INGInious : User committee
Newest features and 2023 roadmap

Anthony Gego
April 2023

Contents

Development team

Newest features

2023 Roadmap

Development team

Team members

Current members

- Anthony Gégo
- Nicolas Rybowski
- Ludovic Taffin
- Quentin Langlois (teaching)

Past members in 2021-2022

- Grégory Creupelandt
- Anatole Huet (intern)

Status meeting every Thursday 14 :00

Several solutions used in the past

- Cafet : no history, no publicity
- Gitter : limited to one room
- Slack : internal + public (abandoned), paid history

$\Rightarrow$ **Merged into one place : inginious.zulipchat.com**

- Allows for multiple rooms
    #dev, #support-en, #support-fr...
- Sponsored standard plan with full history

Newest features

Shell tasks : step-by-step analysis of students bash history

```
worker@agents-1.inginious.org's password:
LOGIN: Good luck !
[worker@4f2817a2c525 ~]$ cd student/
[worker@4f2817a2c525 student]$ mkdir 2021
[worker@4f2817a2c525 student]$ mkdir 2021/informatique
[worker@4f2817a2c525 student]$ mkdir 2021/informatique/examen
[worker@4f2817a2c525 student]$ mkdir 2021/philo
[worker@4f2817a2c525 student]$ mkdir 2021/philo/examen
[worker@4f2817a2c525 student]$ exit
exit
LOGOUT: Good bye!
Connection to agents-1.inginious.org closed.
```

Une erreur interne s'est produite. Veuillez réessayer plus tard. Si l'erreur persiste, contactez l'administrateur du cours. [Soumission #6329c14fff5cdf27505da7bd]   ×

Vous pouvez utiliser **moins de commandes mkdir** pour résoudre le problème. Relisez le manuel, une option peut vous aider à réduire le nombre de commandes.

Solution 1

Création de chaque dossier et sous dossier.

Feedback

OK, but could be done in fewer steps.

5

Interactive shell tasks

Shell tasks : step-by-step analysis of students bash history

```
worker@agents-1.inginious.org's password:
LOGIN: Good luck !
[worker@5d5c17363c55 ~]$ cd student/
[worker@5d5c17363c55 student]$ mkdir -p 2021/informatique/examen 2021/philo/examen
[worker@5d5c17363c55 student]$ exit
exit
LOGOUT: Good bye!
Connection to agents-1.inginious.org closed.
```

Solution 2

All the (sub-)directories are created in one unique command line.

Votre réponse a passé les tests ! Votre note est de 100.0%. [Soumission #6329c17e2b4eb9cd8515b229]   ×

Félicitations!! vous avez réussi à aider votre frère, vous pouvez passer à la question suivante

Feedback

Task succeeded.

6

Implementation

- SSH daemon over `run_student` (parallel container)
- Almost equivalent to `run_student [OPTIONS] sshd [OPTIONS]`

Usage

- API : `ssh_student [--teardown-script SCRIPT]`
- SSH logs stored in `/task/student/.ssh_logs`
- Teardown script runs inside the student container after exit.
  Can be used to copy other files to the student folder before killing the container.

Support for other Docker runtimes has been added

- runc (default)
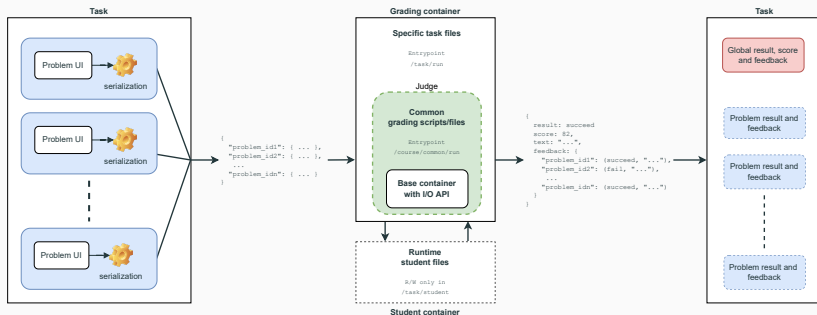- kata-runtime v1 (alpha state, investigation for kata v3 in progress)
  Forcing container label : `LABEL org.inginious.need_root 1`
- nvidia (runc with exposed GPU device)
  Forcing container label : `LABEL org.inginious.need_gpu 1`

Allowing for reduced task definition

For instance, subproblems statements and unit tests only

First step in 2022 : additional entrypoint in `/course/common/run`

Designing judges in 2023

- Define a `Dockerfile` inheriting from your chosen environment
- Copy your current `$common` folder to `/course/common`

Why using it already?

- Allows to collaborate on grading scripts
  without exposing the tasks
- Allows to ship it directly with the platform

2023 Roadmap

2023 roadmap

In progress

- Course-wide user settings (API token, licences, …)
- Task-dispenser based accessibility and grouped actions on tasks

Next steps

- API authentication using tokens
- Tasks sharing among courses
- Private classrooms (no more Big Brother)
- LTI Advantage (LTI v1.3)
- Docker compose distribution

INGInious