

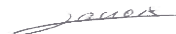
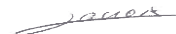

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Reference:
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SERVER REQUIREMENTS

Diane

DOCUMENT HISTORY

Version	Date of writing	Name of the editor	Nature of modification
01	07/03/2018	Kevin Lacroix	Documentation creation
02	19/02/2019	Kevin Lacroix	Addition of information on drug database
03	11/07/2019	Kevin Lacroix	Modification of graphic charter

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Kevin Lacroix Deployment Manager 	Kevin Lacroix Deployment Manager 	Daphné Deneux Head of Services 
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1. Minimum configuration

The configuration specified below applies to the latest version of DIANE (4.7).

The servers for both the database and the application must be taken into account.

The two servers can be installed on the same computer or separately on two computers according to your requirements. Isolating the database server obviously presents a considerable advantage.

Please refer to the DBMS guidelines for the requirements for the database server.

If the database and the interface/application elements are installed on the same server, please adjust the minimum configurations accordingly.

-Processor: Dual core 2 GHz, 3 MB cache minimum, 6 MB recommended.

-RAM: 4 GB minimum, 8 GB recommended.

-Hard disk space:

For the **interface server:** 40 GB minimum (20 GB for updates and 20 GB for interface files). Given the low cost of disk space and our moderate requirements, we recommend applying a comfortable margin to the minimum requirement.

For the **database server:**

Anaesthesia:

The space depends on the number of procedures you carry out. The volume of the database is calculated on the basis of approx. 300 KB per record (one DIANE Anaesthesia record = 1 consultation + 1 procedure + 1 recovery).

Decision on server size must take into account the actual data for the hospital but the following is an averaged basis for the calculation:

Example: a hospital with 10 operating theatres carries out approx. 10,000 surgeries per year:

$$10,000 \times 300 \text{ KB} = 3,000,000 \text{ KB} = 3 \text{ GB/year.}$$

ICU:

The space depends on the number of beds and the occupancy rate of your units. A full ICU patient record represents on average 4 MB per patient for 24 hours.

Decision on server size must take into account the actual data for the hospital but the following is an averaged basis for the calculation:

Example: A hospital with 10 ICU beds and an occupancy rate of 90%:

$$365 \times 10 \times 4 \text{ MB} \times 0.9 = 13.1 \text{ GB per year.}$$

Given the low cost of disk space and our moderate requirements, we recommend applying a comfortable margin to the minimum requirement.

We recommend keeping all data online indefinitely and thus ensuring that the disk space available is sufficient.

- **Network:** Ethernet connection 100 MB/s minimum, 1,000 MB/s recommended.

- **Screen resolution:** Minimum 1280x800 for the interface server, 1280x1024 recommended, no requirement for the database server.

- **Peripherals:** Tape or disk back-up system (recommended for database)

2. Software to be installed in advance

2.1 Database server

For all versions of DIANE.

- **Operating system:** Windows Server 2003 or later, Unix, Linux.

- **DBMS:** Oracle (Version 10G minimum, 32bit),

MySQL,

SQLServer 2005 or later with Fr date format (dmy).

Two databases for production and tests recommended.

Installation of **Oracle** client configured with the database server:

TNSName = DianePRD (production database),

TNSName = DianeREC (recipe database),

TNSName = DianeFOR (for the training database),

TNSName = DianePPRD (for the preproduction database).

2.2 Interface server

- **Operating system:** Windows server, 2003 or later.

For Windows 10 or later versions, the minimum DIANE version to be installed is 4.6.23.26.

From DIANE version 4.7.1.1, Windows XP or earlier is not supported.

Please see the release notes for further information.

- **Software:** Oracle SQL Developer, FTP server (for interfaces, e.g. Filezilla), Office Word (2000) or Open Office (≤ 4.1), Acrobat Reader 9.0 and all other readers required for files likely to be opened on the computer (pdf, Dicom, etc. depending on the hospital).

- If the database is an **Oracle** database, installation of **Oracle** client configured with the database server:

TNSName = DianePRD (production database),

TNSName = DianeREC (recipe database),

TNSName = DianeFOR (for the training database),

TNSName = DianePPRD (for the preproduction database).

The 32-bit Oracle client version 10G (minimum) must be installed.

If the Oracle client version is < 10.2 and the operating system (Windows) is 64 bit, it is not possible to install DIANE in C:\Program Files (x86) due to a constraint of Oracle clients < 10.2). In this specific case, DIANE must be installed in a directory that **does not contain** the characters “)” or “)”.

- If the database used is a MySQL database:

- If the version of DIANE is < 4.6.20.10, the MySQL ODBC client version 3.51 must be installed (this version specifically).
- If the version of DIANE is >= 4.6.20.10, no MySQL client needs installing.

- For DIANE versions < 4.6.20.10, installation and configuration of BDE (Borland Database Engine). For versions >= 4.6.20.10, BDE installation is not required as DIANE no longer uses this technology to connect to the database.

- Local copy of executable and help files (approx. 1 GB).

The last two elements are included in the MSI provided for the installation of the application and the application’s automatic update process.

The installation and configuration of the Oracle client remains the responsibility of the facility and requires administrator rights for the computer.

A domain user account with the relevant server rights should also be created before deployment.

2.2.1 Security

- **Antivirus:** Antivirus protection is the responsibility of the facility. No specific guidance is given. However, we do not recommend activating Word plugins that could significantly slow the mailing process (generation of template letters via DIANE).

Please note that with the Forefront Endpoint Kaspersky10 or MsMpEng antivirus programs or the addition of an automatically integrated firewall, each interaction with DIANE causes the antivirus to verify its communications and increase the CPU load, which slows DIANE. It is therefore not recommended. More generally, we recommend excluding DIANE from the list of programs to be analysed by your antivirus in order to avoid speed issues.

- **Windows Defender:** If this Windows tool is used, the folder containing DIANE executables must be excluded to avoid slowing the application.

- **Registry:** There must be write permissions in the registry for end users in order to enable DIANE updates. These permissions can be transmitted to the automatic update process if we are provided with an account with the necessary permissions in advance.

- Windows Firewall: In order to use DIANE remotely (DIANE ICU), remote administration must be authorised on all relevant computers (command: ***netsh firewall set service RemoteAdmin enable***).

In this context, and if the Windows firewall is activated, all DIANE executables must be added to the exceptions (command: ***netsh firewall add allowedprogram program=C:\Program Files\Diane\Visual.exe name=VISUAL***) on the computers in addition to opening port 135 (command: ***netsh firewall add portopening protocol=tcp port=135 name=DCOM_TCP135***).

This is carried out automatically by the automatic DIANE update.

- Authorise internet access or provide a solution for simplified remote control for maintenance operations.

- Office Word: During installation, “Visual Basic for Applications” must be selected from the shared modules/features. If Word is already installed, you must go to Control Panel/Programs/Microsoft Office/Change/Add or remove features then select Visual Basic in the shared features.

- Office Word Version 2010 or later: the option “Open e-mail attachments and other uneditable files in reading view” under Files/Options/General must not be selected.

- PDF Creator: We provide the PDF Creator installer on the DIANE interface server. The version supplied is 1.0.1. Automatic software updates must be disabled after installation.

- Readability Select the option “Small - 100% (default)” for the text size (Configuration panel - Display) so that the application is readable.

- Drug database: If the Vidal or BCB drug databases are used, please refer to the minimum version required as stated in the release notes.