Extend Orthanc with PostgreDB

Quick User Guide

http://www.orthanc-server.com/

http://petctviewer.org/

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I- Why extend Orthanc with PostgreDB ?

By default Orthanc stores the incoming data in your hard disk using conventional file storing.

Due to DICOM architecture, this induces a high usage of the hard disk and lower performances if you store a high amount of DICOM.

As recommended by Orthanc, if you need to store more than 50 000 dicom files (1 PET/CT study usually need 1 000 dicom files), it is recommended to upgrade your Orthanc server with a database system (Postegre database).

The upgrade is free and should be performed in a limited time with this step by step guide.

Once upgraded you will increase the speed of the access to your dicom images and remove all limitations in storage capabilities (your hard disk space will be the only limit).

To upgrade the 2 main steps are:

- Install the free and open source Postgre database
- Configure Orthanc settings to use Postgre database for storage

II- Install PostgreDB

The first step is to install the Postgre database for your OS.

The postgre database is a third party application; it is free and open source.

Download and install Postgre for your OS from this page: https://www.postgresql.org/download/

For windows users the direct link is: https://www.enterprisedb.com/downloads/postgres-postgresql-downloads#windows

Once installed the Postgre software should appear in your application list (start menu for windows).

During the install, You should be invited to choose a password, remember your choice, also keep in mind the database user and the port set during the installation.

III- Configure Orthanc with PostgreDB

Warning: After this step you will start with an new and empty database.
If you were using Orthanc in the default mode and you want to keep your stored data you have to export your dicom before this step (and reimport dicom once finished the setup with PostgreDB).

a. Declare postgre connection

You need to know you database name, username and password (the default db name and username should be postgres and the default port 5432 ; you set the password during the installation of postgreDB).

In widows to check these parameters go to Start => programmes => PostgreSQL =>pgAdmin => connect to your server in the interface and right click=>"Properties"

Go to your configuration path of Orthanc (C:\Program Files\Orthanc Server\Configuration for Windows) and edit the posgresql.json file as follow:

```
"PostgreSQL" : {
    // Enable the use of PostgreSQL to store the Orthanc index?
    "EnableIndex" : true,

    // Enable the use of PostgreSQL to store the DICOM files?
    "EnableStorage" : false,

    // Option 1: Specify explicit authentication parameters
    "Host" : "localhost",
    "Port" : 5432,
    "Database" : "postgres",
    "Username" : "postgres",
    "Password" : "my_password",

    // Option 2: Authenticate using PostgreSQL connection URI
    // "ConnectionUri" : "postgresql://orthanc_user:my_password@localhost:5432/orthanc_db",

    // Optional: Disable the locking of the PostgreSQL database
    "Lock" : false
}
```

Once done, reboot your computer and Orthanc should be now using PostgreDB.