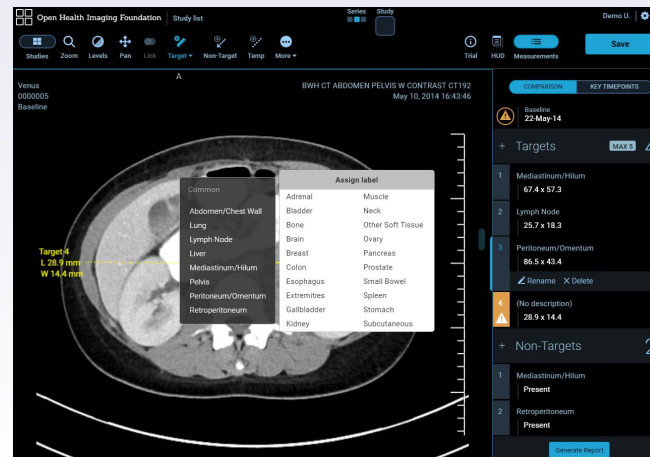


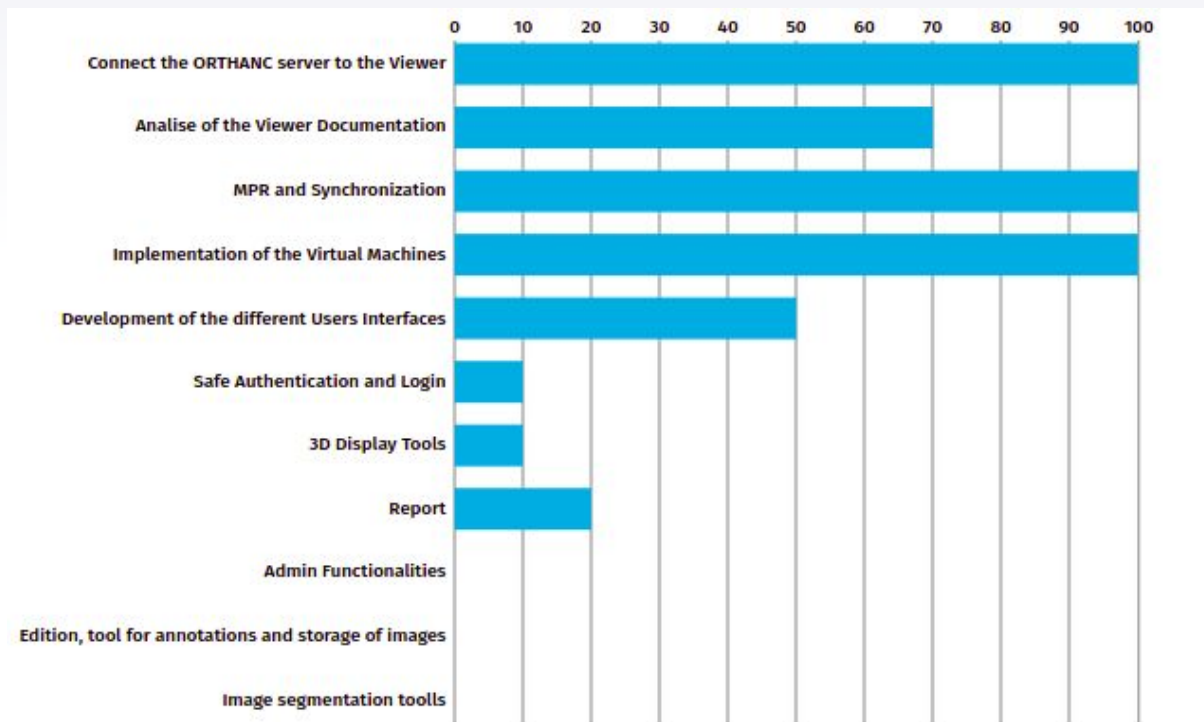
# MI4WEB

## Construction phase

Projeto em Informática - Group 7  
LEI / Universidade de Aveiro  
2021/2022



# Tasks



# ► Analyze OHIF documentation

- Download OHIF Viewer;
- Study Configuration Files, Environment Variables;
- Architecture: how the Viewer is architected;
- Extensions.



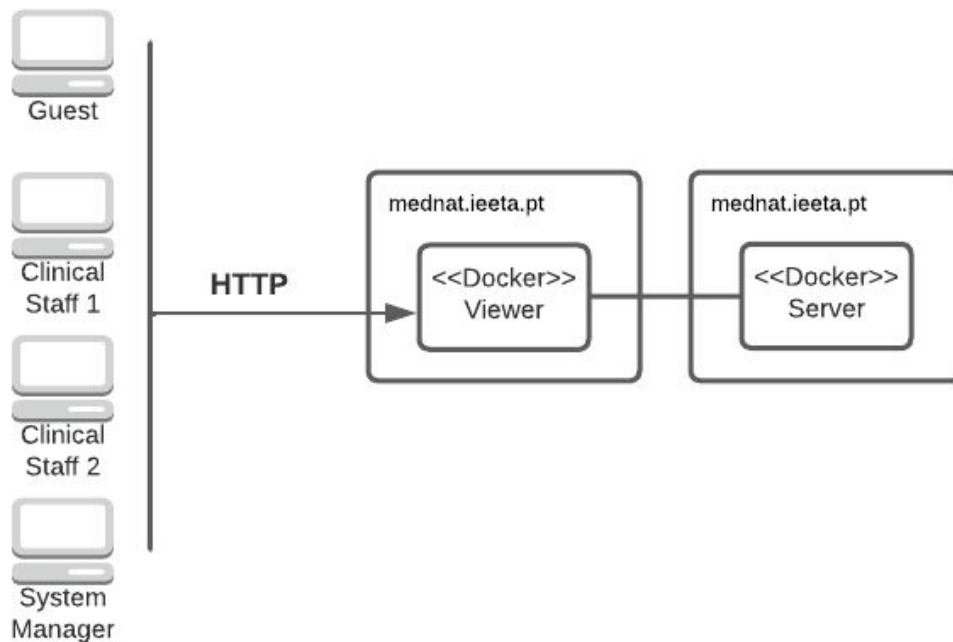
# Connection between Services



- ▶ For the viewer to have *DICOM* images we first start by connecting the *ORTHANC* server to the viewer locally in our computers using a docker-compose file.
- ▶ The next step was to use Virtual Machines, so that you can upload DICOM images by the server to the viewer through the Web.



# Deploy Diagram



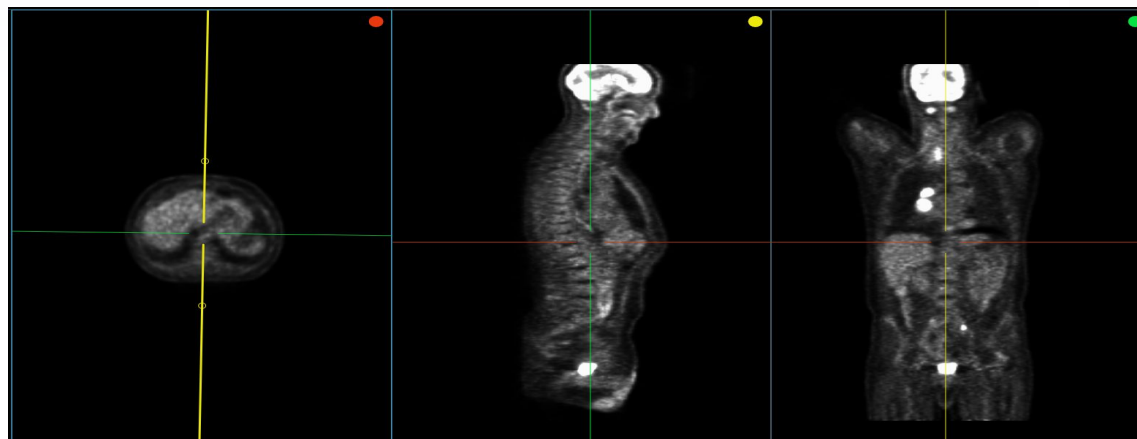
# ▶ MPR

- ▶ MPR(Multiplanar reformation) involves the process of converting data from an imaging modality acquired in a certain plane.
- ▶ It may be achieved with scanning in any plane and whatever modality capable of cross-sectional imaging, such as:
  - ▶ CR
  - ▶ CT
  - ▶ MR
  - ▶ US



# Synchronization

Multiplanar Synchronization is a primary 3D navigation tool in Picture Archiving and Communications System (PACS) viewers.



Axial View

Sagittal View

Coronal View

# Intensity Projection: to be announced

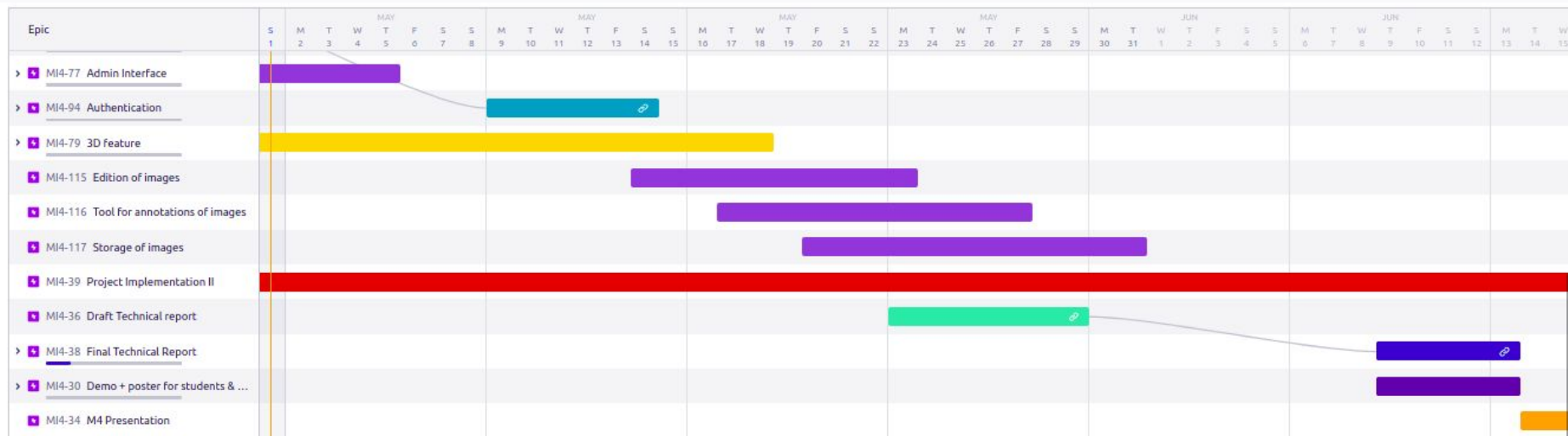
- ▶ MinIp(Minimum Intensity Projection) is a data visualization method that enables detection of low-density structures in a given volume, which is useful to analyze the bile tree and pancreatic duct, because they are hypodense compared to surrounding tissue.
- ▶ MIP(Maximum Intensity Projection) is a method that allows to find all hyperdense structures in a certain volume, usually used to better the identification of pulmonary nodules and evaluate their abundance.



Adaptado de: <https://pubs.rsna.org/doi/10.1148/rg.263055186>

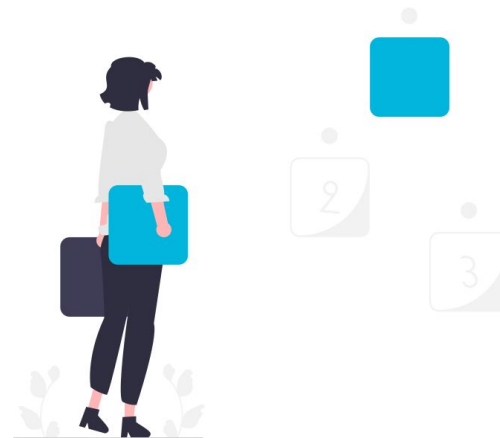


# Calendar



# ► Risks and Fears

- ▶ Lack of time;
- ▶ Have difficulties working on the viewer;
- ▶ Have difficulties working with the VTK.js and Cornerstone.js.



# ► So far...

- ▶ **Minimal proof of concept full web based medical image network .**
- ▶ **Services access from the internet.**
- ▶ **MPR and Synchronization.**



# Prototype

# THANKS!

## Any questions?

