Ysio Max, Multitom Rax, Luminos dRF Max, Luminos Agile Max, Uroskop Omnia Max

User Administration Guide

SIEMENS

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Unauthorized changes to this product invalidate this declaration.

Original language: English

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User Administration Guide

General information

The service interface of the FLUOROSPOT Compact is always in English respectively using international technical terms, whatever language is configured in the FLUOROSPOT Compact imaging system.

The usage of configuration items is subject to the customer data and safety regulations, therefore, please handle any changes with appropriate care.

This mode is realized for users with expert know how. The following description does not claim any explanation of the used terms or contents. It only shows the possible configurations and how to change them. The administrator is responsible for any activity in this regard.

If you have any doubts, please call the Siemens Service.

Caution

Changing users, groups and settings

By using the administration tools, it is possible to modify the FLUOROSPOT Compact so that fluoroscopy and acquisition are no longer possible.
It is the responsibility of the administrator to set up users and groups correctly

- Observe the notes in this chapter.

Service login for user administrators

With activated UserManagment, the user has to be member in user group FLC_AccessSSW (Access service software as privileged user).

For further information, please refer to chapter **Setting up (local) users and groups** *in the FLUOROSPOT Compact* **Operator Manual.**

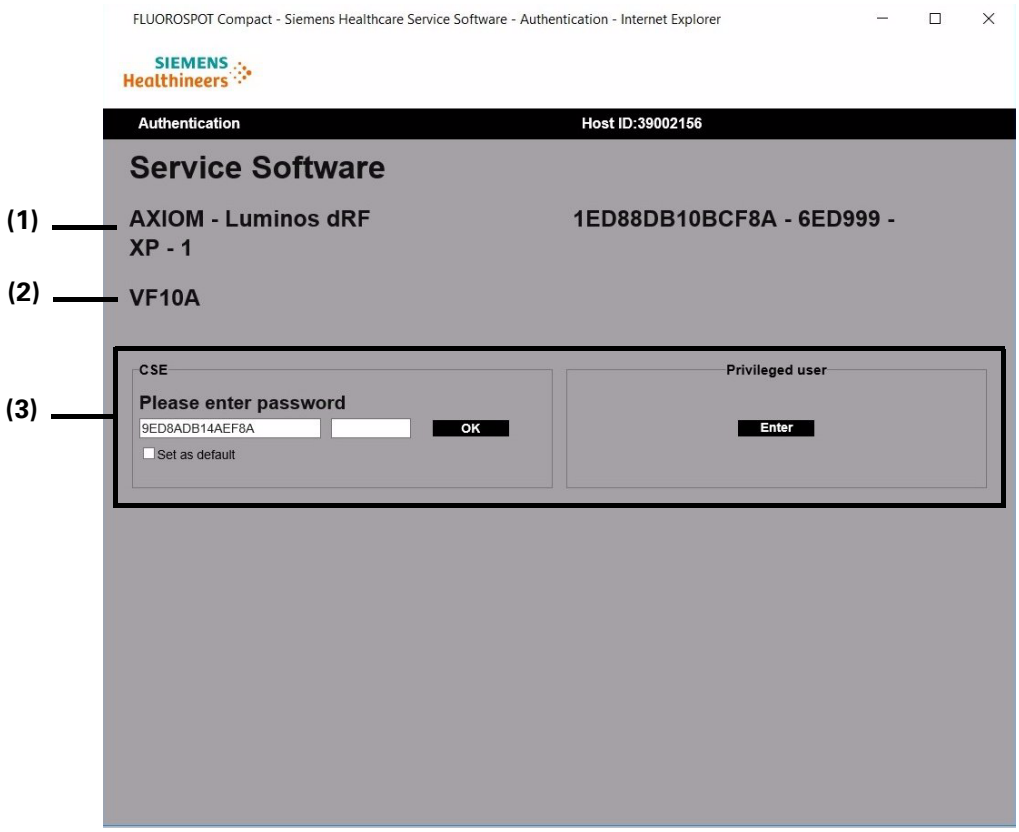


Fig. 1: User admin login

(1) System information
- System name
- Material number
- Serial number

(2) Installed software version

(3) Login possibilities
- Without HIPAA option, you have to enter a password
- With HIPAA option, you log in without password.

Login procedure with password[1]

With the first login on a FLUOROSPOT Compact, the administrator password should be changed (refer to **Changing the password***).*

- Select the **Service** subtask card on the **Patient** task card.
- Click on the **Service log in** button
  – The Service Software log in window opens.

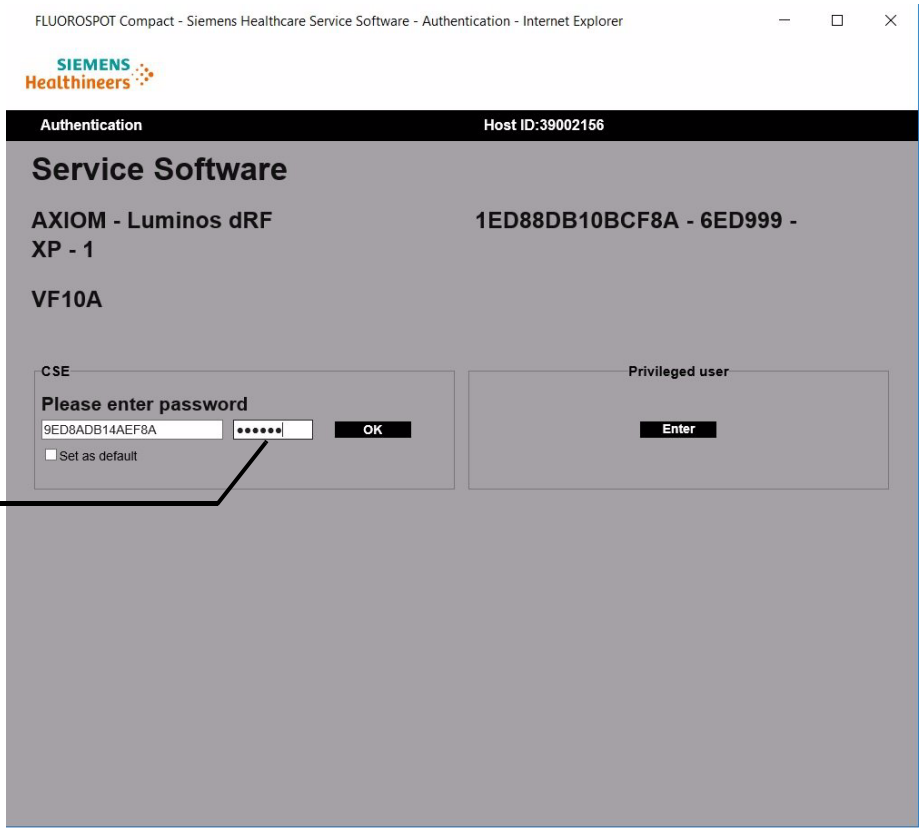


Fig. 2: Service Software log in

- Enter the initial password “admin2” (1).
- Click on the **OK** button.
  – The **Service Software** start window opens.

[1] only without HIPAA option

Login procedure without password[1]

- Select the **Service** subtask card on the **Patient** task card.
- Click on the **Service log in** button
  – The Service Software log in window opens.

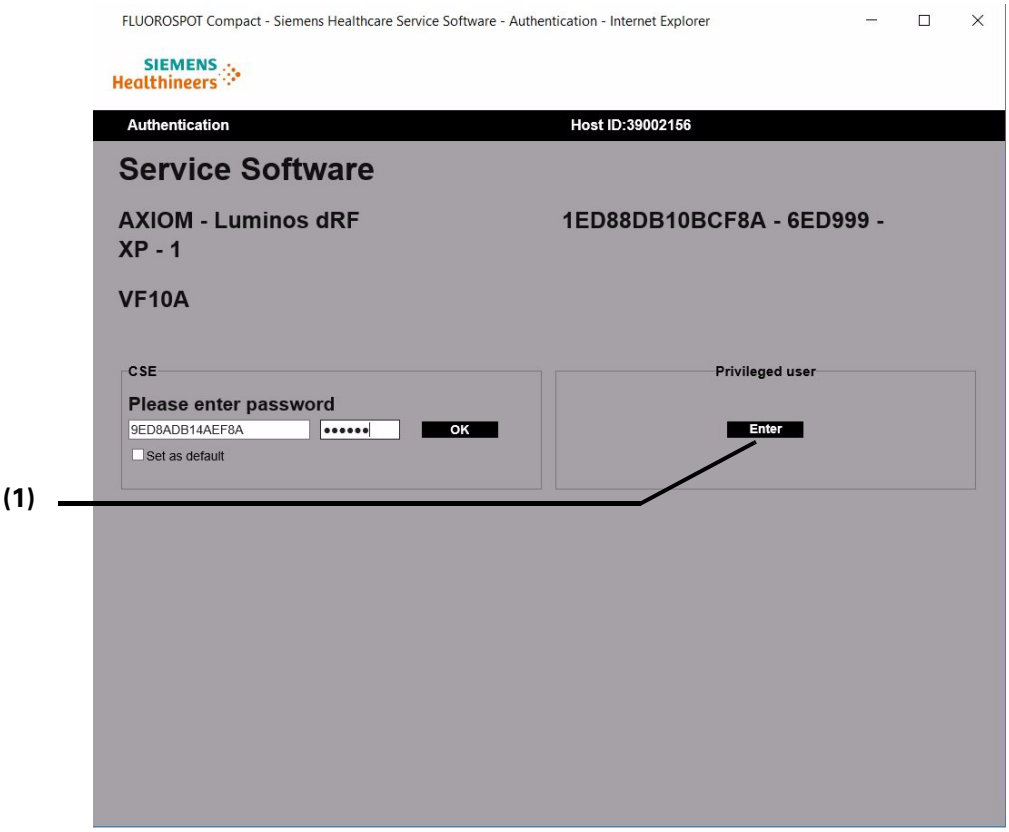


Fig. 2: Service Software log in

- Click on **Enter** (1).
  – The **Service Software** start window opens.

[1] only with HIPAA option

Service Software start window

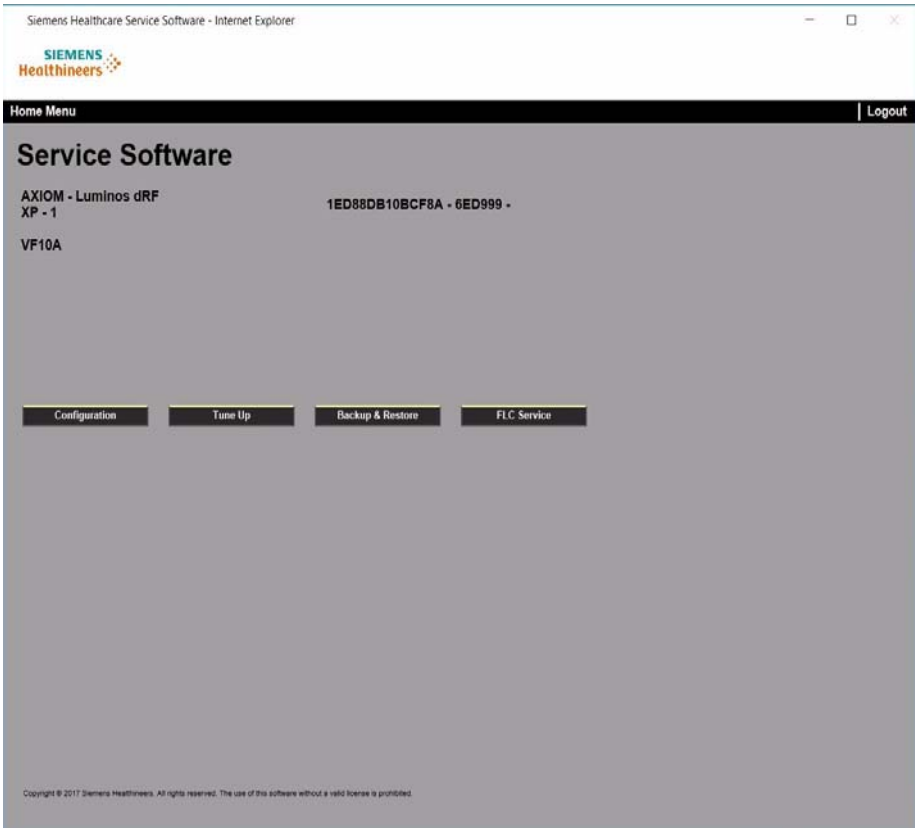


Fig. 4: **Service Software** start window

This **Service Software** start window offers four categories of configuration:

- ❏ Configuration (System site information, software update)
- ❏ Tune Up (Password change and detector calibration)
- ❏ Backup & Restore
- ❏ FLC Service
  - – DICOM Local Settings
  - – DICOM Nodes Settings
  - – USB & WinNIE
  - – Network Connections

General navigation

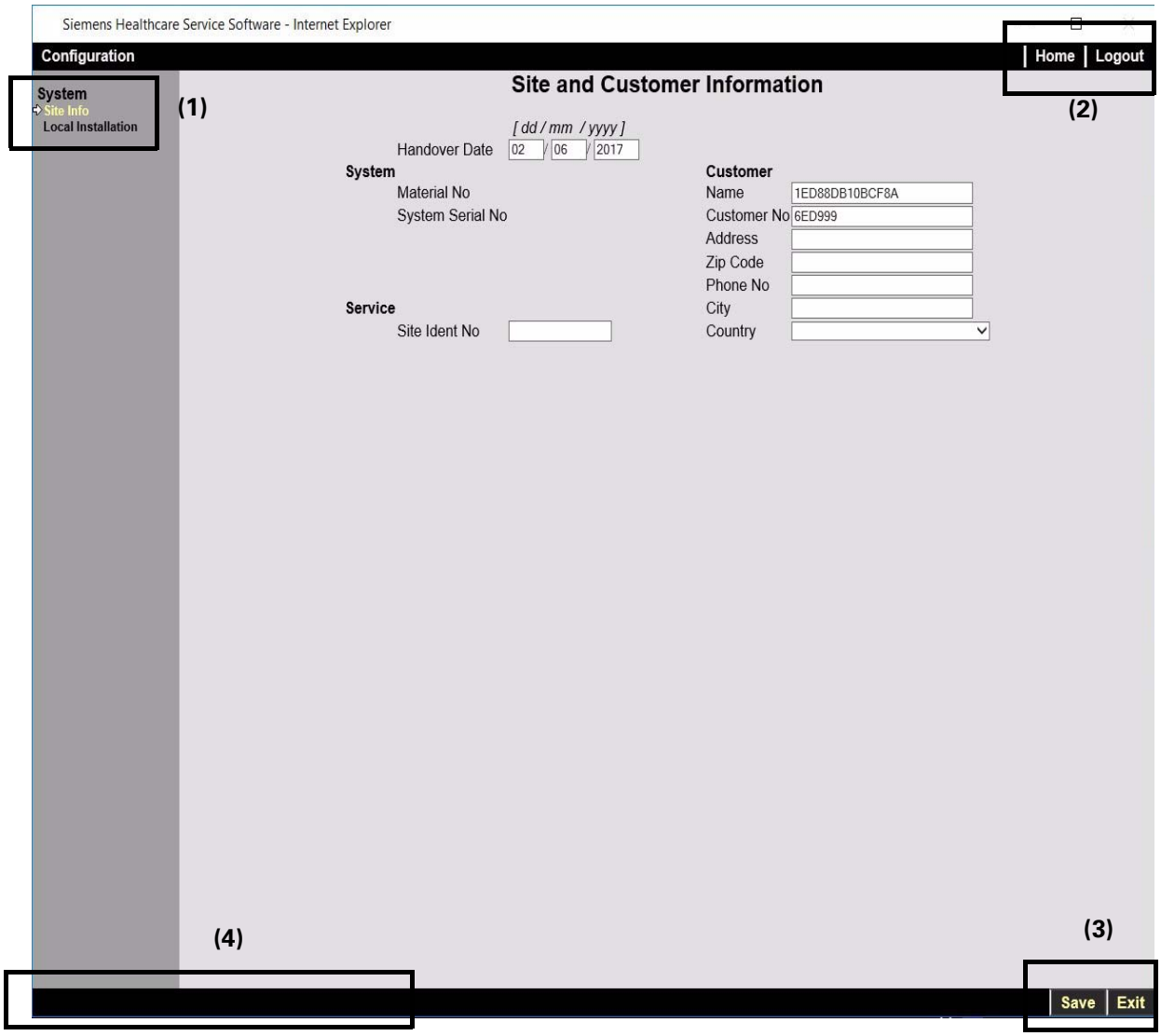


Fig. 5: Example Category **Configuration**

(1) User level

(2) Home / Logout buttons

(3) Save / Go / Exit buttons

(4) Display of information about action or ongoing procedure.

User level In the user level, the selected area is displayed in yellow. All other areas are not selectable and displayed in black.

Home/Logout

- ❏ **Home** button: back to the start screen
- ❏ **Logout** button: ends the entire session, back to examination mode

Save / Go / Exit

- ❏ **Save** button: saves the last changes in the currently selected area
- ❏ **Go** button: Triggers actions
- ❏ **Exit** button: stay in the selected area, but one step back without saving changes

Every time, you finish a change with the **Save** *button, you have to reboot the FLUOROSPOT Compact. Otherwise, operation of the system may not be error-free.*

You may execute several changes in the same category, but you cannot toggle between categories.

Example for correct procedure of several changes in the same category:

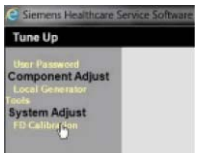
- ◆ Make a change in the DICOM Local Settings (category FLC Service).
- ◆ Use the Save button.
- ◆ Reboot the FLUOROSPOT Compact.
- ◆ Log in again to Service.
- ◆ Make a change in the DICOM Nodes Settings (category FLC Service)
- ◆ Use the Save button.
- ◆ Reboot the FLUOROSPOT Compact.

It is not possible to make both changes in one session.

Changing the password[1]

After the first login with the initial password, you should change the password.

- Select **Tune Up** on the **Service Software** start window.



- Select **User Password** on the **Tune Up** window.
  – The **Change Password of Privileged User** window appears.

Fig. 6: Password change

- Enter the old password.
- Enter the new password and confirm the new password.

[1] without HIPAA option

Password rules

The new password must have six alphanumeric characters.

After the password is changed, use the **Logout** button and reboot the FLUOROSPOT Compact. Then log in again with the new password.

If you forgot your password, please contact the local Siemens service. The password will be reset to the initial password.

Detector calibration[1]

Reasons for a detector calibration

The wi-D detector (MAX wi-D or MAX mini) has to be calibrated:

- ❏ after implementation in the system
- ❏ after modification of detector software
- ❏ after loss of image quality
- ❏ every 24 months to maintain the image quality

The detector calibration should be done by the hospital service technician.

The MAX wi-D and the MAX mini have to be calibrated on the floor.

Caution

Calibration procedure is started although there is somebody in the exam room.

Unwanted radiation

- ◆ Check if somebody is in the exam room before starting the calibration.
- ◆ Do not leave the system unattended during calibration.
  – If necessary, the calibration procedure can be easily stopped via the user interface.

Caution

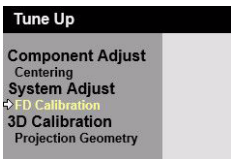
Incorrect calibration parameters.
Reduced image quality

Risk of unnecessary X-ray exposure due to wrong calibration parameters

- ◆ Make sure that the detector is recalibrated every 24 months to maintain image quality.

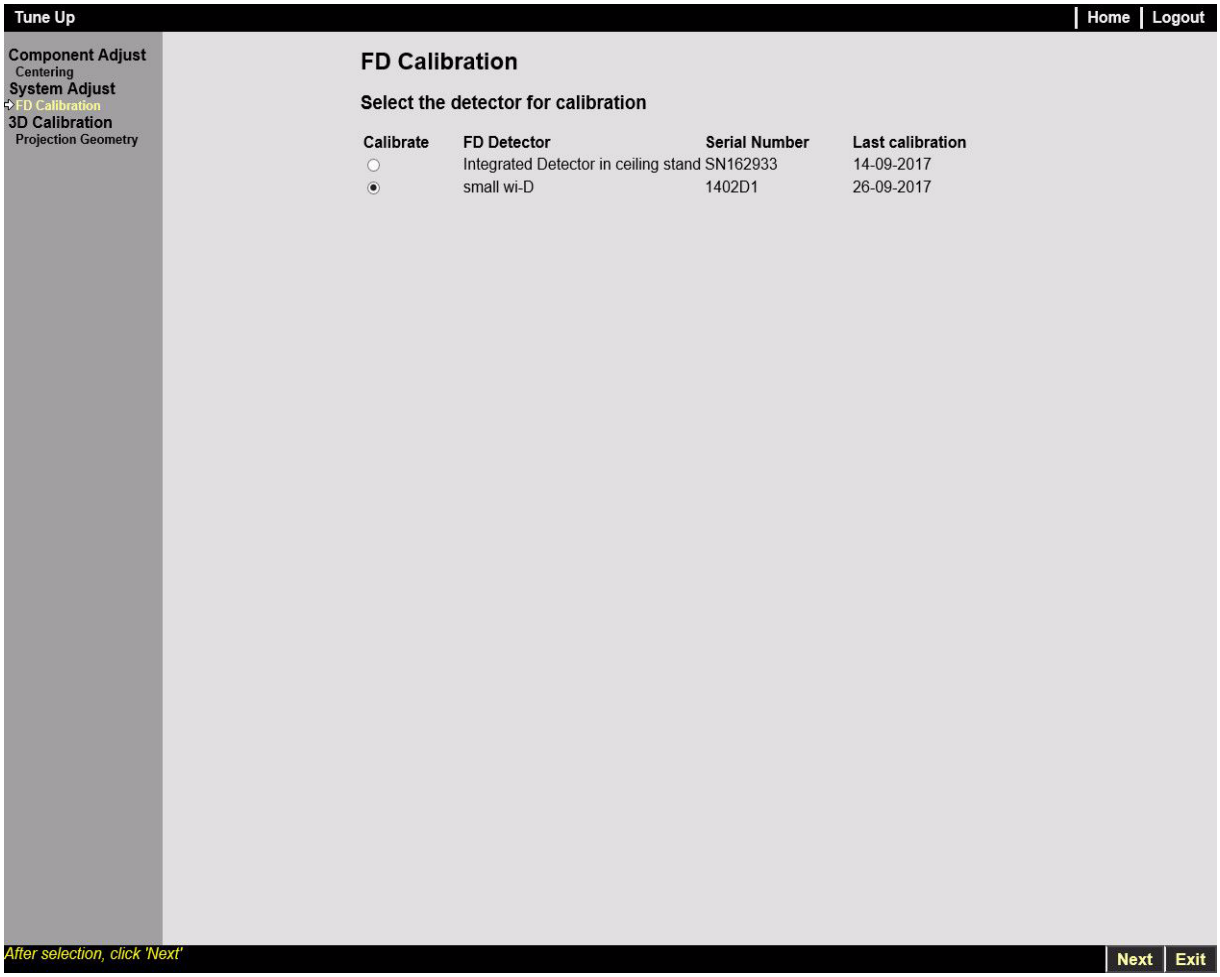
Calibration procedure

- ✓ The detector should be thermalized and charged before calibration.
- ◆ Select **Tune Up** on the **Service Software** start window.



- ◆ Select **FD calibration** on the **Tune Up** window.
  – The **FD Calibration** window appears.

[1] Only for systems with mobile detectors



- Select the mobile detector to be calibrated (example: **small wi-D = MAX mini**).

If more than one Max wi-D or Max mini are attached to the system, you can recognize the correct detector to be calibrated by its serial number which is displayed on the **FD Calibration** *window.*

- Click on **Next**.
  – The following message appears:

<"Please set SID to 150.0 cm>

- Set the correct SID using the tape measure at the collimator (otherwise, the SID will not be recognized).
- Remove the clip-on grid if it is attached to the mobile detector.
- Wait for a stabile temperature.
- Follow the instructions on the screen for step 1 of 4.
- Click on **OK**.
  – Step 2 of 4 is displayed.

◆ Follow the instructions on the screen for step 2 of 4. (It is recommended to select all modes)
– The following message appears:

**<"Is the following filter inserted: - 0.6 mm Cu.
Click 'Cancel' to abort the calibration>**

◆ Insert the required filter in the accessory rails of the collimator as described in the system Operator Manual (the filter is delivered with the system).

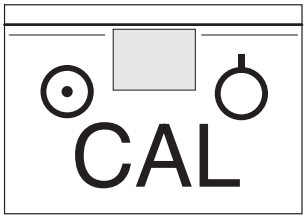
◆ Confirm with **OK**.
– The following message appears:

**<"X-ray will be automatically released during calibration.
Ensure that nobody is in the examination room.
You can stop the calibration at any time by clicking "Abort">**

◆ Confirm this message with **OK**.

◆ Click **Next**.
– The following message appears:

<"Are the following switch(es) turned on? Calibration switch on console">



◆ Turn on the switch.

The calibration switch can be found at the back side of the generator ON/OFF console.

◆ Click **OK**.
– The calibration is started. It may take up to approximately 20 minutes.

The progress and the current status are displayed next to the selected calibration mode.

Do not switch the calibration switch when the calibration is in progress!

◆ Follow the instructions on the screen.
– After the calibration has finished, the following message appears:

**<"The calibration has finished successfully.
Save the calibration results now?
Click 'Cancel' to discard all calibration results or save them later.">**

◆ Click **OK** to save the calibration results.
– The following message appears:

<"Calibration results have been saved successfully.">

- Click **OK**.
  – The following message appears:

<"Please deactivate the listed switch(es): Calibration Switch.">

- Deactivate the calibration switch on the backside of the generator ON/OFF console.
- Click **OK**.

It is very important to turn off the calibration switch for normal operation, otherwise, no radiation is possible!

It is also very important to remove the Cu filter after the calibration.

If the calibration has not succeeded, the previous calibration remains valid.

With **Go** *you can repeat the calibration.*

With **Next** *you can select another detector for calibration.*

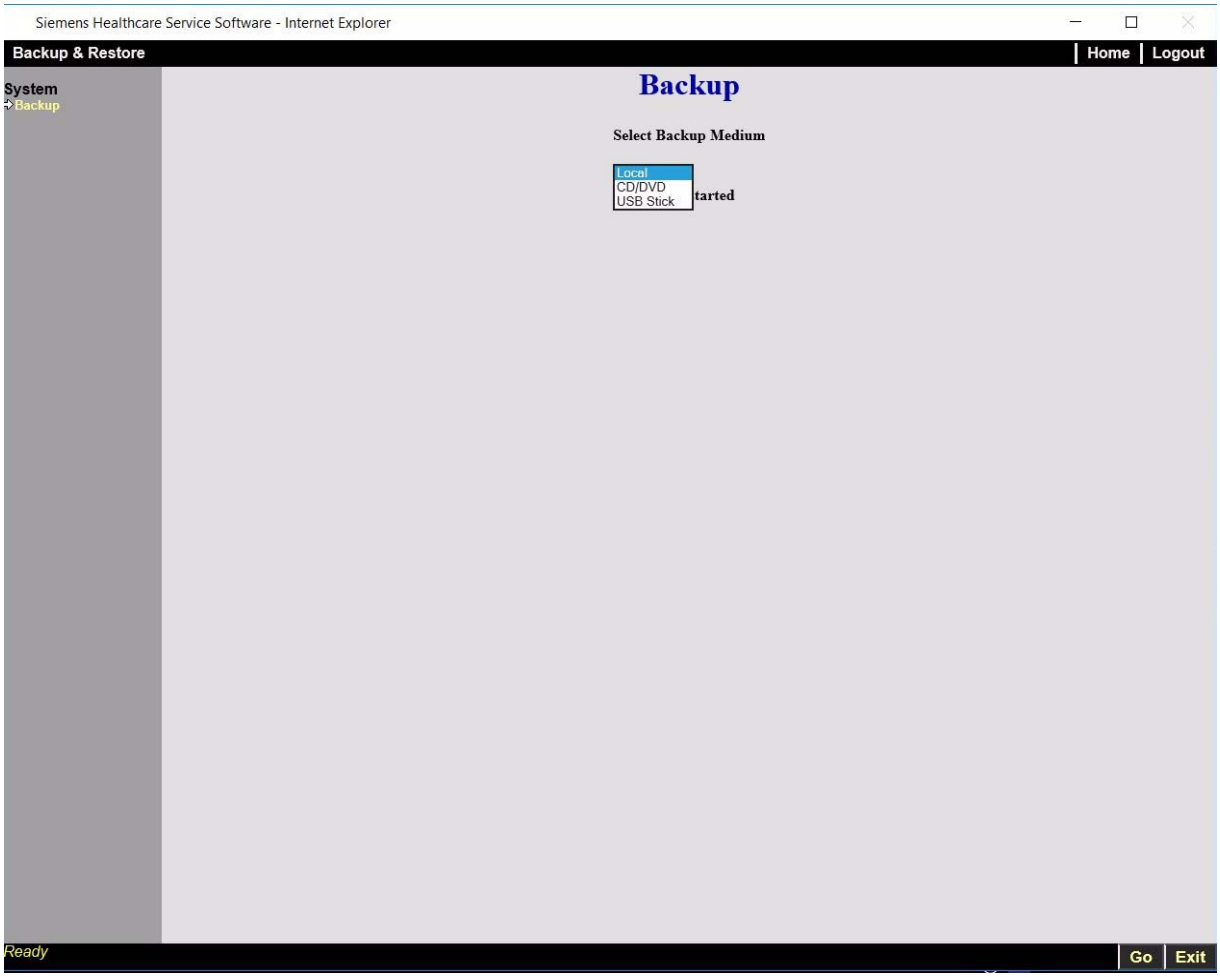
With **Exit** *you leave the FD Calibration window.*

Backup & Restore

A backup is useful before and after any change of configuration settings like OGP setting or similar.

Only a backup of the data is possible. A restore of data can only be done by a Service Technician.

- Select **Backup & Restore** on the **Service Software** start window.
- Select **Backup & Restore** on the **Backup & Restore** window.
  – The **Backup & Restore** window appears.

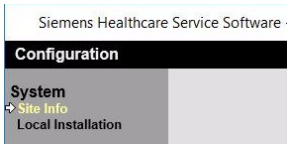


- Select **Local** and press **Go** to start creation of a backup.
- After successful creation of the backup, leave the screen with **Exit**.

System site information

As these data are used as important identification for remote connections, updates, upgrades etc., uncoordinated changes may cause interruptions or communication errors.

System site information shall only be modified by Service Technician or per request of the service organisation.



- Select **Configuration** on the **Service Software** start window.
- Select **Site Info** on the **Configuration** window.
  – The **Site and Customer Information** window appears.

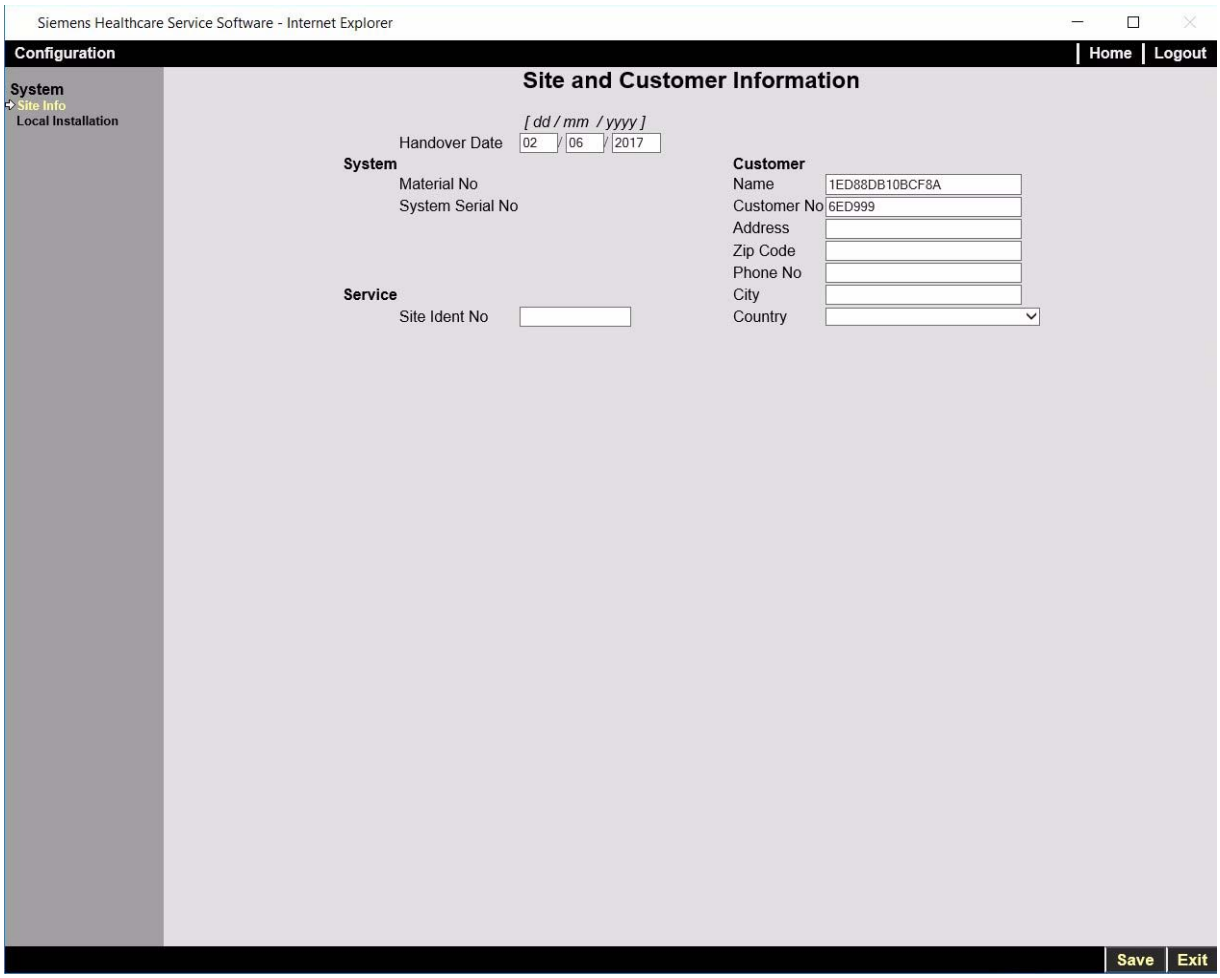


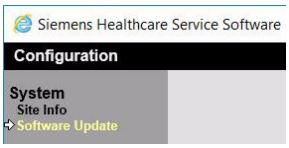
Fig. 6: Site Information

- ❏ Handover Date dd/mm/yyyy = Date of the first day of usage at the customer location
- ❏ Material No XXXXXXXX = System identification
- ❏ System Serial No XXXXX = Individual unit identification
- ❏ Name = Official Customer Name
- ❏ Customer No = Contract numbering scheduled by Siemens

- ❏ Address = Address of local site
- ❏ Zip Code = National post code
- ❏ Phone No = national phone number including international phone code
- ❏ City = National location
- ❏ Country = International country name

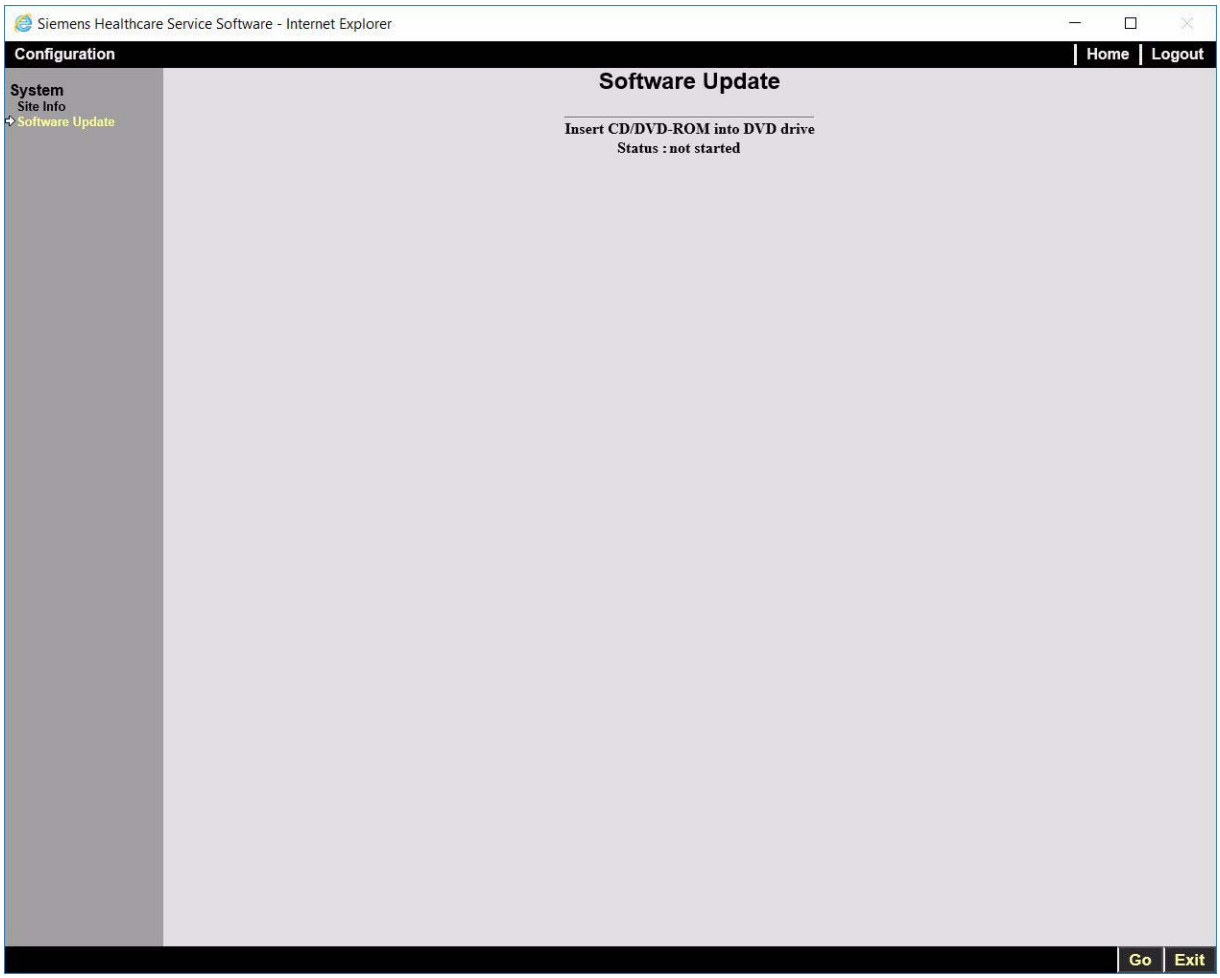
Software Update

The **Software Update** is used to install updates provided by the Service Organisation on CD/DVD.



- ◆ Select **Configuration** on the **Service Software** start window.
- ◆ Select **Software Update** on the **Configuration** window.

The **Software Update** window appears.



- Insert the CD/DVD into the CD/DVD drive and wait until the LED stops blinking.
- Press **Go**.
  – The software will be copied to the FLUOROSPOT Compact.
- After successful transfer of the data, remove the CD/DVD from the drive and reboot the whole system including the FLUOROSPOT Compact.
- After bootup of the system, wait until Installation Manager pops up (this may take up to 2 minutes).

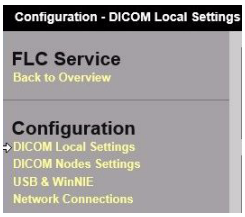
- Do not use the system for any examination until the installation is finished completely.

- Follow the instructions of the Installation Manager.

DICOM Local Settings

The DICOM Local Settings define the DICOM properties of the unit itself.

Please perform a reboot of the FLUOROSPOT Compact after every service session.



- Select **FLC Service** on the **Service Software** start window.
- Select **Configuration**.
- Select **DICOM Local Settings**
  – The **DICOM Local Settings** window appears.

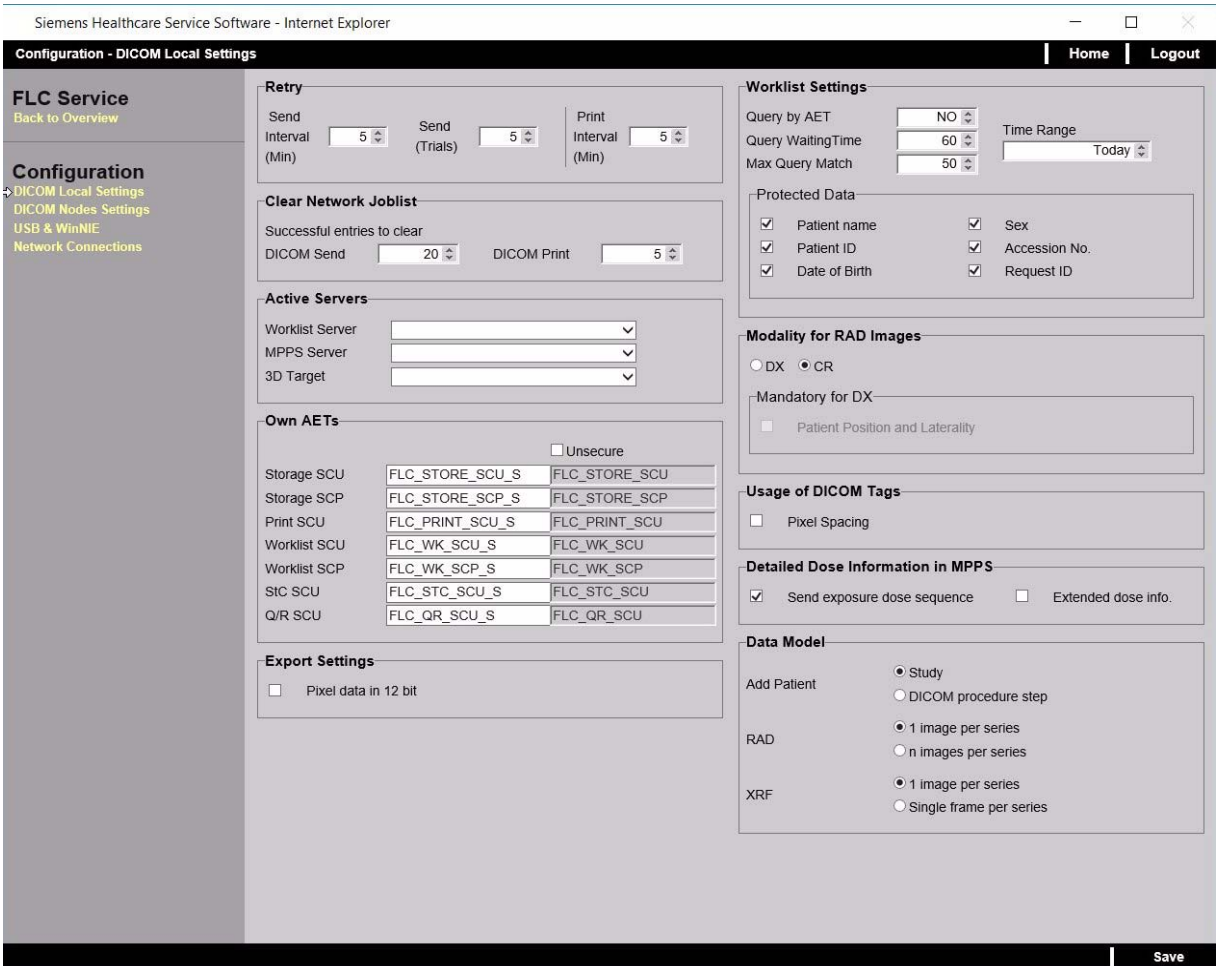


Fig. 7: DICOM Local Settings

Depending on your product configuration, the following DICOM functions are supported:

- ❏ DICOM Send
- ❏ DICOM Query/Retrieve
- ❏ DICOM Print
- ❏ DICOM Worklist
- ❏ Storage Commitment
- ❏ DICOM MPPS

Retry Intervals

- ❏ Send Interval

  Selection box for time interval of retrying to execute a Send job (default value 5 minutes, range 0.5...180min)

- ❏ Send (Number of Trials)

  Selection box to configure the number of attempts to retry executing a Send job (default value 5, range 2,…,10, step 1).

- ❏ Print Interval

  Selection box of time interval for retrying to execute a Print job (default value 5 minutes, range 0.5...180min).

Clear Network Joblist

- ❏ Selection box for number of entries to clear the job list for DICOM Send and DICOM Print. Successful entries in transfer, archive and hardcopy job lists will be automatically cleared (first in - first out) if there are more entries than the configured value. The transfer types (Send, Print) can have different limits
  - Send
    Range: 5, …, 50
    Default: 20
  - Print
    Range: 5, …, 50
    Default: 5

Active Servers

- ❏ **Worklist Server** (must be configured first on the DICOM Nodes Settings page)

  From the list box select the appropriate Worklist server (=> The active worklist server is selectable after it has been configured and saved!)

- ❏ **MPPS Server** (must be configured first on the DICOM Nodes Settings page)

  From the list box, select the appropriate MPPS server (=> The active MPPS server is selectable after it has been configured and saved!)

Own AETs

❏ Storage SCU

Defines the AET of a DICOM application that is using the service Storage based on the Service Class User classification.

❏ Storage SCP

Defines the AET of a DICOM application that provides the storage service based on the Service Class Provider classification.

❏ SCU Print

Defines the AET of a DICOM Print application that uses the print service based on the Service Class User classification.

❏ SCU Worklist

Defines the AET of a DICOM Worklist application that uses the worklist service based on the Service Class User classification.

❏ SCP Worklist

Defines the AET of a DICOM Worklist application that uses the worklist service based on the Service Class Provider classification.

❏ StC SCU

Defines the AET of a DICOM application that provides the Storage Commitment service based on the Service Class User classification.

❏ Q/R SCU

Defines the AET of a DICOM Query/Retrieve application that uses the Q/R service based on the Service Class User classification.

Export Settings

❏ Pixel data in 12-bit

If activated, images will be send in 12-bit depth to DICOM network.

If unchecked, images will be send in 16-bit depth to DICOM network.

Worklist Settings

❏ Query by AET

Enter yes or no for query by the AET.

❏ Query Waiting Time
- This is the max. wait time accepted for a query answer (Timeout).
- The input box accepts only numbers
- The width of the input box allows the range 1...999
- The unit is seconds.
- Default is 60.

❏ Max. Query Match
- This is the max. number of matching records accepted from the FLC.
- The input box accepts only numbers.
- The width of the input box allows the range 10...999.
- Default is 50.

❏ Worklist Protected Data

The following worklist data can be changed if not protected (Protection checkbox not activated): Default for all checkboxes is activated (protected).
– Patient Name
– Patient ID
– Date of Birth
– Sex
– Accession No.
– Request ID

❏ Worklist Time Range

The time range of the worklist can be configured. The corresponding list box provides the following settings:
– Today (default value)
– Yesterday-Today
– +/- 12 Hours
– +/- 24 Hours
– Use no date

Modality for RAD Images

The system-wide modality for RAD images can be set to **CR** or **DX**.

If the modality is set to **DX**, the **Patient Position and Laterality** tag remains dimmed and cannot be activated. Neither 'Image Laterality' nor 'Image Orientation' is supported by the current SW version. Activate DX only with an explicit customer demand.

Use of DICOM Tags

Enable/disable the check box to use the tag "Pixel Spacing" 0028,0030.

The value should be taken over from tag 0018,1164 if enabled, otherwise the tag should not be sent.

Data Model

These option buttons configure which of the following data models will be used if the **<Add Patient>** button was pressed in **Patient mode**:
– Add new study
– Add new DICOM Procedure Step

In addition, the image / series model can be selected using one of the following settings for RAD or XRF and for XA (Cios systems only) images:

❏ for **RAD** (RFU systems)
– 1 image per series (default)
– n images per series

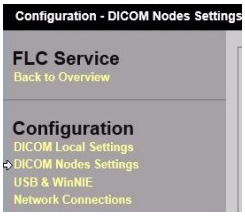
❏ for **XRF** (RFU systems)
– 1 image per series (default)
– Single frames per series

DICOM Nodes Settings

Please perform a reboot of the FLUOROSPOT Compact after every service session.

All network partners of the FLUOROSPOT Compact must be defined in the config page below.

In addition to the specification of partners, the system must also know which services are used or provided in the different network applications.



- Select **FLC Service** on the **Service Software** start window.
- Select **Configuration**.
- Select **DICOM Node Settings**
  – The **DICOM Node Settings** window appears.

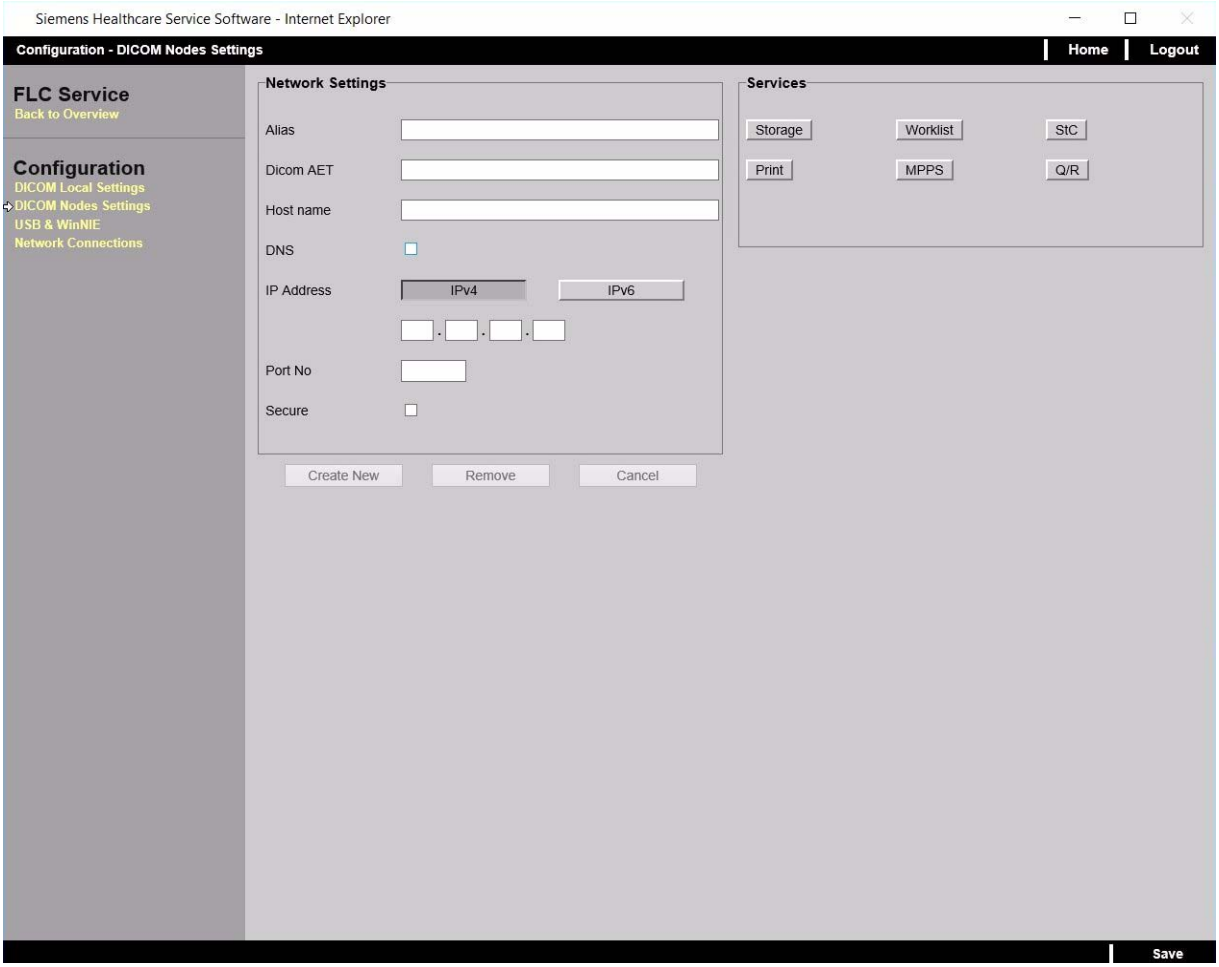


Fig. 8: DICOM Nodes Settings

Network Settings

- ❏ Alias
  An alias name for a DICOM AET is entered here. This name is used in the UI to select the DICOM target.
- ❏ Dicom AET
  Defines a host as a DICOM user that performs network functions as specified in the Services field.
- ❏ Host name
  The name of the computer on which the DICOM AET is installed.
- ❏ DNS
  If checkbox DNS is activated, only the hostname of the computer in the network is required.

  Its IP address is resolved by the DNS server in the customer's hospital network.

  Two nodes with the same hostname cannot be configured at the same time, as DNS and static IP or vice versa.
- ❏ IP Address
  The address of the computer in the network.
- ❏ Port No.
  The host port through which the DICOM association takes place.
- ❏ Secure checkbox
  Enable DICOM encryption

Services

By pressing the Services buttons Storage, Worklist, Storage Commitment (StC), Print, MPPS or Q/R, the selected services are assigned to the above network node.

Different parameters have to be set for the services mentioned below.

- ❏ Storage

  For storing images/studies in the Patient Directory of the specified partner node, defined in the previous configuration step (Network Settings).

  Active Servers

  Archive
  The above configured 'Storage' node can be set as an archive by activating this check box. (compatibility to syngo).

  Storage Commitment Server
  Select the Storage Commitment Server from the list box . Of course this assumes that a Storage Commitment Server already exists and was configured previously.

  It is possible to select an individual Storage Commitment Server for each configured storage node.

DFR

The Information Object Definition must be set here. The system supports two different levels:

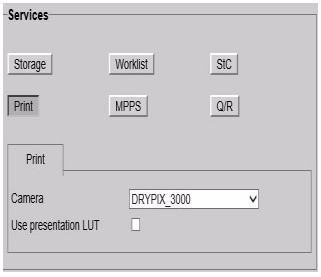
– XRF Ready Processed
  Pixel data are sent ready processed to a DICOM node. This means all pixel manipulation operations, except windowing, are performed on the images and the results are 'burnt in'. DSA images are stored subtracted. Shutter and image graphics are burnt into the pixel matrix. The benefit of "XRF Ready Processed" is that an external viewer can display the images easily.
– XRF Full
  'Native' pixel data are sent to a DICOM node. That means that only some pixel manipulation operations are performed on the images in the FLC. DSA images are stored as 'native'. Subtraction has to be performed on an external viewer (e.g. Leonardo Angio Viewer). Shutter and image graphics are sent in DICOM attributes and therefore have to be applied by the external viewer. The benefit of "XRF Full" is that the external viewer is able to change most parameters of the image.

The DICOM AETs defined in the table "Network Settings" must be able to support the IODs defined here!

Ready window

Windowing is calculated into pixel data.

Ready Window is an option for SC and XRF Ready Processed only. With this option enabled, windowing is also calculated into the pixel data and an external viewer can display the images even if the windowing parameters are not supported. The disadvantage of "Ready Window" is that windowing can no longer be changed. This option should only be used if the display of the images in PACS is otherwise not accepted by the user.



❏ Print

To send images to a DICOM printer to be printed on film.

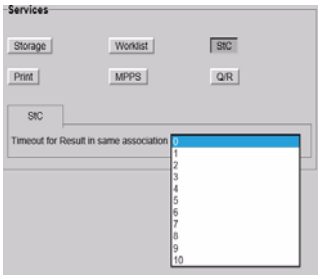
– Camera
  Select the config file from the list box which is to be assigned to DICOM printer.

– Use of Presentation LUT
  Check box to activate the option that a defined presentation LUT is to be used prior to sending image data to the DICOM printer.

  This option should be enabled if the DICOM Camera supports the Print Presentation LUT.

❏ Worklist
This button must be activated to get patient data from the HIS/RIS information server.

❏ MPPS (Modality Performance Procedure Step)
This function is based on the worklist service. Nodes with worklist support can be expanded by the MPPS function. The MPPS protocol is sent back to the MPPS server at the end of an examination sequence with details on the performed examination steps, attendances, etc.



❏ StC (Storage Commitment)
This service is an expansion of the DICOM Send application. Image archiving is verified by the archive system and communicated to the sending node in the network.

The storage commitment function can be set as follows:
– If the checkbox is activated, the configured archive sends the StC result in the same association sequence at the end of a DICOM transfer if the storage process has completed successfully.
The timeout for receiving the response from the archive can be set in "StC Result timeout". The time is defined in seconds. The range is 0–10 s.
– If the checkbox is not activated, the configured archive will send the StC result at a later date.

❏ Q/R (Query/Retrieve)
The service Q/R allows a query for a Patient List, studies and images stored in the database of the configured archive server. The query depth can be configured in the archive server. In this function sequence, the Fluorospot Compact acts as a Service Class User, applying the services supported by the provider. The archive server acts as the Service Class Provider. The function status is displayed on the Live monitor.
After a successful query on the archive, the user can start retrieving the desired folders. The retrieved folders are written in the "Examined Patient List" (database) of the FLUOROSPOT Compact. The flags of the retrieved folders are marked with "R" (retrieved). This prevents images from folders from being reprocessed or from being sent to the network again!

In this function sequence, the FLUOROSPOT Compact acts as a Service Class Provider, the archive server acts as the Service Class User applying the services supported by the provider. The Retrieve Service must be configured in the archive server. The function status is displayed on the Live monitor.

◆ Press the **Save** button to keep the settings.

Create New

If the **Create New** button is depressed the system creates a new network partner list. A new network node can be entered.

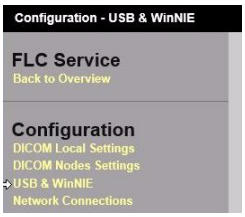
Remove

A previously marked network partner can be deleted from the Network Settings list.

Save

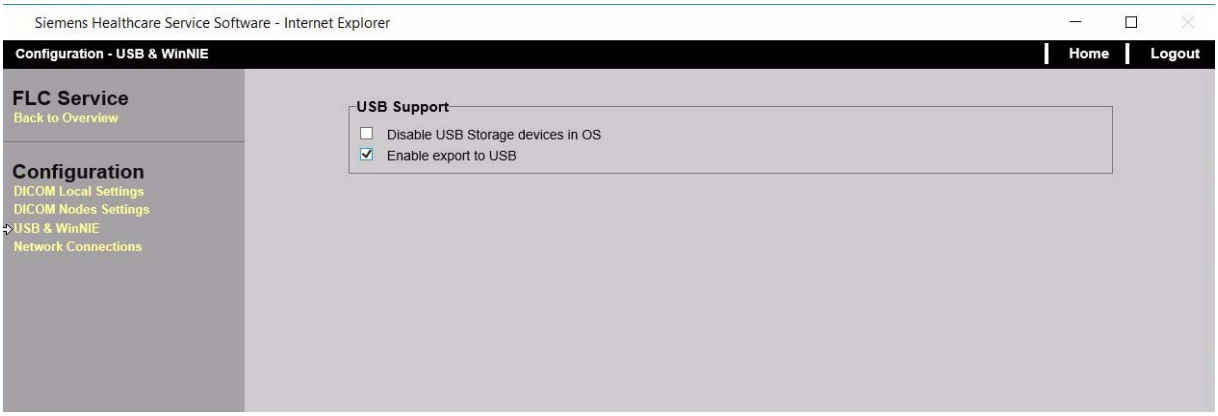
After all entries in the Network Settings menu have been completed the new network partner list must be saved and reboot of FLC is required.

USB Support



- Select **FLC Service** on the **Service Software** start window.
- Select **Configuration**.
- Select **USB & WinNIE**

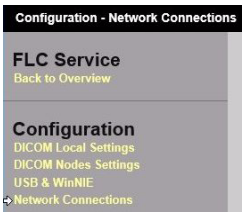
The **USB & WinNIE** window appears.



Network Connections

The network settings and configurations require expert know-how and are strongly influenced by the in-house hard- and software infrastructure.

An initial connection to the hospital-wired network should be done via an Ethernet cable during the start-up procedure after delivery of the system.



- Select **FLC Service** on the **Service Software** start window.
- Select **Configuration**.
- Select **Network Connections**

The **Network Connections** window appears.

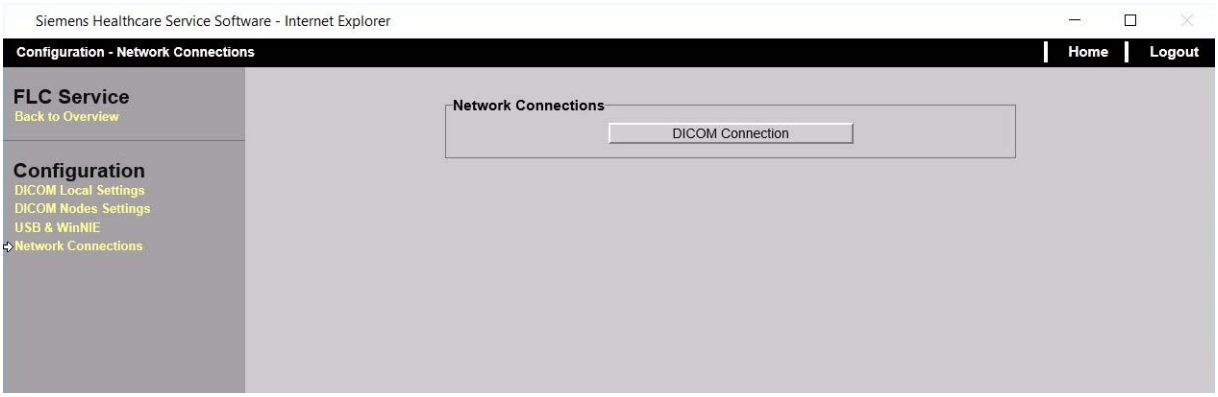


Fig. 10: Network Connections

The DICOM connection to the hospital can be established by:

LAN (Basic):

DICOM Connection opens wired configurations on Microsoft WINDOWS level and requires an Ethernet cable connection (only possible with Siemens Service).