

Database for the clinical validation of INSIDE

Status update

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Meeting INSIDE

Lilly Luongo / Giancarlo Sportelli



Schedule as planned in the last meeting

- End of December: setup of the server machine at CNAO
- End of December: implementation of the trouble ticketing system
- Mid-January: testing of PostgreSQL server configuration and DB synchronization
- End of January: implementation of the production version of the authentication and authorization system
- End of February: first prototype of the custom UI

Current status

- Setup of the server machine at INFN-PI (→ almost done)
- Setup of the server machine at CNAO (→ almost done)
- Implementation of the trouble ticketing system (→done)
- Testing of the PostgreSQL server configurations and DB synchronization (→ work in progress)
- Implementation of the production version of the authentication and authorization system (→ work in progress)
- First prototype of the custom UI (→ work in progress)

Development status

- INSIDE-DB front end
- Application and file serving
- Data insertion
 - Administrator UI
- INSIDE-DB back end
 - Server machine at INFN-PI
 - Server machine at CNAO
 - DB engine

INSIDE-DB front end

- The front end has been designed to run two instances of the Django web framework, one at CNAO and the other one at INFN
- CNAO Django application will anonymize all the DICOM attributes that access to the most sensitive personal data while uploading each DICOM file
- Both Django instances will use the same DB located at INFN-PI

Application and file serving

- User ready prototype for data insertion testing with local-only access
- Insertion testing at CNAO with Elisa
 - <https://insidedb.pi.infn.it/admin> public url
 - Administrator UI
 - New functionalities
 - New organization of uploaded files
- Rearrangement of the Django models

Administrator UI

INSIDE DB administration

Site administration

AUTHENTICATION AND AUTHORIZATION

Groups [+ Add](#) [Change](#)

Users [+ Add](#) [Change](#)

DICOMS

Dicoms [+ Add](#) [Change](#)

INSTRUMENTATION

Acquired binaries [+ Add](#) [Change](#)

Acquisition logs [+ Add](#) [Change](#)

Calibration files [+ Add](#) [Change](#)

Treatment reports [+ Add](#) [Change](#)

TARGETS

Patients [+ Add](#) [Change](#)

Phantoms [+ Add](#) [Change](#)

TPS [+ Add](#) [Change](#)

Targets [+ Add](#) [Change](#)

TREATMENTS

Analyses [+ Add](#) [Change](#)

Simulations [+ Add](#) [Change](#)

Treatments [+ Add](#) [Change](#)

Recent actions

My actions

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[+ tps2](#)
TPS

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

[Patient pz1](#)
Patient

Administrator UI

INSIDE DB administration

WELCOME, ADMIN2.

Home > Targets > Patients > Patient pz1


Change patient

Short description:


Patient ID:

Patient reference:





Patient host:

Tps:  





media/dicom/<paziente>/<tps>

DICOMS 

Dicom: paziente prova-F-tps2-F-dicom/Patient pz1/tps2/dicomfile-to-anonymize.zip

Date exam: Date:  Source: Source ref:
Time:  Upload: Tps:  
Change: No file selected.

Dicom: paziente prova-F-tps2-F-dicom/Patient pz1/tps2/dicom.zip

Date exam: Date:  Source: Source ref:
Time:  Upload: Tps:  
Change: No file selected.

Server machine at INFN-PI

- Server: insidedb.pi.infn.it
- Operating system: CentOS 7
- HTTP server: Apache
- Web protocol: SSL
 - In addition, we automatically redirect HTTP requests to HTTPS
 - The connections are encrypted using INFN certificates signed by a trusted certificate authority
- Web framework for the front end application:
Django 2.2
- Web server interface: WSGI
 - It is a specification that describes how a web server communicates with web applications

Server machine at CNAO

- Virtual machine: VMware
- Number of processors: 2
- RAM size: 8 GB
- HD size: 100 GB
- Web framework for the front end application:
Django 2.2
- INFN IT staff will setup the VM and the CNAO IT staff will import the VM in the CNAO computing infrastructure
- CNAO IT staff will configure the firewall

DB engine

- DB engine: PostgreSQL
- The DB engine will run one instance on the server machine at INFN-PI
- Django framework installed on the CNAO server will connect to the DB at INFN-PI

Schedule for the next two weeks

- Setup of the server machine at CNAO (depending on support from CNAO IT staff)
- Setup of the server machine at INFN-PI
- DB synchronization (depending on support from INFN IT staff)
- Testing
- Data insertion