INTERFACE SERVICE INSTALLATION AND MAINTENANCE

Level 1

VERSION HISTORY			
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Warning

Contents

1. Introduction

DIANE interfaces allow information to be exchanged between the DIANE software suite and the various software programs used within the hospital IT system.

Please note that this document is for information purposes only and must not be forwarded to anyone other than your facility's DIANE IT representatives.

DIANE interface services and connectors are installed and configured by BOW Medical in collaboration with the site IT representatives and specialised staff from third-party software developers.

1.1 Importing information into DIANE

Inflows are transmitted via a 24/7 Windows service called "DIANE interfacing service". Depending on site needs, a second service may be installed ("DIANE interfacing service 2").

Each service is a 32-bit exe installed on a Windows server (from XP, 32 or 64-bit). The User Account Control present in certain versions of Windows (2008, for example) must be deactivated.

1.1.1 DiaInterfS: importing data into the DIANE database

This exe, installed as a service, manages the integration of data into the DIANE database.

A client (driver) specific to the DBMS installed is used to connect to the database (see "Connecting to the DIANE database").

This service is configured via the "DiaInterf.ini" file. This file can be edited via the "ConfigInterf.exe" module. Both of these elements are located in the same directory as the service.

Principal flows handled by this service:

- Identity / Hospitalisations / Movements
- Consultation appointments
- Theatre scheduling
- Lab results
- Theatre operation scheduling.

1.1.2 *DiaFileTransfertInterfS*: file transfer

This service allows one or more file sources to be redirected to one or more destinations, with the possibility of choosing the transfer protocol and type of storage location (network path, FTP account, TCP socket, MsMQ file, etc.).

This service is also configured via the "DiaInterf.ini" file.

1.2 Exporting DIANE information to third-party applications

- Outflows are transmitted directly via the DIANE application on the client computer.
- They are configured via various ".ini" files that can be edited via the "Configuration.exe" module.
- Data are exported in the form of HL7, HPRIM, XML-HPRIM, or XML files depending on their usage and in the form of .doc or .pdf documents.
- Data are exported via FTP, file (locally on the computer or shared network drive), TCP, http, email and file MSMQ protocols.
- These interfaces enable in particular the exporting of summaries during their generation to other applications and the feeding of external procedure code servers.

This document mainly deals with interface services installed on the server side.

Please contact BOW Medical if you would like more information on the various types of export.

2. General information

2.1 Interface service elements

The files for installing DIANE interface services are contained in a self-extracting archive named according to the mask "DiaInterf<Version No.>_<Archive No.>.exe" (*e.g. "DiaInterf445_25.exe"*).

Each archive contains the following:

- DiaInterfS.exe: Service for importing data into the DIANE database
- DiaInterf.exe: Console tool with the same features as "DiaInterfS.exe", used for tests and maintenance by our staff
- DiaFileTransfertInterfS.exe: File transfer service
- DiaInterf.ini: Service parameter storage file
- ConfigInterf.exe: Tool for configuring "DiaInterf.ini"
- RestartDiaInterf.cmd: Script used to restart the import service
- ParseMessage.exe: Tool for editing HL7 and HPRIM messages
- HL7ShowGrammar.exe: Tool for HL7 conformance testing

2.2 Directories used

The files extracted from the archive should be installed on a non-system partition or a second disk, with a path such as **"D:/Diane/Interfaces"**, or "C:/Diane/Interfaces" if the former is not possible.

Installation will also include all or some of the following sub-folders depending on the required configuration.

NB: The executables "ParseMessage.exe" et "HL7ShowGrammar.exe" are generally moved to the "D:/Diane/Tools" directory.

2.2.1 Processed messages

The "**D:/Diane/Interfaces/ArchivesMessages**" directory is created during installation. This parent directory contains the archive of files processed by the services.

The files processed are saved automatically in a sub-directory identifying the connector. For example:

- "./Identite" Connector "Import Identity/Movement"
- "./RDV_Consult" Connector "Import consultation appointment"
- "./Planif_Bloc" Connector "Important operation scheduling"

An additional tree structure of sub-directories is created automatically using the model "../_year2011/_month12/_day08" so that it is easier to look up the history.

Each specific archiving directory is indicated in the corresponding connector in the "ConfigInterf.exe" configuration tool (see Section 5.2).

2.2.2 Logs generated

Each service generates a daily log file describing the processes carried out, found in the service installation directory.

The "**D:/Diane/Interfaces/ArchivesLogs**" directory should be created during installation in order to save log files for each service, as well as the following sub-directories:

- "./DiaInterfS"
- "./DiaFileTransfert"

The respective naming formats for these files are:

- DiaInterfS: "InterfDiane_*yyyy-mm-jj*.log"
  - ➔ This log includes traces of all connectors managed by DiaInterfS

- DiaFileTransfertInterfS "DiaFileTransfertService_ yyyy-mm-jj _x.log"
  - ➔ "x" is the indicator of the relevant connector in DiaInterf.ini
  - ➔ A log file is created for each connector.

2.3 Archive management

The archiving and automatic compression of files processed by DiaInterfS is included in the service. It is possible to define the file storage duration to facilitate storage space management.

2.3.1 Processed message management

The following settings are found in the "DiaInterf.ini" file:

"AutoZIPArchiveByWeek" Key

This key activates the automatic compression of processed messages.

Setting this key to "1" triggers the automatic compression of all messages older than two weeks from the current date for the relevant connector in one single archive.

➔ The archive is generated according to the mask:
<yyyy-mm-jj-hh-nn-ss_archive_*ConnectorName*.z>

➔ The archive is placed in the directory:
"**D:/Diane/Interfaces/ArchivesMessages/ConnectorConcerned**"

- As a matter of routine, as soon as messages have been archived for 21 calendar days, a single archive containing 7 days of history will be created to contain days D+15 to D+21.

- If this automatic compression is started for a site with a significant history:
  - Compressed archives created manually during BOW Medical interventions will be ignored (.zip, .rar and .7z extensions).
  - A single archive will be created with all messages 15 days or older.
  -

"AutoCleanUpOldArchive" and "DayBeforeAutoCleanUp" keys

The first key activates the deletion of compressed archives, while the second allows you to indicate - in number of days - the threshold beyond which archives must be deleted.

Only archives created by automatic "DiaInterfS.exe" processes (".z" extension according to the mask given above) are taken into account.

2.3.2 Managing logs generated

The only automatic archiving process carried out by the DIANE interface service on its own logs is to move all log files older than 7 days to the "**D:/Diane/Interfaces/ArchivesLogs**" directory.

Automatic suppression/compression is not carried out or possible.

We install a BATCH file with a scheduled task to delete archive and log files older than X days.

3. Service installation

3.1 Procedure

3.1.1 Example: DiaInterfS

To install the service:

- Open the “Launch” window in the “Start” menu
- Drag/drop the "DiaInterfS.exe” file to the command prompt (automatically generates the file access path)
- Add a space then "/install” (see Figure 1 below).
-

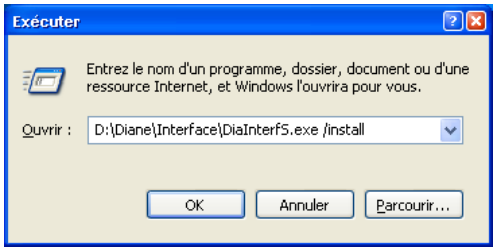


Figure 1 – service installation command prompt

The service has the internal name “DianeService” and can be found with the name “DIANE interfacing service” in the list of services installed on the server (see Figure 2 below).

Once the service is installed, it is started by clicking “Start” on the management interface for your server’s services (or right-click then “start” after selecting the service). The default configuration of our service includes an automatic start.

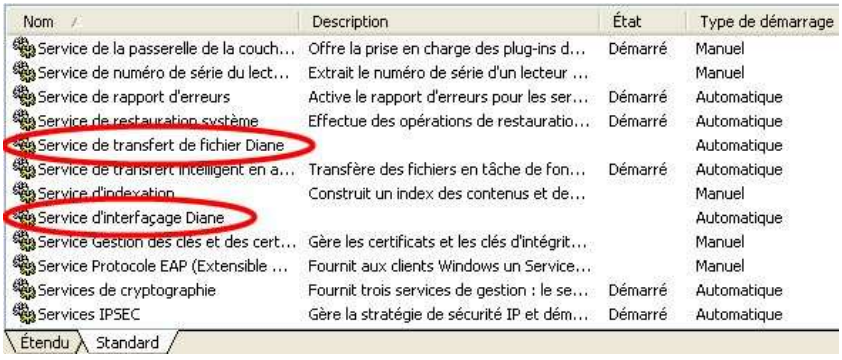


Figure 2 – Viewing installed DIANE services

To uninstall this service, replace "/install" by "/uninstall".

If the executable has been deleted but the service has not been uninstalled, the service cannot be uninstalled using "/uninstall". In this case, you must use the command "sc delete<ServiceName>".

The DIANE interfacing service is called “DianeService”.

The file transfer service is called "DiaFileTransfertService".

This name can be found by right-clicking the service then going to properties.

Figure 3 – Properties of an installed service

3.1.2 DiaFileTransfertInterfS

The installation/uninstallation procedure is exactly symmetrical to that of *DiaInterfS*.

This service appears as “**DIANE file transfer service**” (see Figure 2 below).

3.2 Related matters

3.2.1 Connecting to the DIANE database

A connector to the DIANE database must be configured via the configuration panel administration tool. This client will be ODBC for a MySQL or MS-SQL database or BDE (Borland Database Engine, specific to Delphi applications) for an Oracle database.

DIANE no longer uses the ODBC/BDE client from version 4.6.21.10 onwards. The above therefore only applies to older versions.

However, it is still necessary to install the corresponding DBMS connection client. The relevant ORACLE client must also be installed in order to connect to an ORACLE database.

Finally, you must copy to RODATA directory containing a correctly configured Db.ini file to the root of the interface service directory. For this, retrieve the directory and the file in the DIANE directory of a client computer.

This database alias must be transferred into each “Set” connector of the interface service. Furthermore, the executables in the DIANE software suite must be installed and configured on the server (as is the case for a normal client computer) so that BOW Medical can carry out installation tests and maintenance.

4. Restarting the service - DiaInterfS

4.1 Principle

When installing the service, we install a scheduled task (in the server task scheduler) to stop and restart the service on a daily basis.

This restarting allows any memory leaks, the risk of which increases with uninterrupted operation, to be dealt with.

Unless the health facility specifies otherwise (on the basis of other scheduled maintenance), the scheduled task is configured to take place at 2am every morning.

This task uses the file "RestartDiaInterf.cmd”. Our installation procedures are given below.

4.2 Configuration on Windows 2003 Server

- Open the configuration panel
- Open “Scheduled tasks”
- Launch the scheduled task assistant.
- If necessary, select “Open advanced properties” before clicking “Finish”
- The task can then be renamed like a normal file.

4.3 Configuration on Windows 2008 Server

- Open the Server Manager from the “Configuration/Task scheduler” menu.
- Click “Create a task”.
- From the “General” tab, enter the name “**Restart DIANE Interface Service**”.
- From the general tab, enter this quick description:
  “This task restarts the DIANE interface service (Diane Interfacing Service in the list of services installed on the server) at 2am each morning.”
- From the “Triggers” tab, click “New” and configure as follows:

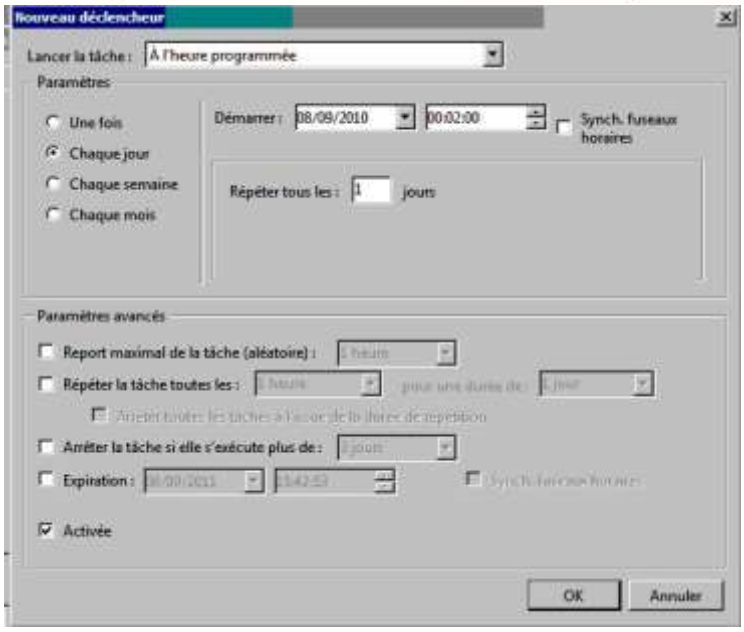


Figure 3 - Task scheduling

- Create the action to be taken as follows (according to file location):

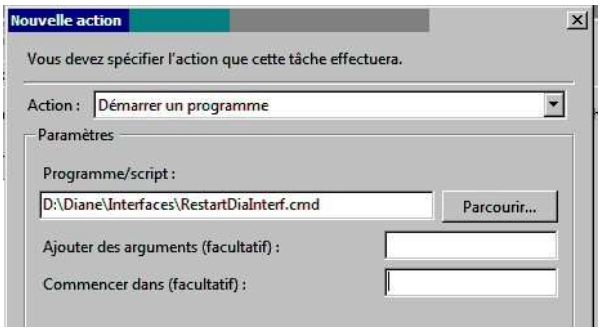


Figure 4 - Action to be taken by the scheduled task

5. Using DiaInterfS

Please remember that service and connector configuration must be carried out by BOW Medical.

It is necessary to work with an IT representative for the site and, if applicable, a representative of the third-party company responsible for each flow to define and test the flows.

Connector settings are managed via the "DiaInterf.ini" file found in the same directory as the service. In particular, these settings are:

- Information on connecting to the DIANE database
- Type of grammar used for each connector (HL7, HPRIM, XML-HPRIM, etc.)
- Type of file exchange (FTP, TCP, network) and associated information
- Type of information handled (patient, hospitalisation, operation, appointment, etc.)
- Log configuration (process history and any errors).

5.1 Lists of possible interfaces

Please refer to the specific document for each connector/interface for further information.

5.1.1 "Identity/Movement" connector

The fields below are likely to be obtained via an "Identity/Movement" interface. The list of elements retrieved will depend on the elements actually made available to the DIANE interface service by the third-party software that issues files and may depend on the exchange grammar used: HL7, HPRIM, XML-HPRIM, etc.

Information about the patient:

- UPI
- Family name
- Married name
- First name
- Sex
- Date and place of birth
- Full address
- Telephone 1, telephone 2
- General practitioner's name
- General practitioner's address, telephone number

Information about the hospitalisation:

- Stay No.
- Stay type
- Admission date / discharge date
- Unit, Room, Bed

In the connectors for this flow, "Process patients" and "Process hospitalisations" must be ticked (see Figure 7).

5.1.2 "Consultation appointments" connector

Below is the minimum list of fields that must be transmitted to the DIANE interface service for a consultation appointment import.

Information about the patient:

- UPI
- Family name / First name
- Date of birth

Information about the appointment:

- Appointment ID (unique number)
- Start time and end time (or appointment duration)
- Doctor involved in appointment (various types of identification possible)

Additional DIANE configuration via the "Configuration.exe" module is necessary to show appointments according to the mode chosen by the site.

In the connectors for this flow, "Process appointments" must be ticked (see Figure 7).

5.1.3 "Theatre scheduling" connector

Below is the minimum list of fields that must be transmitted to the DIANE interface service for an OT scheduling import.

- UPI
- Unique surgery ID
- Surgery type
- Surgery date and time
- Name of surgeon or doctor

In the connectors for this flow, "Process operations" must be ticked (see Figure 7).

5.1.4 "Laboratory test results" connector

For laboratory test result imports, the patient's UPI is the only essential data in the flow handled by the interface service in order to enable the subsequent inclusion of data in patient records.

The connector will usually process a file containing all results (.doc, .txt, .rtfou or .pdf format) and a HPRIM file that contains all the information in a standardised way.

In the connectors for this flow, "Process results" must be ticked (see Figure 7).

5.1.5 "DianeDataSet" connectors

This connector allows a complete (initial patient data, consultation, OT and RR data, documents) or partial anaesthesia record to be integrated via a DianeDataSet XML file.

The structure of this file has been defined by BOW Medical on the basis of HPRIM nomenclature to import (and export from client computers) all or part of an anaesthesia record.

Typically, this connector allows information from operating theatre management software to be included in DIANE.

5.2 Configuring connectors via ConfigInterf.exe

5.2.1 ConfigInterf.exe welcome window

Figure 5 below shows:

- "Set" connectors for writing to the DIANE database (red icon)
- "Get" connectors for retrieving input files (green icon)
- Buttons for starting and stopping DiaInterfS.exe (red circle)

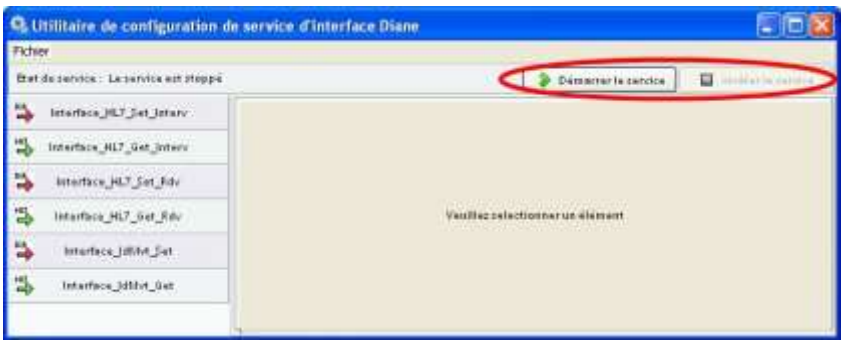


Figure 5 - ConfigInterf.exe *welcome screen*

5.2.2 Adding a connector

Click on the "File" menu then "Add". The menu shown in Figure 6 will appear, from which you can select the type of connector you wish to create.

Figure 6 - Possible actions via the ConfigInterf.exe *menu*

It is important to choose a relevant name for each connector that includes:

- The type of data processed (e.g. Appt for consultation appointments)
- Whether the connector is input or output by using the terms “Get” and “Set”
- Potentially the exchange grammar (e.g. HL7).

5.2.3 Configuring an input connector (“Get”)

After entering the name of the connector to be created, the window shown in Figure 7 appears.

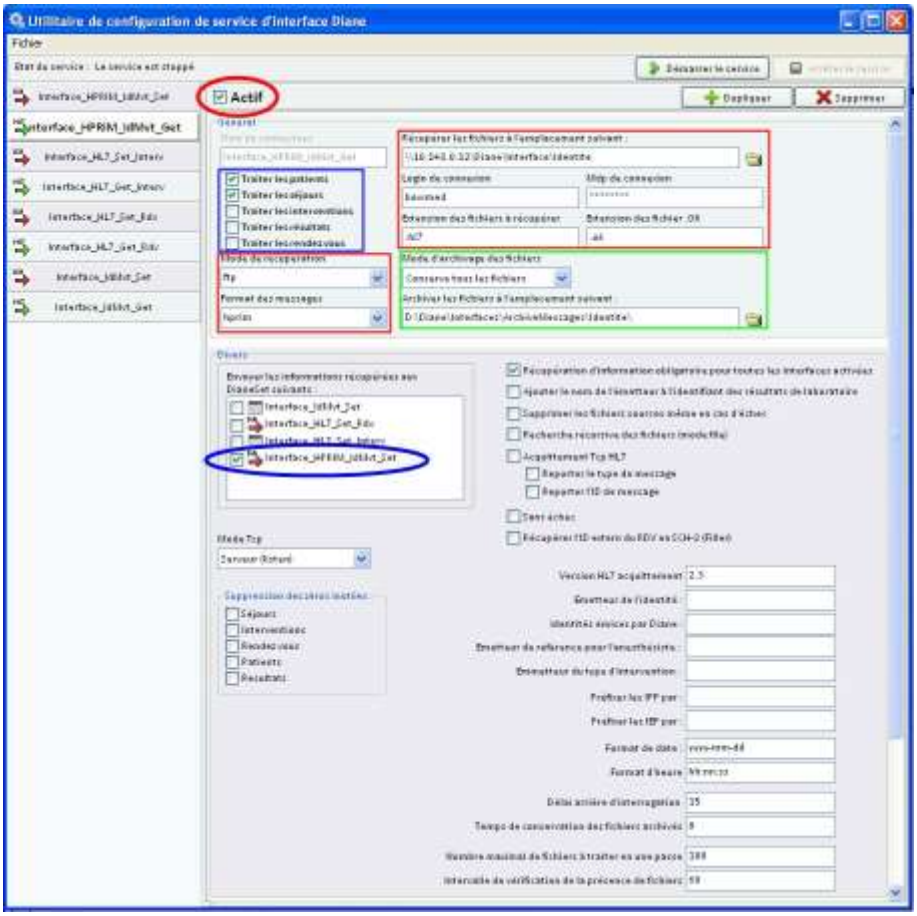


Figure 7 - Configuring an input connector

5.2.3.1 Activation

- Tick “Active” (Figure 7 - red circle)
- Assign this input connector to an output connector by ticking the corresponding box (Figure 7 - blue circle).
  NB: The output connector must also be active.

5.2.3.2 Setup

Retrieval mode (Figure 7 - red boxes)

- Choose between FTP, TCP, file (network path), etc.
- Location: network path, FTP account directory, TCP socket (IP: Port), etc.
- Connecting login and password for an FTP account

File characterisation (Figure 7 - red boxes)

- Extension of the file containing information to be processed
- Extension of the acknowledgement file (leave blank if no acknowledgement)
  NB: The acknowledgement file has the same name as the main file but with a different extension.
- Message format: exchange grammar used (HL7, HPRIM, XML-HPRIM, etc.)

Data processing:

- In the blue box (Figure 7), select the information to be extracted from the files.
- The other configuration elements are settings for adapting the connector to the requirements of third-party developers and/or the specific hospital context.

5.2.3.3 Archiving

In the fields shown in the green box, you can specify messages to be archived and the parent directory where they are to be saved (as a reminder, directories using the tree structure “`../_year2011/_month12/_day08`” are created automatically).

5.2.4 Configuring an output connector (“Set”)

After entering the name of the connector to be created, the window shown in Figure 8 appears.

5.2.4.1 Activation

- As for the input connector, tick “Active” (Figure 8 - red circle)

5.2.4.2 Setup

Connecting to the DIANE database (Figure 8 - red box):

- The login is SYSDIANE for Oracle or MySQL databases and SYSDBA for MS-SQ databases.
- The password is known only to BOW Medical.
- The “Database” field should contain the alias of the DIANE database, which starts with “Diane".

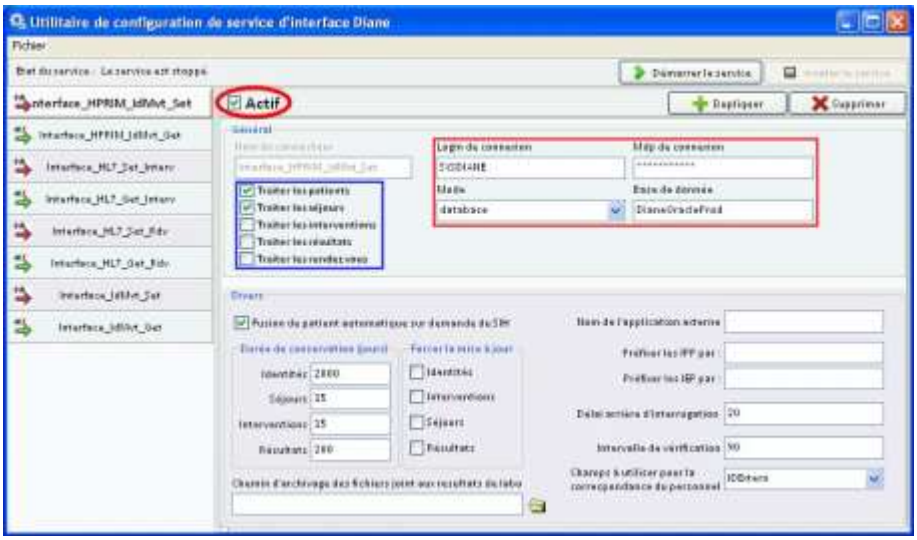


Figure 8 - Configuring an output connector

Data processing:

- In the blue box (Figure 8), select the information to be included in the database after being extracted from the files.
- The other configuration elements are settings for adapting the connector to the requirements of third-party developers and/or the specific hospital context.

5.2.5 Configuring logs

Selecting “Log Configuration” on Figure 6 above brings up detailed log configuration, with four possibilities for each “traceable” element (see Figure 9):

- None Element not tracked in logs
- Local Element only tracked in the daily local log file
- Distant Element only tracked via the LogReport
- Local+Distant Element appearing in the daily local log file and the LogReport

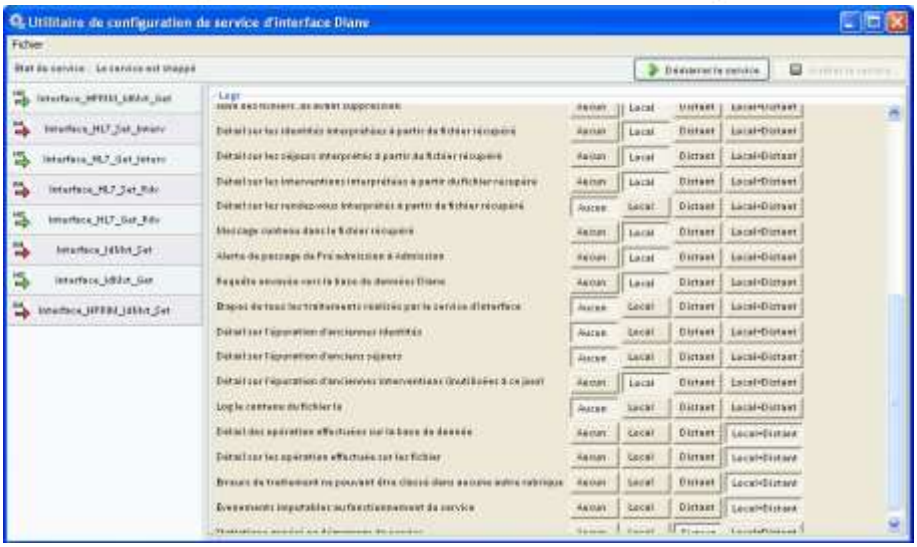


Figure 9 – Log configuration

6. How DiaInterfS works

The DiaInterfS.exe interface service evolves constantly, so that it can support new formats and standards when necessary.

6.1 Principle

The server interface works on the following principle:

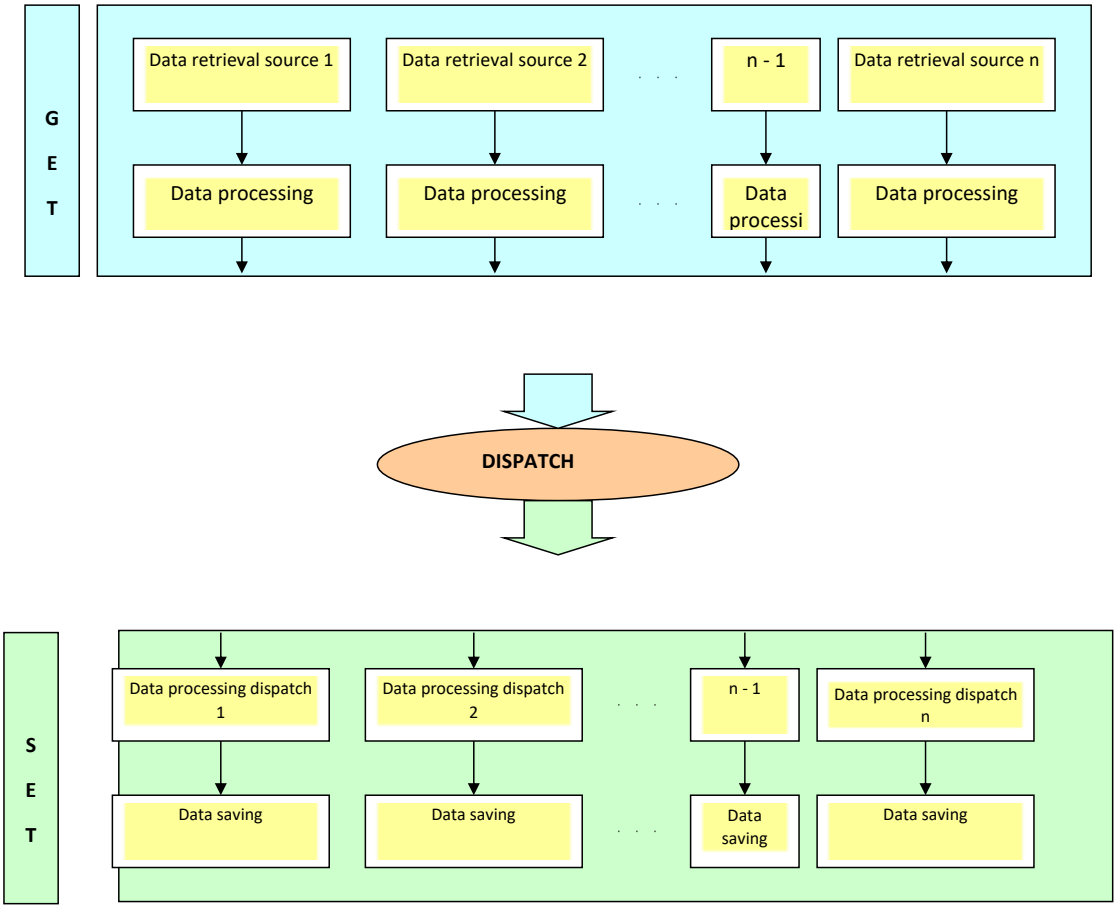


Figure 10 - DiaInterfS process map

It should be noted that additional tasks (such as deleting obsolete temporary data) are not included in this diagram.

The service can process several flows at the same time. The interface also functions as a 'dispatcher', which accepts 0-N connections in both directions. This makes the service both powerful and flexible.

6.2 Example

Using the example of a hospital using Sigems for the patient record:

The DIANE interface service can retrieve identities from Sigems via the web gateway service ("Get" connector). It can then feed the DIANE database thanks to the "Set" connector, but it is also possible to ask it to export the identities in HPRIM (or HL7) to feed other applications.

This allows the hospital to avoid additional structures for sending flows to other applications.

6.3 Internal operations

In order to understand the internal operations of the interface service for some of its features, it is important to understand some of the DIANE architecture.

The DIANE database has a pair of tables for both identities and hospital stays: the temporary table and the main table.

For patients, this therefore gives "**`Patient`**" and "**`TmpPatient`**", and for stays "**`Sejour`**" and "**`TmpSejour`**".

1.1.1 New identity

When the DiaInterfS service receives a new identity from the HIS identity server, this is initially placed in the **`TmpPatient`** table. It will be created in the **`Patient`** table when confirmed by the DIANE user - generally when the record is first opened during the first consultation.

The following window appears when the user selects the patient in question (*name hidden*):

Figure 11 - Assigning DIANE records/HIS identities

6.3.1 Changes to HIS identities

When changes are made to the patient's HIS record, they are transmitted via the interface service and initially included in the **`TmpPatient`** table. When a user attempts to open the DIANE record for the patient in question, it is possible to merge the last changes with the existing patient identity in DIANE (in the **`Patient`** table).

A window appears for the user to confirm this:

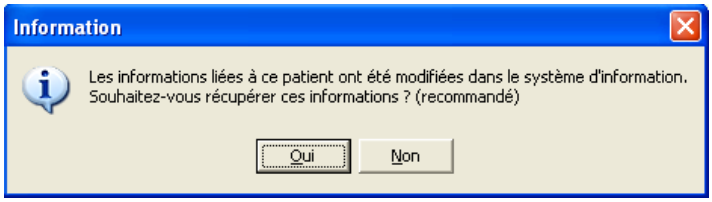


Figure 12 - Notification that HIS modifications are available

A window showing the consequences of the update is then shown (in this example, modifying the place of birth in the DIANE record):

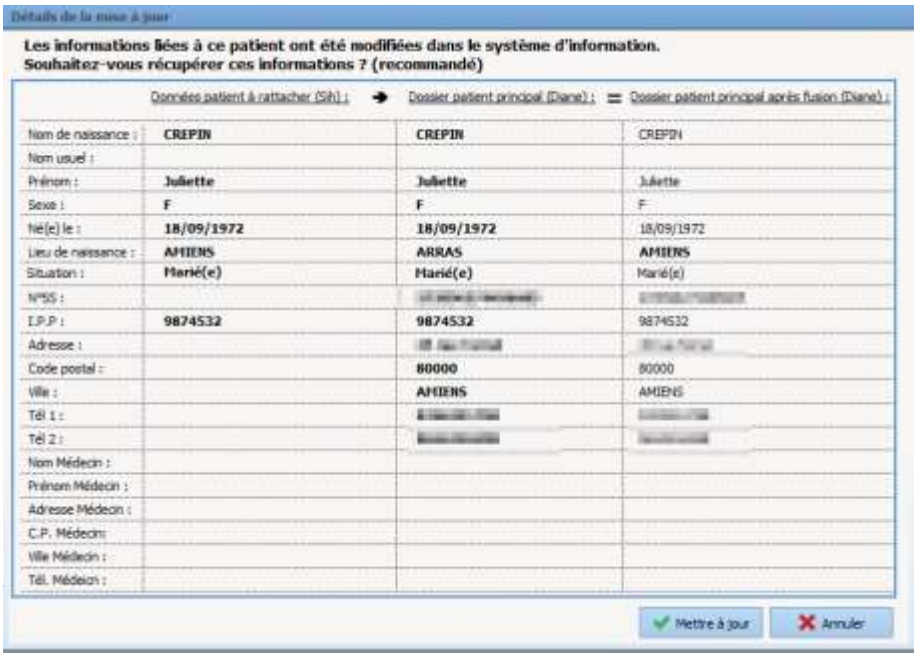


Figure 13 - Presentation of HIS changes detected

6.3.2 Addition/deletion of hospital stays

A similar principle to that for identities applies to hospital stays.

Contrary to changes to identities, DIANE users are not notified of additions or changes to stays. These new elements are automatically transferred to DIANE to avoid disturbing users.

This is the corresponding window (deactivated):

Figure 14 - Notification of stay addition (deactivated)

6.3.3 "Ghost" patients

In the specific case of ghost patients, DIANE receives a message via the interface service that an identity should no longer be used. This is then a ghost identity. This means that the identity has been deleted in the patient management software.

In this case, regardless of whether the identity has been included in the DIANE "**`TmpPatient`**" table or is also in the "**`Patient`**" table, it will be kept. An identity transmitted to DIANE is never deleted and is always available.

The same applies to hospital stays with one notable exception: the stay in question is marked as deleted, although it is in fact kept in the database.

If the stay has only been included in "**`TmpSejour`**", it will be deleted, but only from this table. However, if it has also been transferred to the "**`Sejour`**" table, it will be marked as deleted in the "**`Sejour`**" table.

6.4 Operating algorithm

The DIANE interface service carries out several processes to include messages relating to the identities it receives. These are presented below.

6.4.1 Identities

Usual case: Retrieval of an identity with no association in DIANE and no identity creation request from DIANE.

If the patient does not yet exist in the **`Patient`** table

If it is a new identity to be added to the **`TmpPatient`** table

It is added to the **`TmpPatient`** table

Otherwise (the identity already exists in the **`TmpPatient`** table)

It is updated in the **`TmpPatient`** table

Otherwise (the identity is already present in the DIANE **`Patient`** table)

If it is an identity to be added to the **`TmpPatient`** table

The identity received is compared with the identity in the **`Patient`** table to check whether updating is required

If there are differences

Addition of a record in **`TmpPatient`**

Update flag set to 1 to show an update

Otherwise

Deletion of file (now obsolete) from FTP

Otherwise (the identity already exists in the **`TmpPatient`** table)

The identity received is compared with the identity in the **`TmpPatient`** table to check whether updating is required

If there are differences

Updating of record in **`TmpPatient`**

Update flag set to 1 to show an update

Otherwise

Deletion of file (now obsolete) from FTP

Specific case: Retrieval of an identity from patient record software after an identity creation request in DIANE.

In this case, the processing algorithm is generally the same. However, updates are not notified if changes are required. Here, strong identification is guaranteed as the interface uses an internal DIANE identifier (Dnxxxxx) that has been transmitted then retrieved, and processing is automatic.

6.4.2 Merging identities

Objective: Replace target patient with source patient.

- **Unknown target patient**: patient does not yet exist in DIANE (Dia or HIS)
  - No action, “end” patient will necessarily be the source patient.

- **Target patient only known in HIS:** patient has not been transferred to DIANE
  - **Unknown source patient**
    - Impossible as the message that sends the merge includes all the source patient data, so this will be in the database at the time of the merge.
  - **Source patient only known in HIS:** patient has not been transferred to DIANE
    - Deletion of target patient in HIS, as correct identity in the DIANE database.
  - **Source patient known in DIANE** (and therefore also in the HIS)
    - Deletion of target patient in HIS, as correct identity in the DIANE database.

- **Target patient known in DIANE** (and therefore also in the HIS)
  - **Unknown source patient**
    - Impossible as the message that sends the merge includes all the source patient data, so this will be in the database at the time of the merge.
  - **Source patient only known in HIS:** patient has not been transferred to DIANE
    - Administrative information for the source patient merged with the DIANE record
    - Target patient deleted from HIS database.
  - **Source patient known in DIANE** (and therefore also in the HIS)
    - Merge the two DIANE patients (as with the merge tool)
    - Target patient deleted from HIS database.

6.4.3 Stays

A general rule applies:

If the stay is a pre-admission

Search for whether the pre-admission has been associated in the **Sejour** table

If yes

Assigning of the pre-admission identifier to the admission identifier

Search for whether the pre-admission has been associated in the **TmpSejour** table

If yes

Assigning of the pre-admission identifier to the admission identifier

Transformation of the pre-admission identifiers with the corresponding admission identifier

If the stay has not yet been retrieved in DIANE

If the stay does not exist in the **TmpSejour** table

If the message is not a stay deletion

Addition of a record in **TmpSejour**

Otherwise

Deletion of file (now obsolete) from FTP

Otherwise

If the message is not a stay deletion

Updating of record in **TmpSejour**

Otherwise

Deletion of stay in **TmpSejour**

Otherwise

If the stay does not exist in the **TmpSejour** table

Addition of a record in **TmpSejour**

And updating of record in DIANE

Otherwise

Updating of record in **TmpSejour**

And updating of record in DIANE

"Cleaning" of stays by the interface service takes place on the date of admission, not the update date given by the service.

Furthermore, stays that have not been closed, including those with a difference between the admission date and current date that exceeds the threshold, are not deleted.

7. Interface service maintenance

It is important to differentiate between the log files that reflect the activity of the interface service and the archive files that correspond to EAI messages.

For reasons of standardisation, it is important to ensure that the logs and archives are configured correctly.

7.1 Verifying log configuration

In both cases, avoiding an accumulation of files in terms of total size and number of files is recommended. For larger hospitals, the number of archive files can be several million after one year → **highly problematic for the Windows file manager.**

- Use ConfigInterf.exe to verify the location of the various LOG/Archives directories.
  - If not otherwise configured, logs will go to the DATA\NOM_MACHINE\LOG directory. The path can be changed via the "service configuration" menu.
  - Archive files are configured by input flow. Failed files, at the very least, must be kept.
- Verify that the **scheduled restart task** is working correctly by searching for "started" and "stopped".

The associated script (BATCH) must include:

  - The restarting of the Windows DIANE service
  - The deletion of archive and log files more than X days old. The value to be entered depends on the facility. As a default, enter 60 days.
- (Optional) In the main "Log configuration" menu, verify that all events are not logged. In particular those in red (specifically lab result flows), which are very long. If a hospital logs all events, this is because BOW Medical is monitoring the hospital for a specific reason. The first two points are therefore particularly important.

Commenté [CA1]: A confirmer - est-ce que j'ai bien compris ?

7.2 Detecting errors

- Open several log files (in addition to the latest one) and **check that the word "error" is not present.**

- In the message archive directory (one per flow), there must be no error messages. The archive file for an error message is prefixed with **FAILED_ProcessFailure_.**

If FAILED files are present, retrieve the files AND the log for the corresponding date (shown in the file name).

7.3 Verifying the service

Use Task Manager to check how much memory is being used by DiaInterfS.exe (between 5 and 25 MB).

During initial verifications in particular, ensure that accent characters are transferred correctly (by checking that they are saved correctly in the TMPPATIENT table, for example). If they are an issue, the interface service must be run in a user context with accent characters.

7.4 Saving the configuration

Retrieve the DiaInterf .ini file located in the service installation directory.

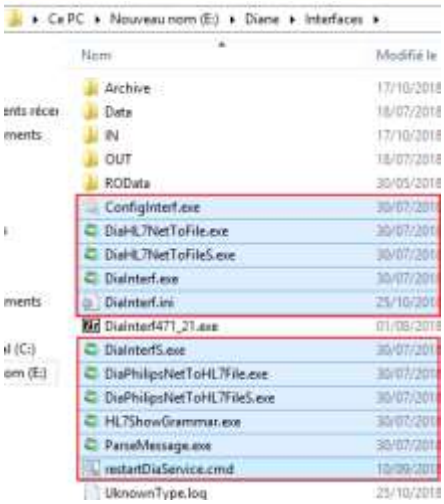
Note the date of retrieval in the file name.

This file will be copied to SVN, in the hospital directory (interface directory).

7.5 Updating the service

To update the service, carry out the following tasks:

- Download the DiaInterf***.exe file (where *** is the version required) from *www.bowmedical.com*, and place it in the service installation folder.
- Stop the interface service from the service manager.
- Copy the files in the service installation folder to a backup folder (“old”, for example) so that they can be retrieved if necessary (see screengrab below for the list of files to copy).



- Execute DiaInterf***.exe (password: **ladmin**).
- When asked if you would like to replace **restartDiaService.cmd**, respond **N** (no), as this file can have specific settings depending on the hospital, then respond **A** when asked if you want to replace the following file. This enables all the other files already present in the folder to be replaced.
- If the version before the service update is older than 4.6.21.10, a **RQData** folder must be created, and a copy of the **db.ini** file found in the DIANE installation directory, **RQData** sub-folder, must be added to it.
- Finally, restart the interface service from the service manager.

Once the update has been carried out, it may be useful to check the last information in the day's log to ensure that it is working correctly (i.e. date and time of last information in the log correspond with current date and time and, if this is the case, checking that files have been processed correctly).

8. Results in the database

Once interpreted, the interface service records results in a TMP (temporary) table corresponding to the flows.

Commenté [CA2]: 'Dans' manquant en fr

The following is a description of the TMP tables for the identity/movement flow for data verification.

Launch ExecSQL, which is usually found in the interface directory or in "/Diane/Tools", and log in to the database being used by selecting the type of database from the menu bar.

8.1 Temporary tables

8.1.1 TMPPATIENT

Launch "`select count(*) fromtmppatient`" (F5 key) to see the number of pending identities (usually between 10,000 and 150,000).

Select `"tmppatient"` and press the F7 key (equivalent to `"select * fromtmppatient"` + F5 key) to show the records. If there are many records, you can use Ctrl+W to interrupt the process while still having enough results.

Reminder: The update column contains the values:

- 0 = Administrative data already retrieved for the DIANE patient
- 1 = Administrative data modified for an existing DIANE patient
- -1 = Administrative data with no assignment to a DIANE patient.

Note patients (ideally test patients) for carrying out the tests given in the “DIANE Application” section.

Check that the information appears to be entered correctly (married name given, correct date of birth, etc.).

8.1.2 TMPSEJOUR

Launch `select count(*) fromtmpsejour` (F5 key) to see the number of pending hospital stays (normally 10 to 20x fewer than the number of identities, it is rare to have more than 5,000 stays).

Select "`tmpsejour`” and press the F7 key (equivalent to "`select * fromtmpsejour`" + F5 key) to show the records in order to verify admission and discharge dates. The service is set up to remove stays for which the admission date is earlier than 20 days prior (inferior to "now - 20"). However, this may vary from one hospital to another.

Ensure that stays have been closed correctly and that no more than half have no specified discharge date.

Open some received file archives (ArchiveMessages) and browse them using ParseMessage to see what has been interpreted (or consult someone who can read a HPRIM or HL7 message).

8.2 DIANE tables

Launch "`select count(*) from patient`" (F5 key) to see the number of patients already entered in DIANE.

Launch "`select * from patient`" (F5 key) to see the number of patients with a HIS identity (sort by UPI column to avoid 'empty' values).

Ensure that the information is entered correctly (e.g. first names in lower case with a UPI entered would be abnormal (UPI entered manually)).

Launch "`select count(*) fromsejour`" (F5 key) to see the number of hospital stays retrieved in DIANE (more than double the number of patients would be suspicious).

Launch "`select * fromsejour`" (F5 key) and ensure that the discharge date in particular is entered correctly.

9. Result for DIANE client

Check the facility's configuration for patient + movement flows:

See technical sheet: BM-INT-FT-00v01

For identity/movement flow verification, launch DIANE to ensure that everything is working correctly.

- Open some of the week's patients to ensure everything loads properly.
- Check that their stays have been updated.
- No multiple stays open at the same time (no discharge date given for several stays).
- No abnormal admission dates for operations (admission date six months prior to operation, for example).