



VIP : in a quest for interoperability



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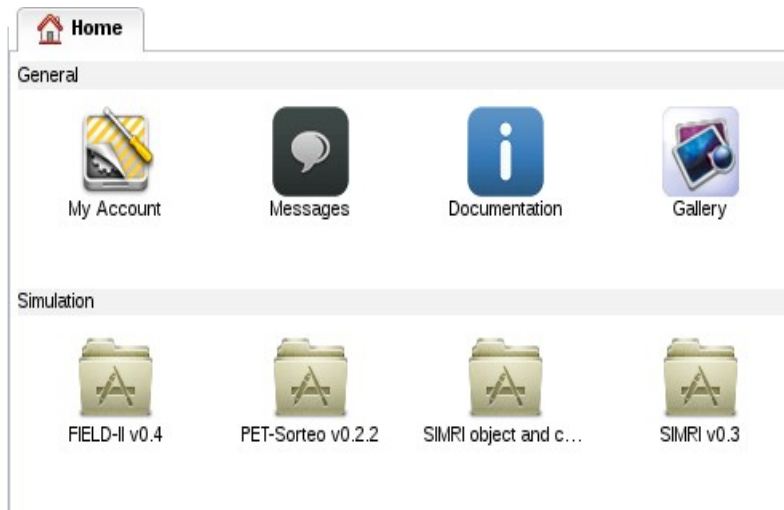
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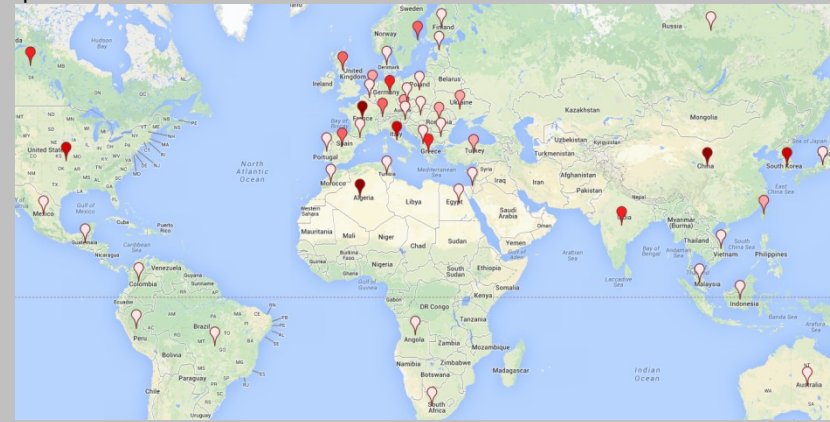
Outline

- What's VIP ?
- FLI-IAM, CARMIN
- The REST API
- Cloud usage in VIP

What's VIP ?

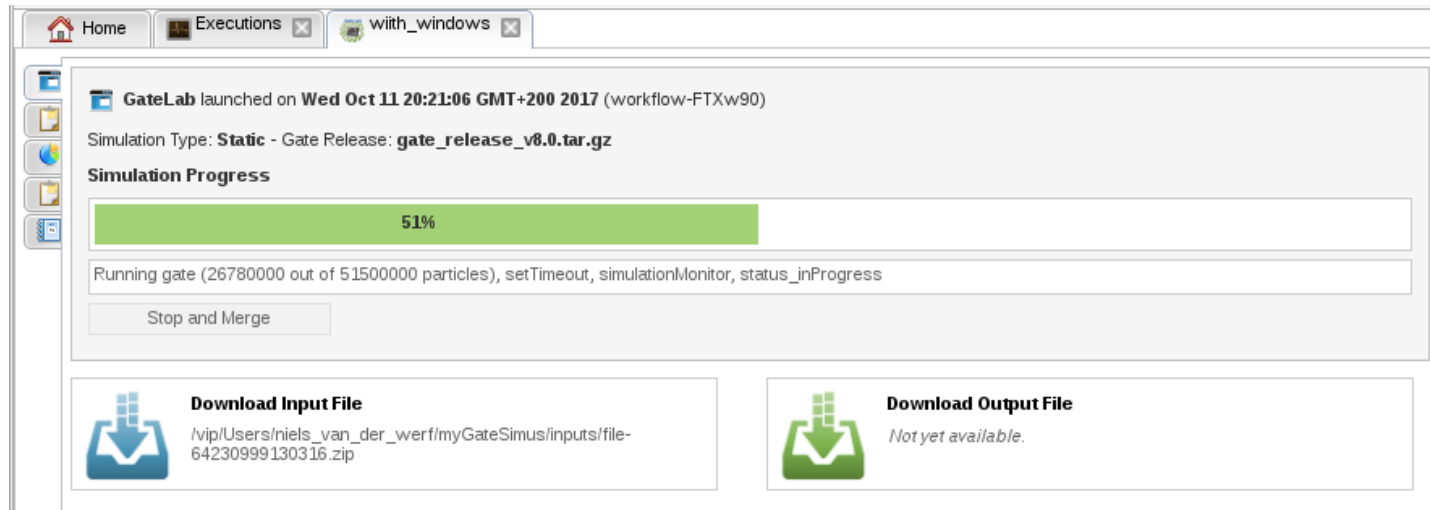


1000+ registered users in October 2017
Most used robot certificate in EGI in 2012(<http://go.egi.eu/wiki.robot.users>)
40 publications since 2011



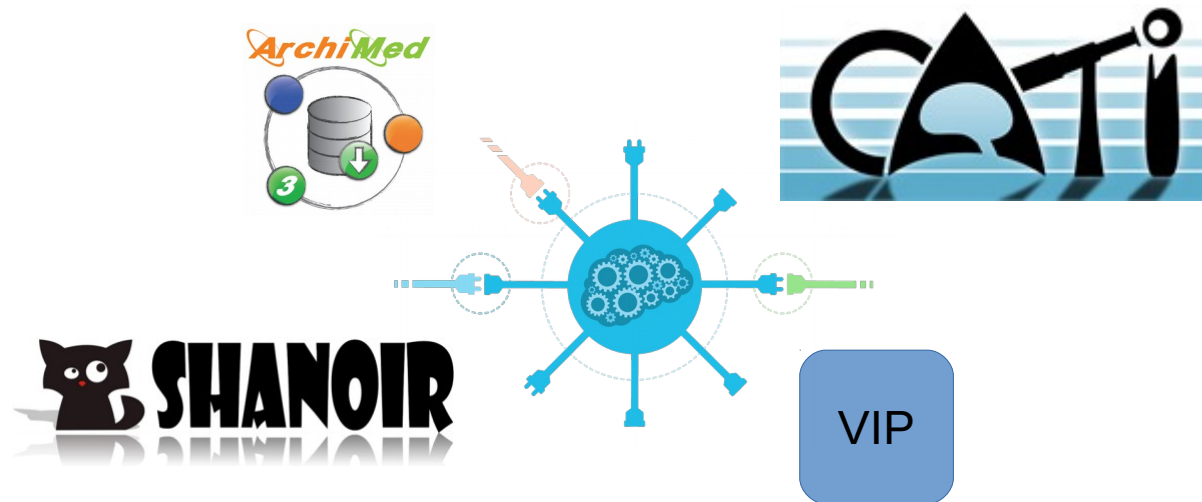
- Virtual Imaging Platform
- Scientific gateway for bio-medical research
- Medical simulation and image analysis applications
- Quasi-exclusive use of the EGI e-infrastructure through Dirac

VIP portal's features



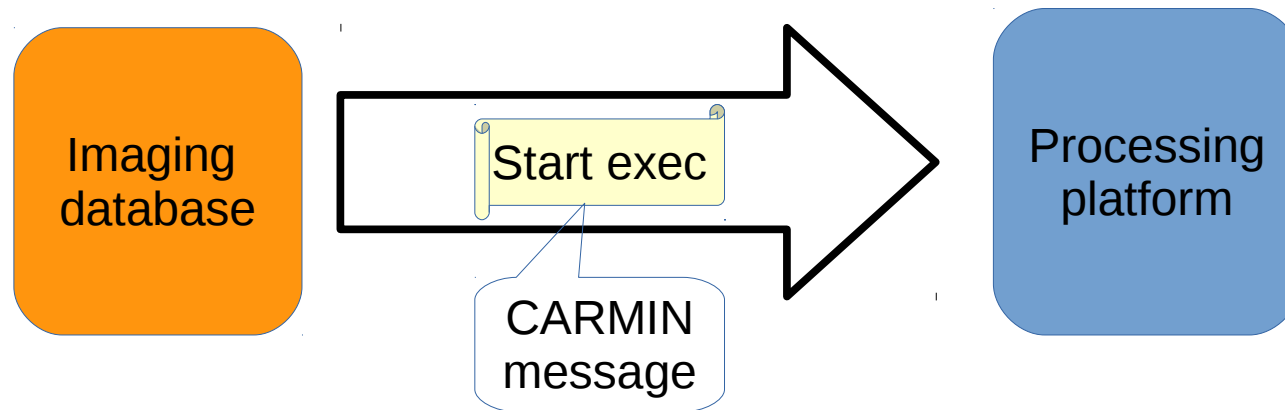
- <https://vip.creatis.insa-lyon.fr/>
- Application execution life-cycle
 - Input upload > launch > monitoring > results download
- Storage
- Support

VIP is a part of FLI-IAM



- France Live Imaging
 - Information Analysis and Management node
- Group
 - Image Databases
 - Processing platforms
- Goal : a platform of platforms
- Small demo video

What's CARMIN ?



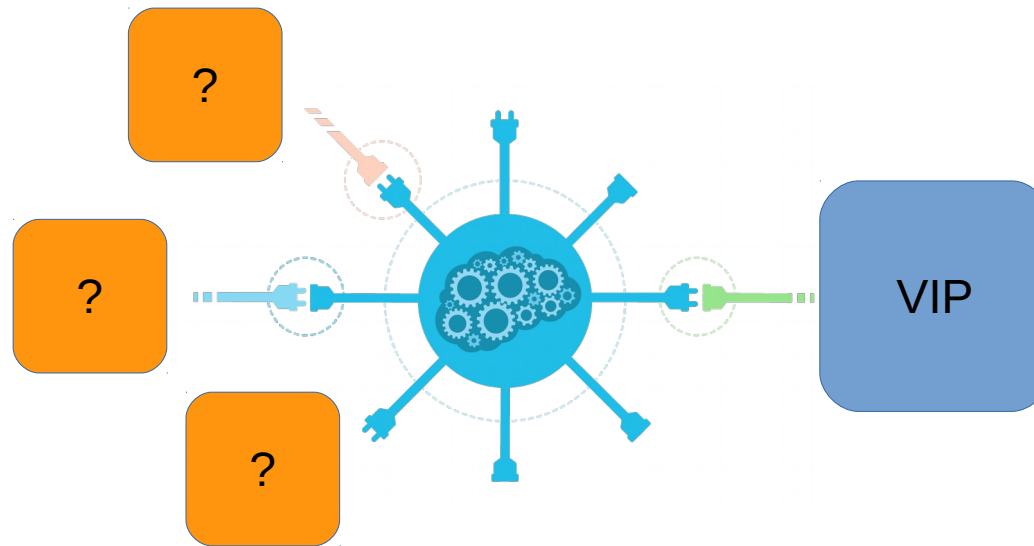
- Common API for Research Medical Imaging Network
- API Specification for processing platform
- Execution management
- Basic data exchange
- <https://github.com/fli-iam/CARMIN>
- Interested ?

CARMIN status

- SOAP before, REST now
- 0.3 version soon to come
- Use OpenAPI format (new swagger version)

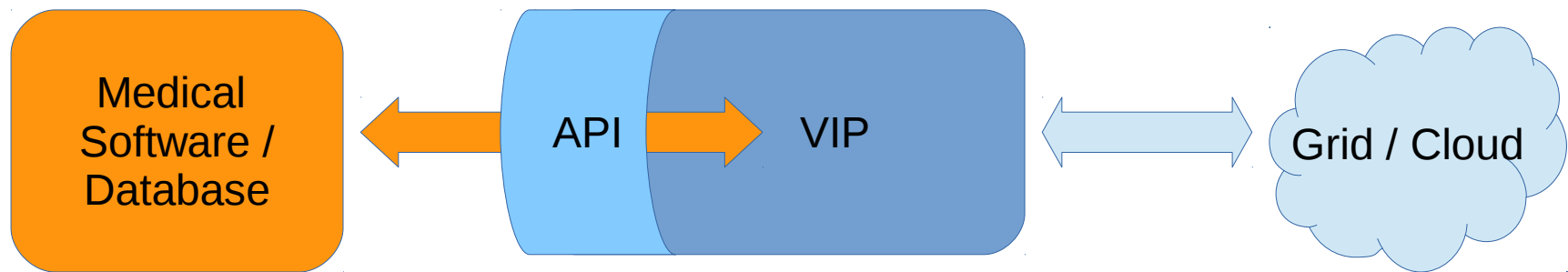
```
responses:
  '200':
    description: successful response
    content:
      application/json:
        schema:
          type: array
          items:
            $ref: '#/components/schemas/Execution'
    default:
      $ref: '#/components/responses/Error'
post:
  summary: Initializes an execution
  description:
    The successful response must contain the execution identifier.
    If the status "Initializing" is returned, playExecution must be called.
  operationId: createExecution
  requestBody:
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/Execution'
  responses:
    '200':
      description: successful response
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Execution'
    default:
      $ref: '#/components/responses/Error'
/execution/count:
  get:
    summary: Give the number of the user's executions
    operationId: countExecutions
    parameters:
      - name: studyIdentifier
        in: query
        schema:
```

VIP and CARMIN



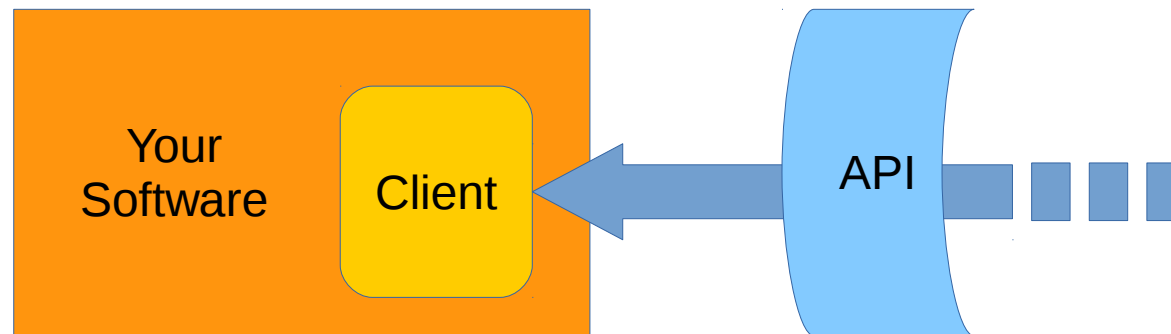
- Vip has the best CARMIN support
 - Execution launch and monitoring
 - Limited data exchange
- CARMIN is not limited to FLI-IAM

API usages



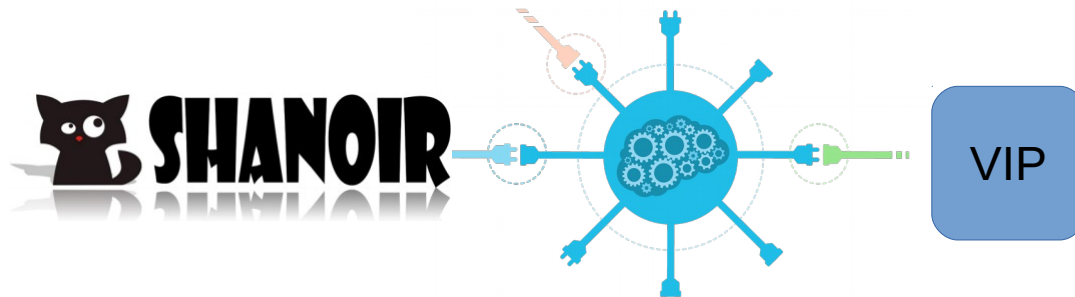
- VIP can be integrated into
 - A database
 - A software used by doctors
 - A research tool with visualization
- Interested ?

How to integrate the API ?



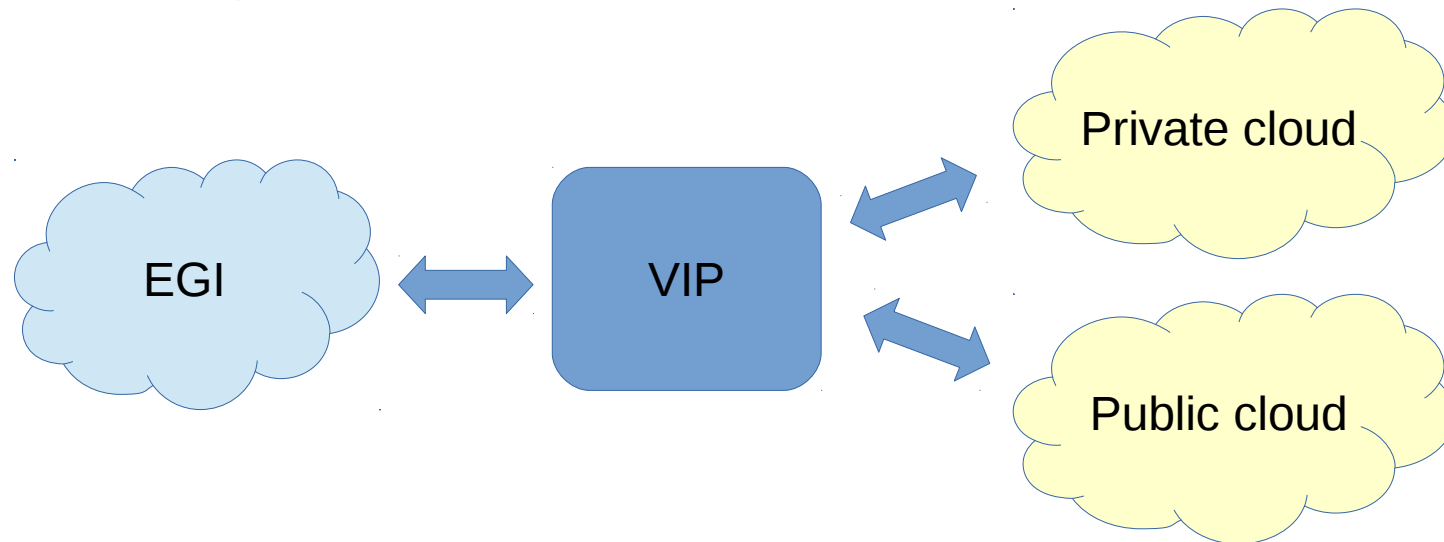
- An API client must be integrated
- We provide
 - A Java client
 - A Command-line client
- Clients can be automatically generated thanks to swagger

Back to FLI-IAM



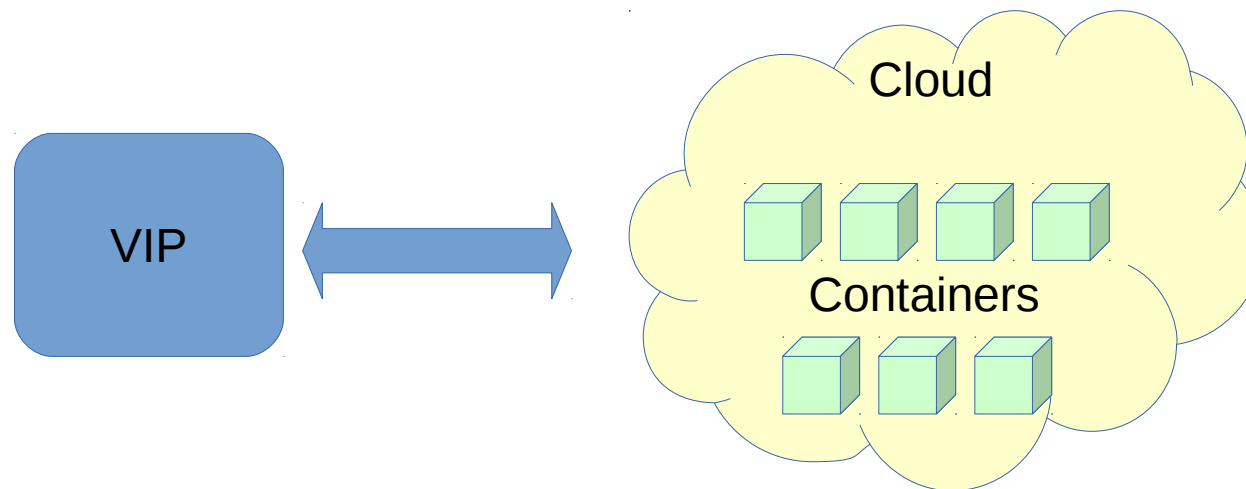
- End of phase 1 in December
- First goal realized (intercommunication)
- Beginning of 2nd phase in 2018
- Commercial use (self-sustainability)

Cloud usage in VIP



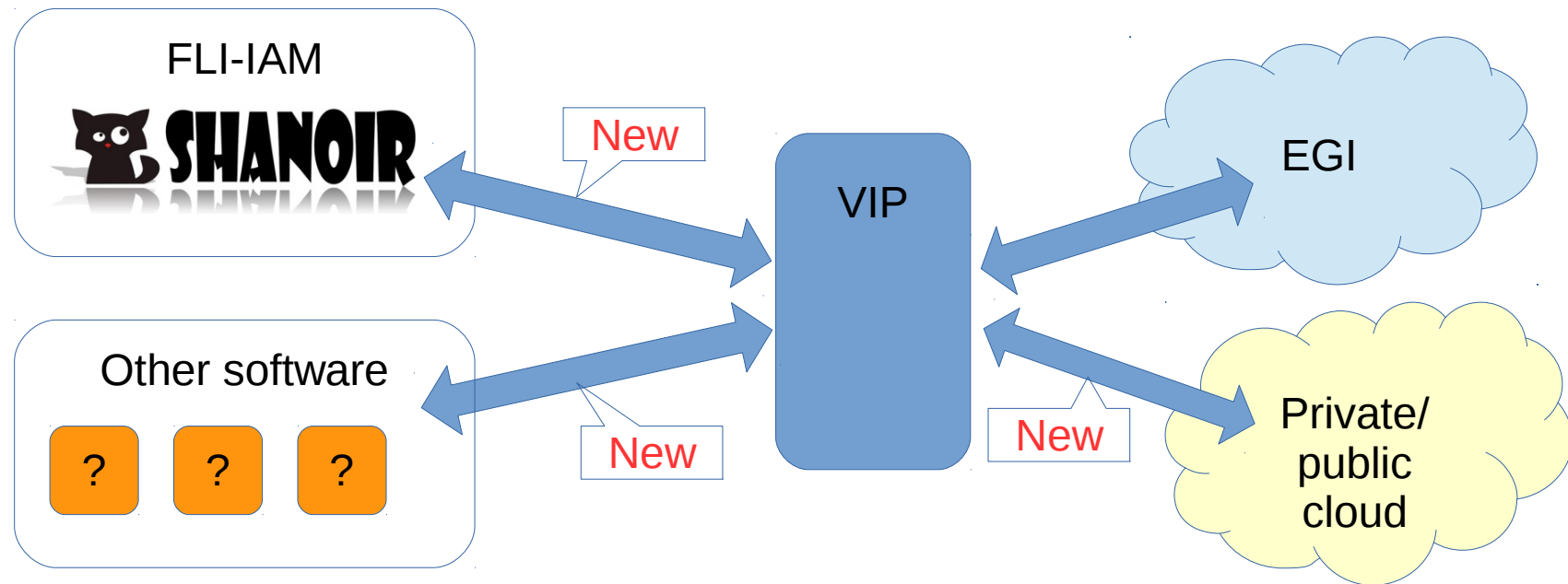
- Still free usage of EGI for research
- Free usage of public cloud (Coming)
- Commercial usage of private cloud (Coming)

Which tech for the cloud



- Cloud exploitation via containers
- Docker or probably Singularity
- 2018 target

Conclusion



- Software interoperability
- More infrastructures supported

Questions ?