic "Snapshots" on page 27 for more information.

A snapshot is a copy of the patient information (database) and image metadata but not a copy of the actual image data.

1. Log in to Core Manager.

2. On the Configuration tab, click Snapshot.

Create Legacy Snapshots in Core Manager

To immediately create a snapshot, click Snapshot Now.

Schedule Legacy Snapshots in Core Manager

1. In the Snapshot Schedule group, select the preferred schedule option.
2. Click Save changes.

Restore Legacy Snapshots in Core Manager

1. Select a .cbck from the Restore from snapshot file list. If there are no .cbck files
    yet, click Choose File. Browse to the snapshot file and click Open.
2. Click Restore.
    Note
    Keep in mind that all patient and image data added to the database after the snapshot was taken, will be lost (including the users).
3. Click OK to confirm.
4. Restart DTX Studio Core.

Use Health Reports to Display Logged Errors

1. Log in to Core Manager.
2. On the Monitoring tab, click Health Reports.
3. The Health Reports list displays the errors and detailed information.
4. Click Go to view the related configuration of the logged error.
5. Modify the configuration in order to fix the error.
6. Return to the Health Reports list and click Acknowledge to delete the error log.

Troubleshooting

In case you encounter problems with DTX Studio Core, pinpoint the problems by consulting the health reports. It is also possible to restart the DTX Studio Core service. If problems persist, contact technical support.

How do I restart the DTX Studio™ Core service?

If DTX Studio Core does not work, try to restart it on the host computer.

1. Right-click the Windows start menu and select Run.

2. Type "`services.msc`" and press Enter or click OK.

3. Scroll down until you see the DTX Studio Core entry.

4. Right-click the DTX Studio Core entry and select Restart. Alternatively, select the DTX Studio Core entry and click Restart the service in the sidebar of the Services window.

5. After a couple of minutes, reload DTX Studio Core.

I added an imaging device but the status still shows Disconnected.

Refresh your browser.

I want to add an imaging device but not all devices are shown in the overview.

Refresh your browser.

Make sure that the discovery broker is configured properly.

The device status is shown incorrectly.

Remove the device and add it again.

I installed DTX Studio™ Core but it is not available.

Restart your computer.

I have unassigned images. What should I do?

Follow the instructions in the Unassigned images section.

I accidentally deleted an image or a patient. Can I restore it?

If you deleted an image or a patient, look up the item in the recycle bin. If you deleted the item from the recycle bin, it cannot be restored.

Technical Support

If you encounter any problems during the installation, please contact DTX Studio Technical Support:

– support@dtxstudio.com

– https://tech.dexis.com

For North America:

– Phone number: 1-888-88-DEXIS

– https://dexis.com/en-us/contact-us

Nobel Biocare AB
Box 5190, 402 26
Västra Hamngatan 1,
411 17 Göteborg,
Sweden

www.nobelbiocare.com

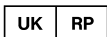**Distributed in Australia by:**

Nobel Biocare Australia Pty Ltd
Level 4/7 Eden Park Drive
Macquarie Park, NSW 2114
Australia

Phone: +61 1800 804 597

CH importer/representative:

Nobel Biocare Services AG
Balz Zimmermann-Strasse 7
8302 Kloten
Switzerland

CH REP

UK responsible person:

UK RP

Nobel Biocare UK Ltd.
4 Longwalk Road
Stockley Park
Uxbridge UB11 1FE
United Kingdom

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33 Spartan Road
Takanini, Auckland, 2105
New Zealand

Phone: +64 0800 441 657

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Metro İş Merkezi No: 10/7
Beşiktaş İSTANBUL
Phone: +90 2123614901

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