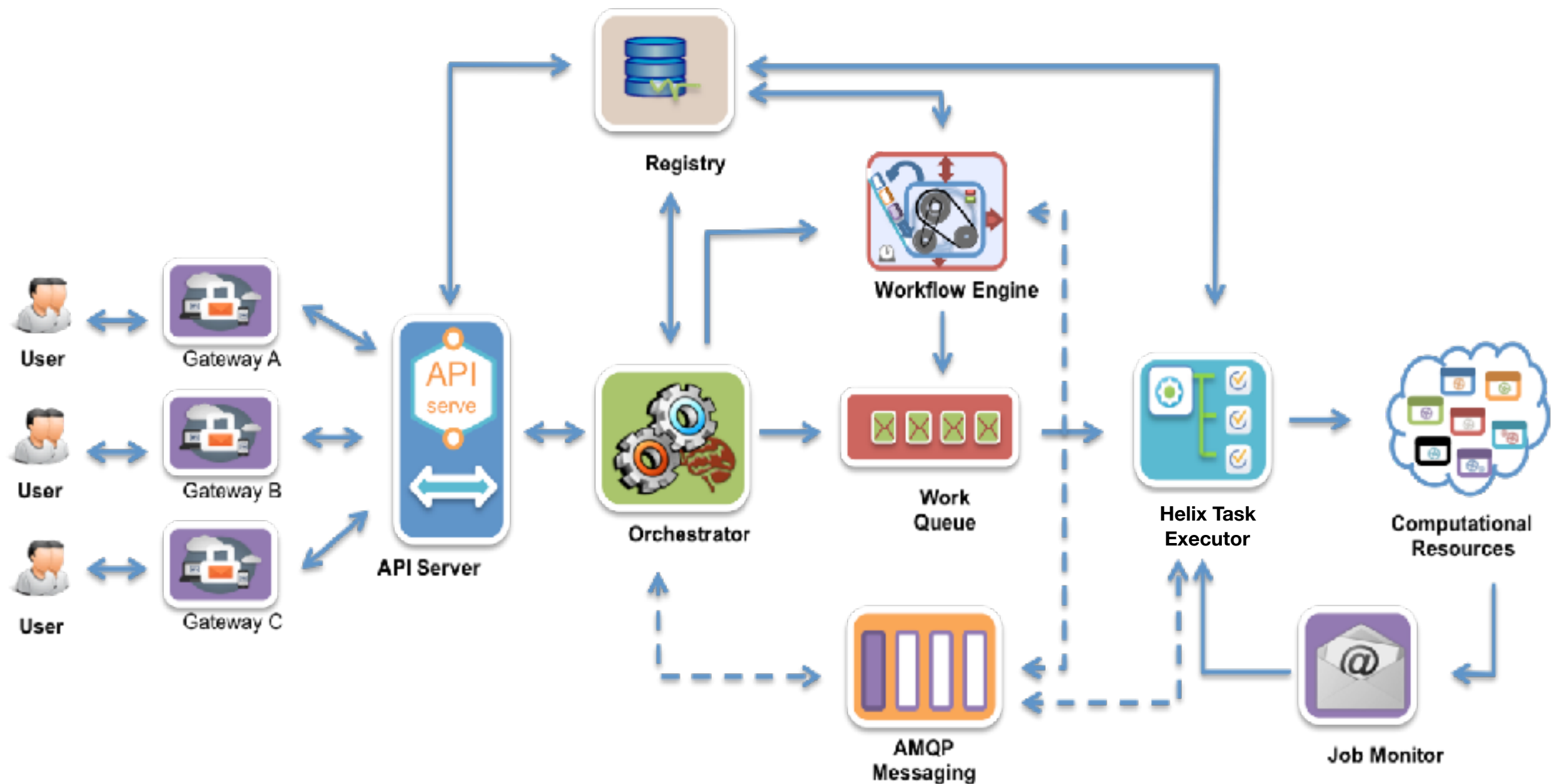


Getting started with Apache Airavata

Dimuthu Upeksha
Research Engineer - SGRC Team

Architecture



Airavata Components

Airavata is the gateway middleware system which bridges the gateway interface with the remote Super computers/HPCs. The hosted Airavata middleware is provided as gateway platform service; SciGaP.

Airavata consist of

- **Reference gateway (PHP, Python, etc)**
- **Airavata API**
- **Orchestrator**
- **Registry**
- **Credential Store**
- **Helix Task Executor**
- **Job Monitor**
- **Workflow Manager**

Airavata Works with

- **Range of HPCs – National clusters, Campus clusters, Cloud resources, etc)**
- **Multiple job schedulers – SLURM, PBS, GE, etc**

Code

<https://github.com/apache/airavata>

The screenshot shows the GitHub repository page for Apache Airavata. The repository is a mirror of the Apache project. The page includes a header with navigation links, a repository overview section with statistics, and a list of recent commits and files.

Repository Overview:

- 7,158 commits
- 39 branches
- 16 releases
- 36 contributors

Actions:

- Branch: master
- New pull request
- Create new file
- Upload files
- Find file
- Clone or download

Commits:

- machristie** Upgrade Ansible to at least 2.3.1.0 due to sec vulnerability (Latest commit 7d57a5e 15 days ago)

Files:

File	Commit Message	Time Ago
airavata-api	Thrift stub generation for isUserEnabled	4 months ago
airavata-services	Thrift stub generation for isUserEnabled	4 months ago
dev-tools/ansible	Upgrade Ansible to at least 2.3.1.0 due to sec vulnerability	15 days ago
modules	Merge pull request #199 from rkunalan/fixes	4 months ago
sandbox	Revert "Container Based Task Execution Workflow for Airavata"	11 months ago
thrift-interface-descriptions	Add isUserEnabled to lamAdminServices	4 months ago
tools	Updating license headers using license-maven-plugin	2 years ago
.gitignore	adding data manager code to develop branch	3 years ago
.travis.yml	Travis: clone full repo for git-describe to work	6 months ago

Build and Install

System Requirements

- Java 8
- Maven
- Git
- Java IDE - Recommended : IntelliJ or Eclipse
- Ansible

Setting up the code base

- `git clone https://github.com/<User Name>/airavata.git`
- `cd airavata`
- `git remote -v`
- `git remote add upstream https://github.com/apache/airavata.git`
- `git fetch upstream`

Build

- `mvn clean install -DskipTests`

Setting up locally

We use a virtual box VM to deploy all Airavata components

<https://www.youtube.com/watch?v=Eb-FetgKB6k>

<https://docs.google.com/document/d/1dFhajiYIPtNymIKbMvCXeLivLHujLjvE107QyUDEgdA/edit?usp=sharing>

Contribution

- Do all the changes while staying on the develop branch
- Commit local changes to your fork
- Sent a pull request to Airavata repository
- Subscribe and discuss matters in dev@airavata.org