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iQ-WORKLIST

Administration Guide & User Manual

Version 1.4

Release 002R

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1. Introduction

The iQ-WORKLIST provides DICOM worklist capabilities. The information is read from HL7 message files or network transmissions provided by a hospital information system (HIS) or any other HL7 compliant system, or from GDT files provided by a practice information system (GDT – "Gerätedaten-Träger"; German standard for communication between medical devices).

1.1 System Requirements

Minimal system requirements are:

- Pentium III or IV CPU > 1 GHz or comparable AMD processor
- minimum 256 MB main memory (RAM)
- minimum 20 GB free space available on the local hard disk
- Windows 2000 or Windows XP

Recommended system requirements are:

- Pentium IV CPU > 2 GHz, or comparable AMD processor
- minimum 512 MB main memory (RAM)
- minimum 20 GB free space available on the local hard disc, 7200 rpm, 8 MB Cache
- Windows 2000 or Windows XP

2. Usage of the Application

The iQ-WORKLIST application is designed as Windows Service and is therefore not providing any user interface. The application can only be started or stopped using the windows service manager

The application consists of the following files that will be installed during the setup:

- worklist.exe
 Main application file
- swflib.dll Library for DICOM and HL7 functionality
- worklist.ini Configuration file (see chapter 3)
- HL7TODICOM.ini HL7 to DICOM mapping file (see chapter 3)
- worklist.log Log file (created after first start)

The configuration of all parameters and settings is done in the 'worklist.ini' configuration file. The mapping between HL7 and DICOM is provided in the "HL7TODICOM.ini" file. Refer to chapter 3 to get detailed information about the two files.

NOTE: Any changes to the configuration file will only be applied after a restart of the server using the windows service manager.

2.1 Command line parameters

The iQ-WORKLIST application supports several command line parameters in order to get license information, to install and uninstall a license, or to register and deregister the service within the windows service manager.

The following table shows all available command line parameters for 'worklist.exe':

Parameter	Function	Comment
-?	Shows the list of the available parameters	
-i	Registers the service within the Windows Service Manager	The service is registered automatically during the setup
-u	Deregisters the service	The service will automatically be unregistered during the uninstalling process
-f	Shows the hardware fingerprint	The hardware fingerprint is needed to receive a valid license (see chapter 4)
-r	Resets the current license	This function is needed to migrate the license to another machine where the current license will not work due to a different hardware fingerprint (see chapter 4)
-k name key	Installs a license with the mandatory parameters 'name' and 'key'	The additional parameters 'name' and 'key' will be provided after the purchasing process (see chapter 4)
-C	Starts the application in a console window (not as service)	This command is available for debugging and error tracking but should not be used in a productive environment

3. Configuration

The configuration can be changed by editing the main configuration file "worklist.ini".

NOTE: After making changes in the configuration you have to restart the application.

Chapter 3.1 will list all available settings inside the configuration file. Chapter 3.2. will list all settings of the HL7-to-DICOM mapping. The parameters in both files are NOT case sensitive, e.g. expressions like 'LOGLEVEL' and 'LogLevel' are equal.

3.1 Main Configuration

The main configuration file provides different options:

Parameter	Comment			
[APPLICATION]				
LOGLEVEL =	Numeric value between 0 and 3			
	0 on	ly errors will be logged		
	1 err	ors and warnings will be logged		
	2 ver	rbose mode		
	3 del	bug mode		
LOGMAXSIZE =	Maximum size of log files to keep the log files readable. When reaching the limit the old file will be stored with additional timestamp information in the filename and a new file will be created for logging purposes.			
BMAINTENANCEMODE = Database maintenance mode. The maintenance within the given mode parameter 'DBMAINTENANCEINTERVA		ance mode. The interval of the given mode is set via the TENANCEINTERVAL'.		
	Available values are:			
	Hour	maintenance is done in hours		
	Day	maintenance is done in days		
	Week	maintenance is done in weeks		
DBMAINTENANCEINTERVAL=	Defines the int 'DBMAINTENANCEM	erval based on the set ODE'. Value is a numeric value.		
	Example:			
	DBMAINTENANCEMC	DDE = hour		
	DBMAINTENANCEIN	TERVAL= 6		
	→ Maintenance is startup, i.e. when maintenance is start	scheduled every 6 hours after started at 4:30 am the next red at 10:30 am and all data older		

	than 6 hours are deleted.
DBMAINTENANCEHour=	Defines the hour for the maintenance modes 'Day' and 'Week'. Accepted values are 0 to 23. The value is ignored for the maintenance mode 'hour'.
	Example:
	DBMAINTENANCEHour=1
	\rightarrow maintenance is scheduled at 1:00 am
	DBMAINTENANCEHour=22
	\rightarrow maintenance is scheduled at 10:00 pm
[WORKLIST]	
AETITLE =	Application entity title of the worklist SCP. The SCP will accept any association request independent of the called AE title
PORT =	Listen port of the worklist SCP.
DATABASE =	Path and filename of the database file. The path can be relative or absolute. The file will be created if it does not exist at startup.
[HL7]	
SupportHL7 =	Enables/disables the HL7 mode. Boolean value can be YES/NO or 1/0. If disabled all parameters in the HL7 section are ignored (including HL7 network support).
IncomingFolder =	Path of the incoming folder for HL7 message files. The folder will be scanned in the given interval ('CheckInterval'). Folder can be relative or absolute.
OutgoingFolder =	Path of the outgoing folder for HL7 message files.
	NOTE: This parameter is for future purposes and therefore not used at the moment.
MappingFile =	Path and filename of the HL7-to-DICOM mapping file (can be relative or absolute).
CheckInterval =	Interval in seconds for scanning the HL7 incoming folder.
SupportHL7Network =	Enables the network server that is listening for HL7 messages sent via network.
Port =	Listen port of the HL7 network server.
[GDT]	
SupportGDT =	Enables/disables the GDT mode. Boolean value can be YES/NO or 1/0. If disabled all parameters in the GDT section are ignored.
IncomingFolder =	Incoming folder for GDT message files. The folder will be scanned in the given interval ('CheckInterval'). Folder can be relative or absolute.
OutgoingFolder =	Path of the outgoing folder for GDT message files.
	NOTE: This parameter is for future purposes and therefore not used at the moment.

CheckInterval =	Interval in seconds for scanning the GDT incoming folder.
ForceModality =	Forces the setting of the modality information for each message to the given value (Modality). Boolean value (YES/NO or 1/0).
	Note:
	This function was added for GDT systems that are not able to use a defined tag for a modality information (GDT has no 'modality' tag). This function should only be used if only one kind of modality is using the worklist.
ModalityKey =	Modality information that is used if 'ForceModality' is enabled
AccessionNoFromDateTime =	Enables the creation of the accession number out of the current time and date. Boolean value (YES/NO or 1/0).
	If disabled the accession number will be taken from the key defined in 'AccessionNoKey', e.g. the patient ID key 3000.
AccessionNoKey =	Defines the GDT key that is used for the Accession number (default is 'Patient ID').

3.2 Configuration of HL7 input format

The "HL7TODICOM.INI" HL7 configuration file offers the possibility to change the import behavior for HL7 message files. The file installed with the application reflects the HL7 protocol version 2.0.

The configuration should work in most cases. Any changes in the HL7 configuration will influence the worklist information available for the worklist clients.

Each entry of the configuration corresponds to a message entry of an HL7 message file. Refer to the manual of your information system or the HL7 protocol (<u>http://www.hl7.org/</u>).

4. Licensing of iQ-WORKLIST

The iQ-WORKLIST licensing model is hardware based. There is a hardware fingerprint calculated that represents the hardware. A license consists of both a name and a software key that will only be valid for a specific hardware fingerprint.

After the installation on the machine the iQ-WORKLIST will work in trial mode without any functional limitation. The trial period is 30 days. iQ-WORKLIST will stop working after the trial period is expired.

During the purchasing process you will have to provide the hardware fingerprint to your distributor. Use the command 'worklist.exe -f' to get your current hardware fingerprint. Send the fingerprint to your distributor and you will receive a name and a key that needs to be entered in order to activate a full version of the application.

In order to activate the application use the following command in the command prompt:

Worklist.exe –k name key