



New VIP usages through the API



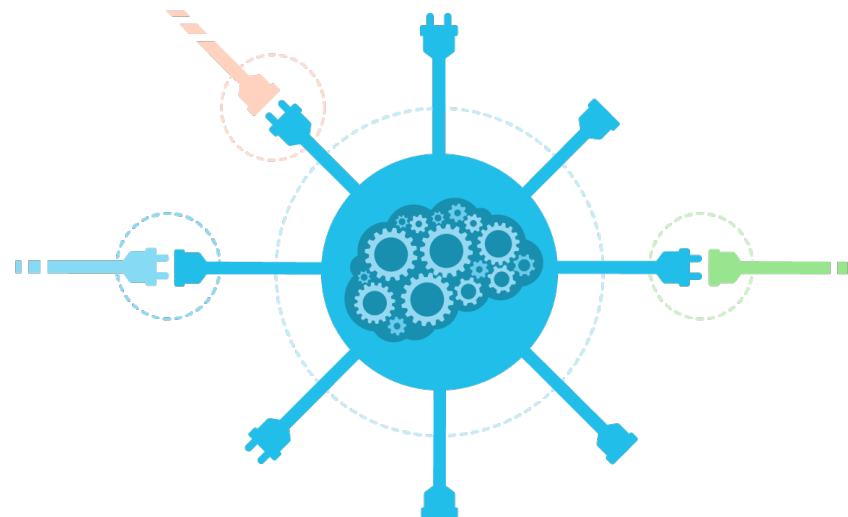
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What's an API ?

- Application Programming Interface
 - Methods of communication between software components
- Lots of web APIs
- SOAP (old school)
- REST (hype)



The REST API in VIP

- Originally developed to interface VIP with FLI-IAM components
 - Communication between VIP and image databases
 - CARMIN specification
 - SOAP first, then REST

- It allows
 - Get applications (aka pipelines) information
 - Launch an execution
 - Monitor executions
 - Upload execution inputs (limited)
 - Download execution outputs (limited)
- (Almost) like the VIP portal !

New usages

- Interface with other medical software (FLI-IAM, shanoir)
- Testing
- Use VIP in research software
- Complex application launcher

New usage : Testing

- Naslaty internship
- Easiest testing through the API than on the web portal
- Improve Software quality / service reliability



New usage : Use VIP in research software

- Main usage
 - You need lots of parallel resources in your software
- Secondary usage
 - Distribute your software (specific requirements)

- How to do that ?
 - Integrate your application into VIP (Docker etc)
 - Use the API in your software

How to use the API in your software

- Complex to find a cross-technologies solution (Matlab, C/C++, python, etc)
- Command-line tool : vip-cli (Qifan internship)
 - Install it with your software (Java)
 - Call it from your software
- “vip-cli execute MyApplication -inputFile input.zip -myParam 42”
- “vip-cli status workflow-xxxxxxxxx”
- “vip-cli results workflow-xxxxxxxxx /where/to/put/results”

Possible problems

- Best to discuss them with potential users (nothing is fixed)
- Authentication
 - User must have a VIP account
 - API key obtained from VIP portal to configure in software
- vip-cli is currently designed to be passive
 - You have to call it regularly to check if an execution is over
- Files exchanges on the file system
- Call command line, read standard output in your environment
- VIP is (currently) not necessary faster

Questions ?