

Integrating EGI Check-in the Virtual Imaging Platform

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 **Inserm**



International e-infrastructure set up to provide advanced computing and data analytics services for research and innovation



Vision

Give access to **services, resources** and **expertise** to collaborate and conduct world-class research and innovation

Missions

1. Deliver open solutions for advanced computing and data analytics in research and innovation
2. Connects service providers beyond Europe following the collaboration needs of the served communities

EGI-ACE Project Overview

EGI Advanced Computing for EOSC

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EGI-ACE is a 30 –month project coordinated by the EGI Foundation

The European Open Science Cloud (EOSC) is an environment for hosting and processing research data to support EU science



Missions

1. Empower researchers from all disciplines to collaborate in data- and compute-intensive research through free services
2. Contribute to the EOSC Data Commons through a federation of cloud compute and storage facilities with analytics tools and federated access services

The Virtual Imaging Platform (VIP)



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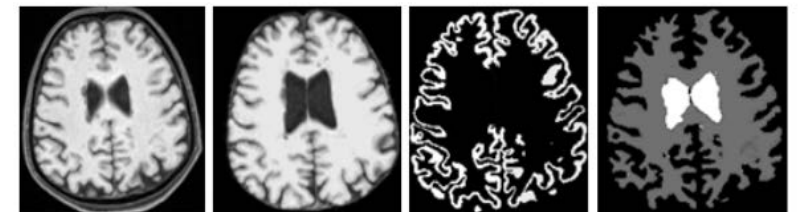
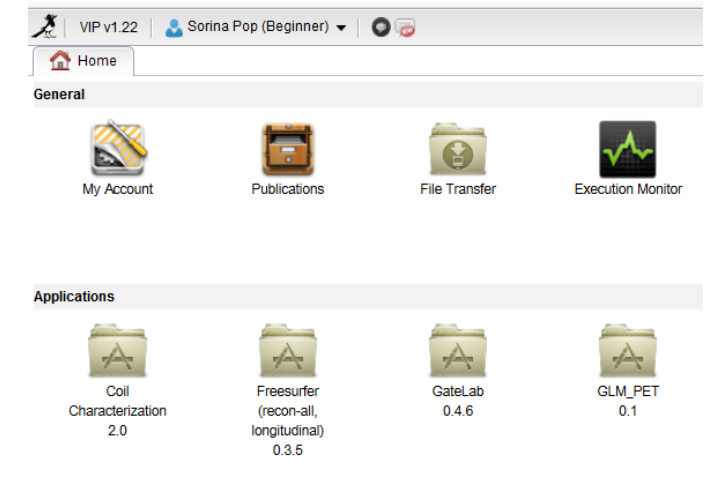
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Web portal for medical simulation and image data analysis:

<https://vip.creatis.insa-lyon.fr>

- Leverages resources available in the EGI biomed Virtual Organisation
- Offers an open service to academic researchers worldwide
 - More than 1300 registered users
 - More than 20 applications available as a service



Example of white/grey matter brain segmentation with [Freesurfer](#) on VIP
Credits : Bernardino Barile and Dominique Sappey-Mariniere, Creatis

Application available on VIP



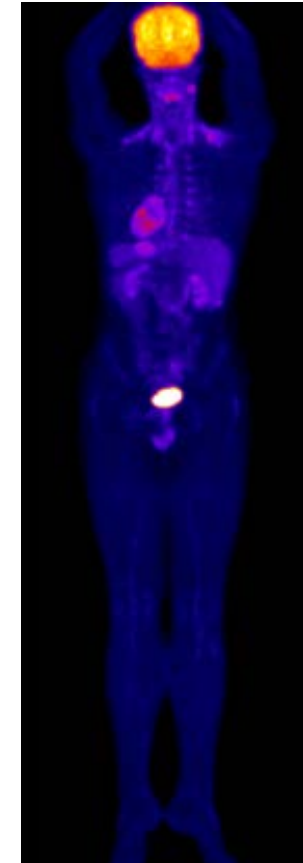
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- **Internationally used and renowned**
 - **GATE**: numerical simulations in medical imaging and radiotherapy
 - **Freesurfer**: open source neuroimaging toolkit for processing, analyzing, and visualizing human brain MR images
 - **FSL**: library of analysis tools for FMRI, MRI and DTI brain imaging data
- **“Home-made”**
 - **MRI Coil Characterization**: comparison of RF coils on MRI systems

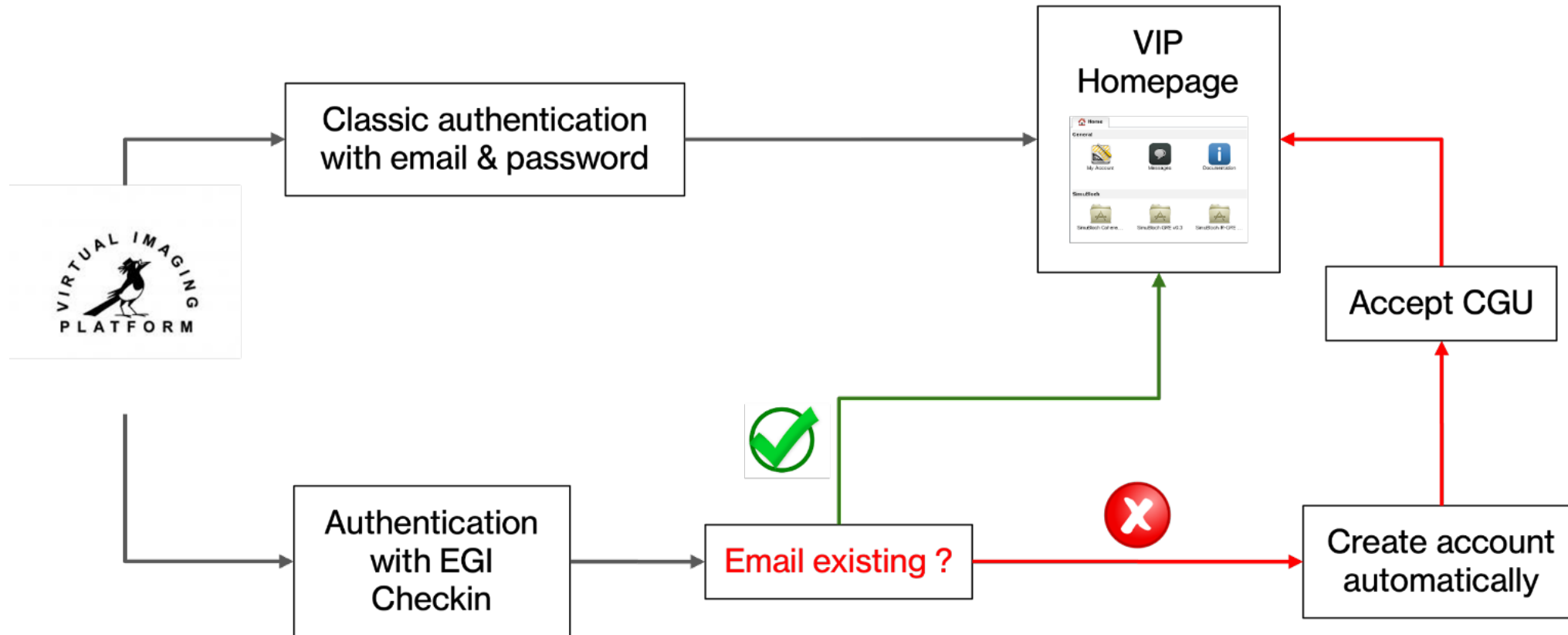
And many others!



3D whole-body F18-FDG PET scan simulated with GATE (4,000 CPU hours). Credits: IMNC-IN2P3.

- **Introduction** ✓
 - EGI Federation ✓
 - EGI ACE project ✓
 - The Virtual Imaging Platform ✓
- **Implementation of new authentication service**
 - EGI Check-in
 - Federated identity
 - Protocols used
- **Demo Check-in/VIP**
 - Connection with EGI Check-in
 - EGI Check-in central hub
 - EGI Consent page
 - Landing Home page VIP

Authentication on the Virtual Imaging Platform



Goal: Having another way to authenticate on VIP

EGI check-in: Login with your own credentials

Proxy service that operates as a central hub to connect federated **Identity Providers** with EGI **Service Providers**



Main characteristics:

- Enables multiple federated authentication sources using different technologies
- Increased productivity and security
- Federated in eduGAIN as a service provider
- User registration portal to allow accounts-linking

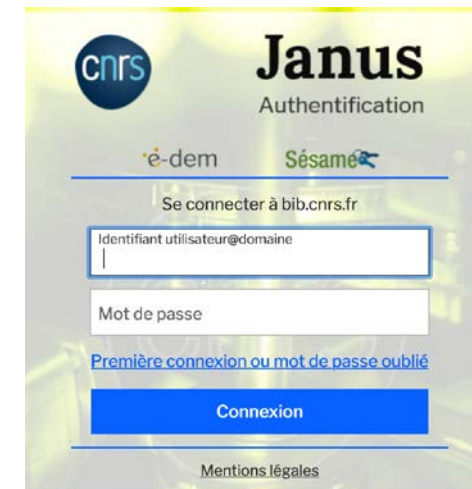
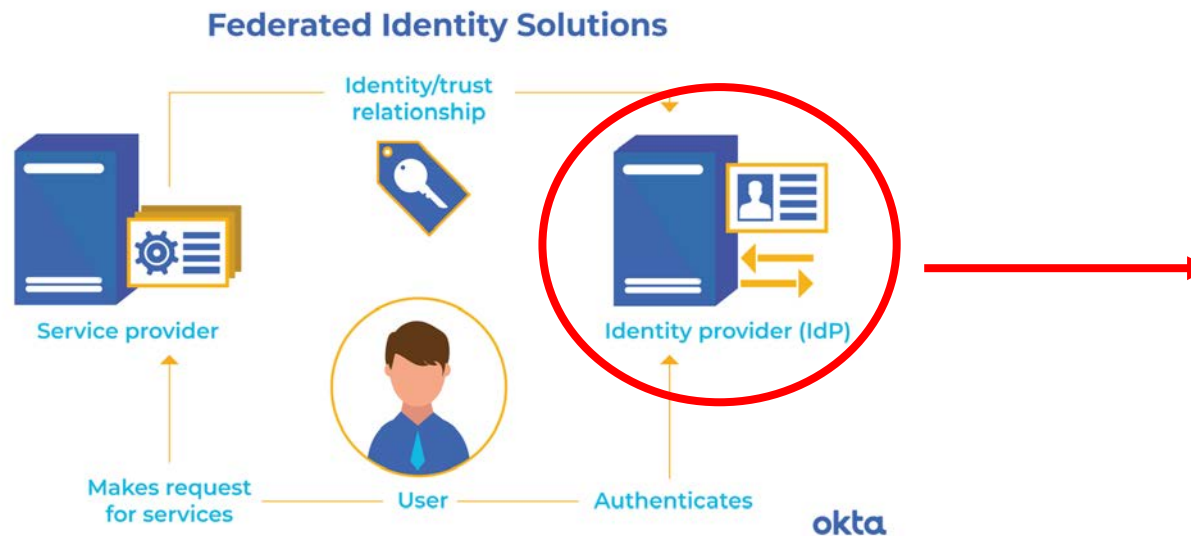
SSO & Federated Identity

Single Sign On (SSO)

- Identity Solution
- Same authentication session
- Multiple applications

Federated Identity

- Agreement between entities
- Specific attributes
- Multiple authentication session
- Multiple applications



Description of the trustful relationship between Service provider and identity provider

Federated Authentication Protocols

- **OAuth2:**
 - **Delegation of authorization** protocol
 - Allows a website, software or application to use the secure API of another website on behalf of a user
- **OpenID Connect (OIDC):**
 - **authentication** protocol
 - Layer on top the OAuth 2.0 protocol
 - JSON Web Token (JWT)



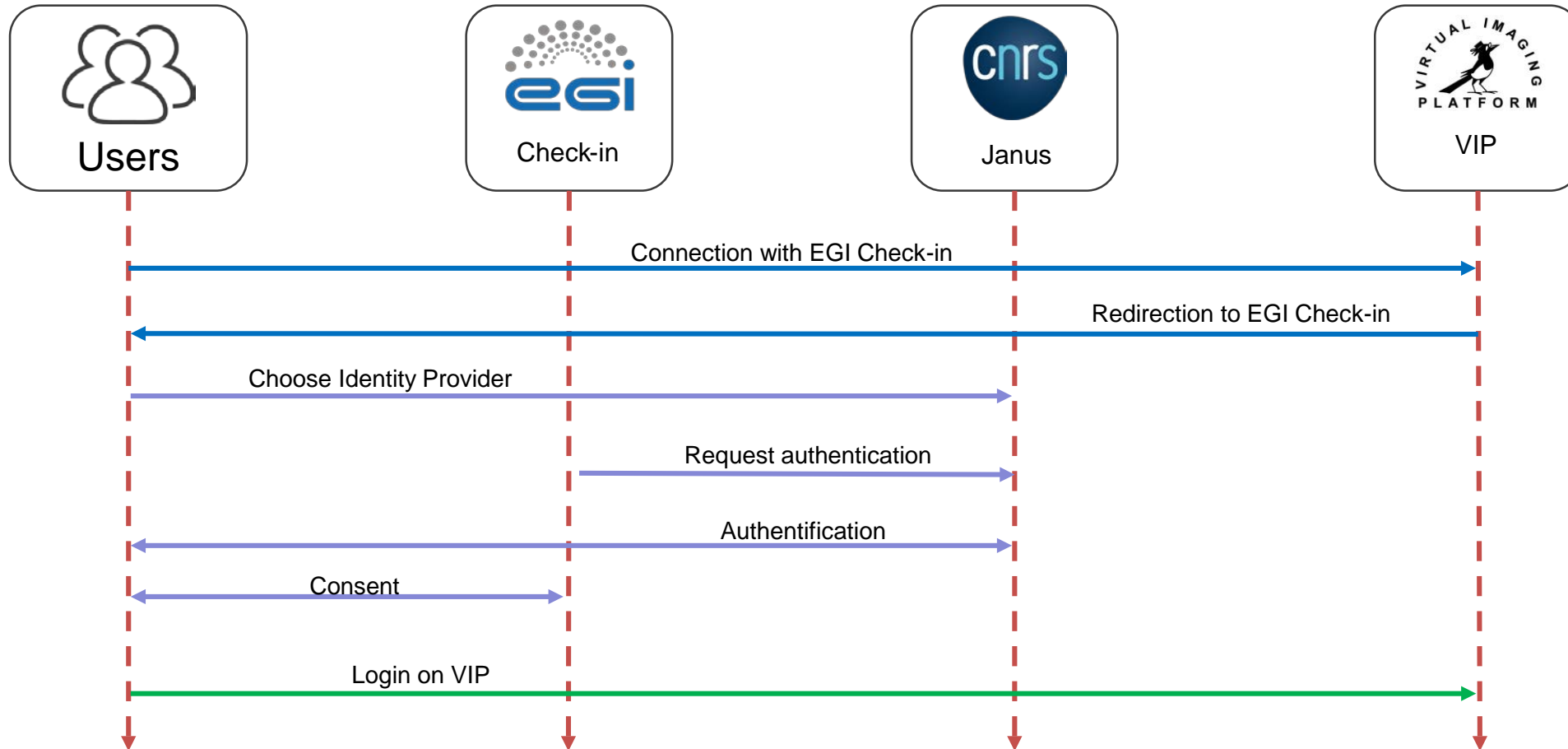


DEMO

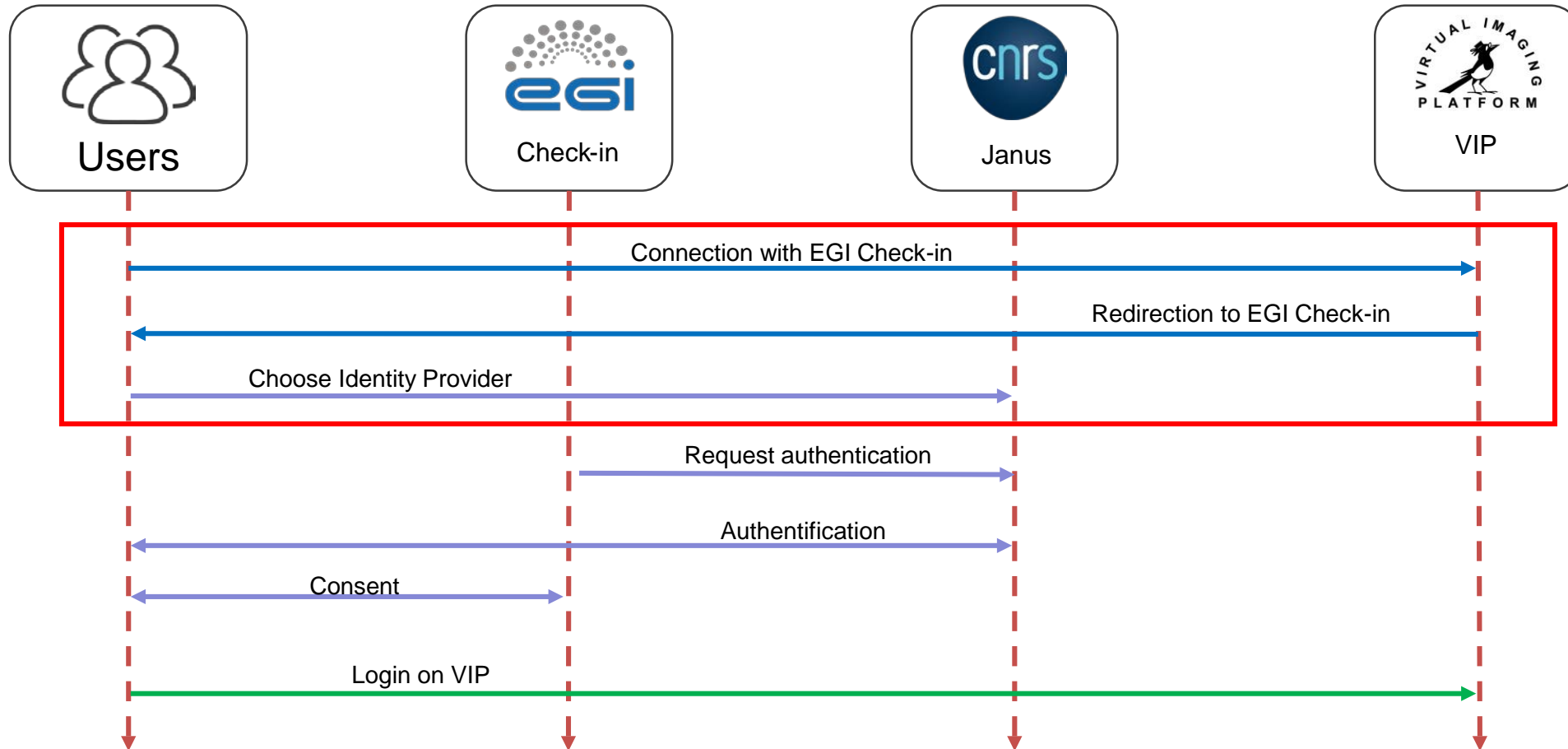
- Web portal for medical simulation and image data analysis
- <https://vip.creatis.insa-lyon.fr>



General Flow of the EGI check-in/VIP



General Flow of the EGI check-in/VIP



“Connection with EGI check-in” on VIP



Virtual Imaging Platform

Email

Password

Keep me logged in

[Sign in](#)

[Connection with EGI Check-in.](#)

[Create an account.](#)

[Forgot your password?](#)



Check-in

Choose your academic/social account

Search...

- CNRS - Personnels des unités
- 29 Mayis University
- ASHARQIYAH UNIVERSITY
- A*STAR - Agency for Science, Technology and Research
- A. T. Still University
- AAF Virtual Home
- aai.lab.maeen.sa
- AAI@EduHr Single Sign-On Service

or

Can't find your identity provider?

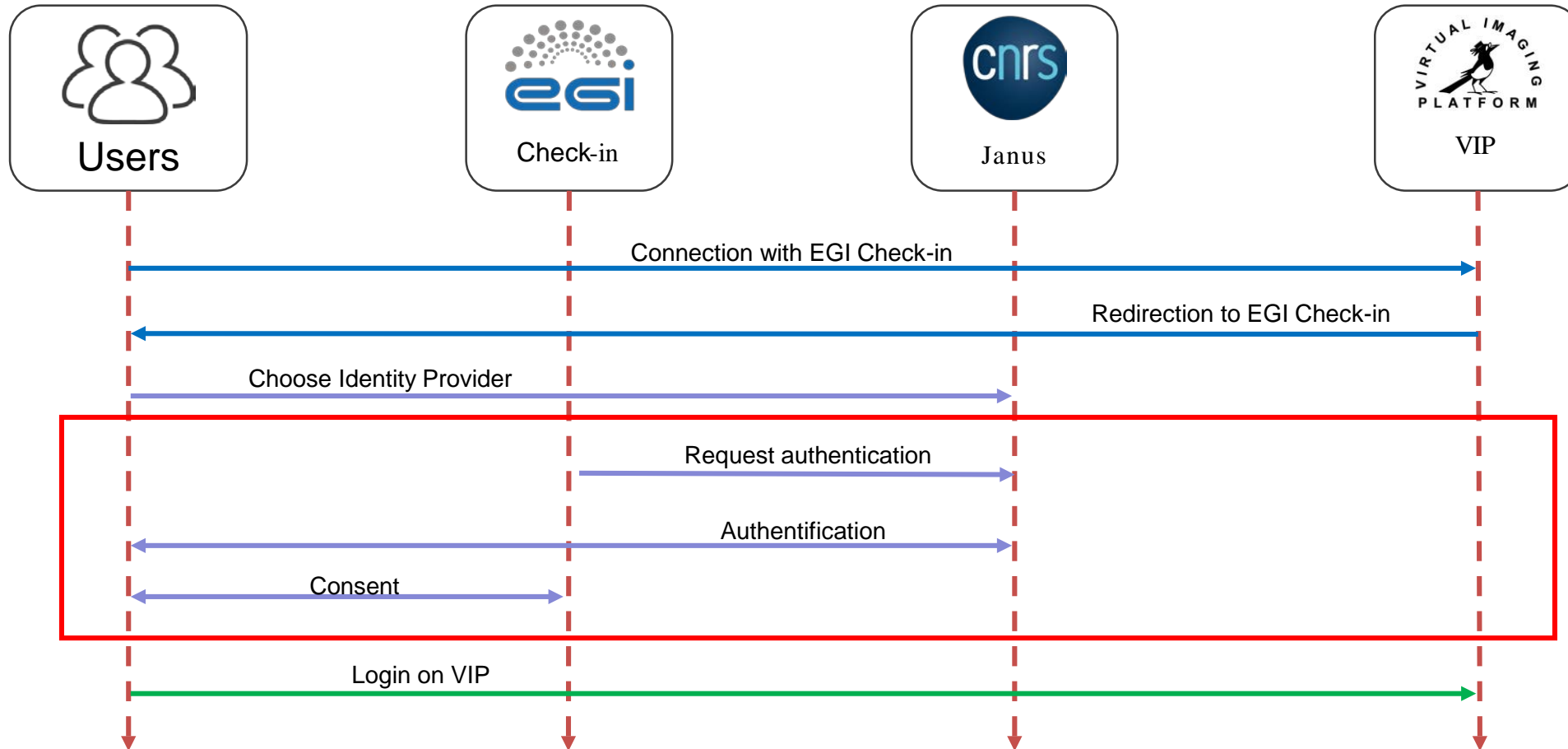
Français



[Terms](#) [Privacy](#)

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General Flow of the EGI check-in/VIP



EGI check-in Consent



Check-in

Approval Required for Service "Virtual Imaging Platform (VIP)". Please read the [Privacy Policy](#)

Implementation check-in in Virtual Imaging Platform (VIP)

▼ more information

- **Home page:** <https://vip.creatis.insa-lyon.fr/>
- **Acceptable Use Policy:** <https://vip.creatis.insa-lyon.fr/documentation/terms.html>
- **Contacts:** alexandre.cornier@creatis.insa-lyon.fr, axel.bonnet@creatis.insa-lyon.fr, vip-support@creatis.insa-lyon.fr

You will be redirected to the following page if you click Authorise:

<https://vip.creatis.insa-lyon.fr/login/oauth2/code/egi>

This service would like to:

- 👤 read your user identifier
- 📄 read your basic profile info
- ✉ read your email address
- 👤 read your community user identifier

Select the approval duration:

- prompt me again next time
- remember this decision for one hour
- remember this decision until I revoke it

This setting can be revoked in [Manage Approved Services](#) page.

Do you authorise "Virtual Imaging Platform (VIP)"?

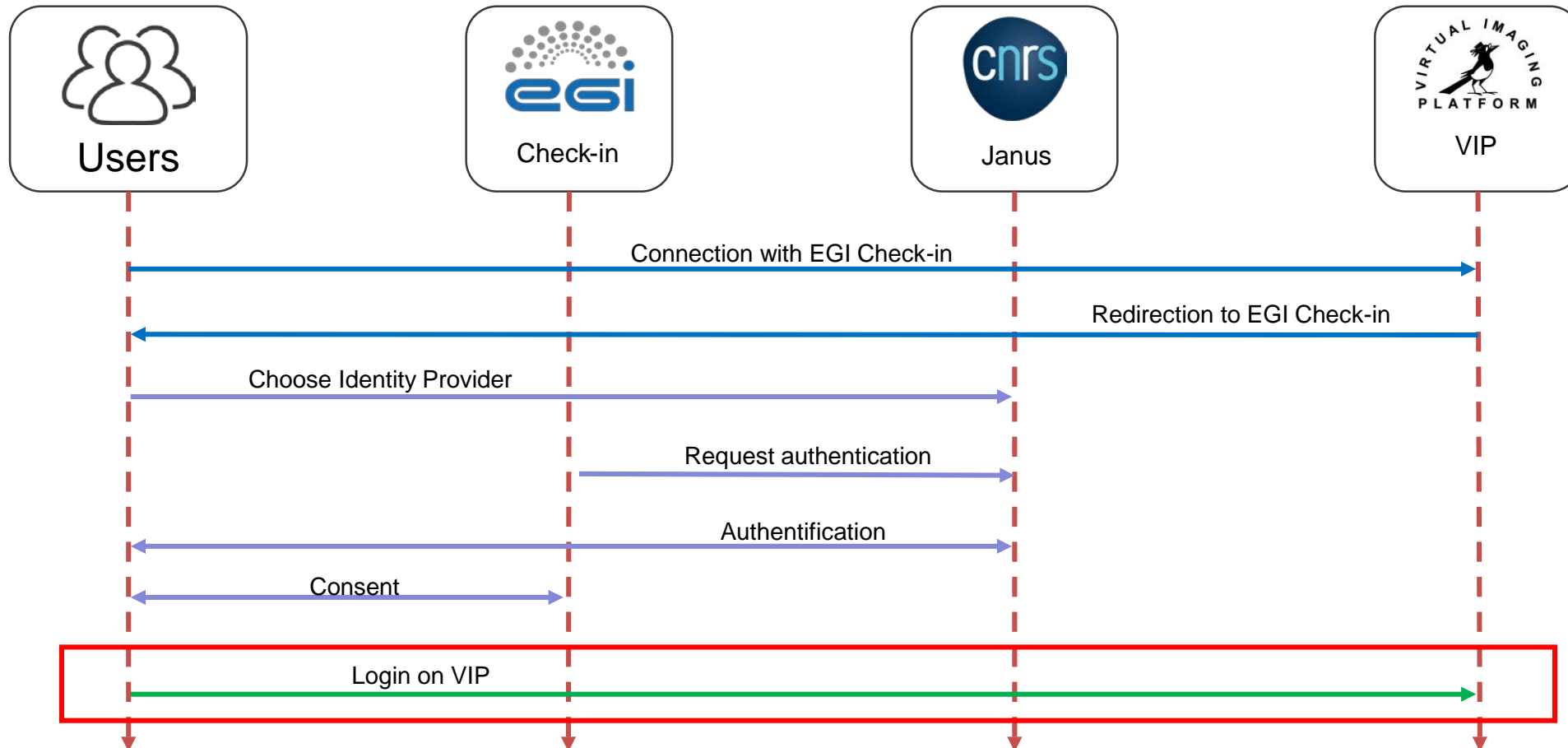
AUTHORISE

DENY



European reference text on
personal data protection for EU
residents, since may 25, 2018

General Flow of the EGI check-in/VIP



Access VIP home page after authentication



Home My Account x

Account Information

Level: Beginner

First Name: alexandre

Last Name: cornier_1647353842898

Institution:

Phone:

Country:

Groups

You are not a member of any group. The following public groups will grant you access to applications. Please choose a group to be able to access the home tab directly at your next login.

Autodock	Join Group
Cardiac	Join Group
cermep	Join Group
CreaPhase	Join Group
Diffusion-Perfusion	Join Group
Ecole PRIMES	Join Group
GateLab	Join Group

Note: modifications will only take effect once you reload the portal.

Email

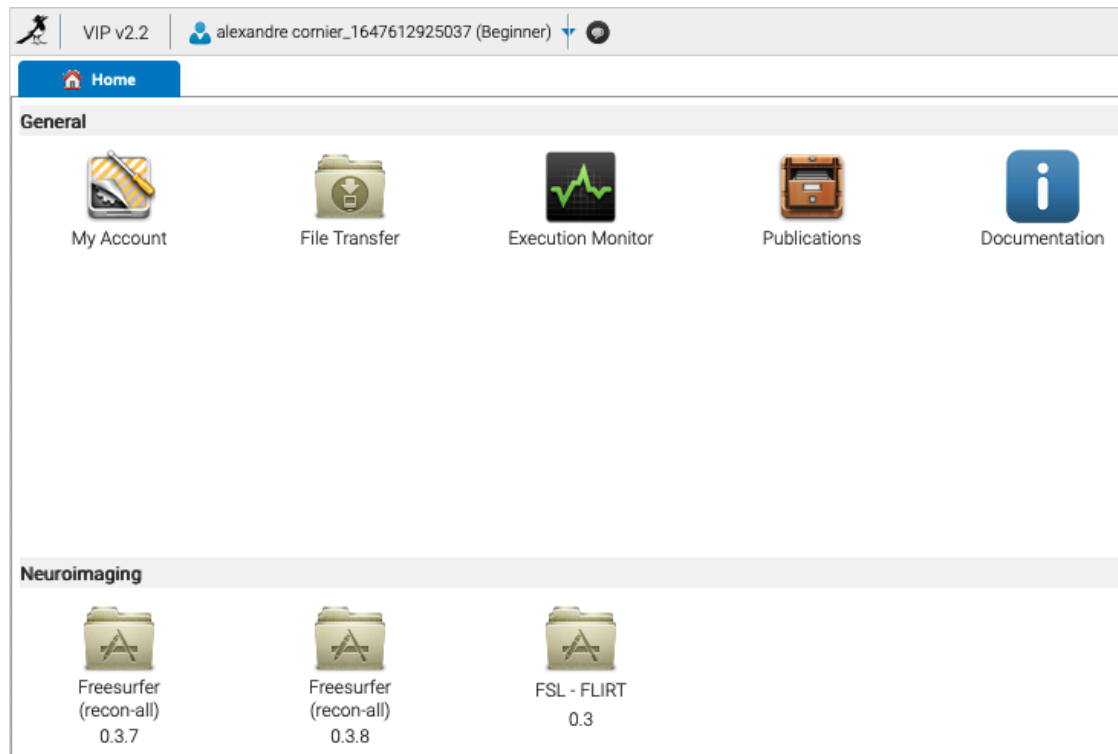
alexandre.cornier@creatis.insa-lyon.fr

New email:

Warning:

- Complete your profile
- Choose the group to access to the application
- To get a password, please used the “Forgot Password ?” button

Access VIP home page after authentication



EGI Webinar: The Virtual Imaging Platform: Scientific Applications as a Service and Beyond

On March, 23rd 2022



Advantages of using EGI Check-in in the Virtual Imaging Platform

- **Provides Safe & Secure** login connection
- Allows users to authenticate themselves in a **simpler, faster way**
 - **Direct access** to the platform
 - **Large choice** of identity providers

Implementation of the service (for developers)

- Clear and useful documentation
- Challenges
 - In-depth understanding of **security** and **authentication** issues
 - **Possible conflicts** with the main code of each platform

Conclusion

**Thanks for your attention & I'll be happy to take
your questions!**