

# CI/CD at LIPN

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**Journée Respire**

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# Hello!


I'm Jaime Arias

- CNRS Research Engineer @ LIPN
- Responsible of the development team @ LIPN
- Member @ Software/Source Codes College
- Ambassador @ Software Heritage



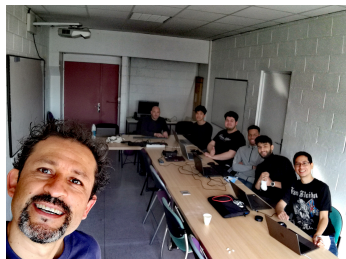
You can find me at:

 `arias@lipn.univ-paris13.fr`

 `www.jaime-arias.fr`

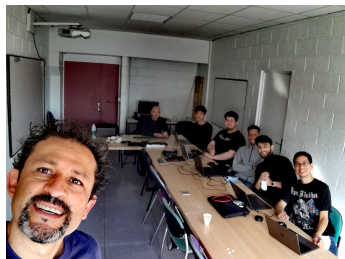
# La dev-team

- Development team @ LIPN
- Currently, 4 permanent members:
  - 1 apprentice, 1 IE, 2 IR
- We host interns, engineers, and apprentices throughout the year
  - 2nd year BUT (6 students)
  - 3rd year BUT (1 student)
  - 3rd year bachelor (1 student)
- Hackaton one day per week



# La dev-team

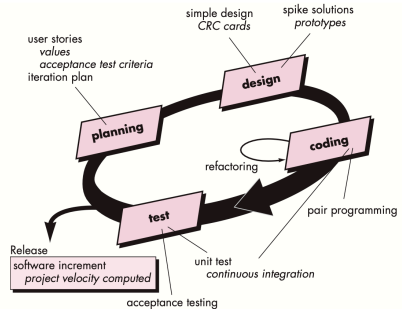
- Development team @ LIPN
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  - 3rd year bachelor (1 student)
- Hackaton one day per week
- We code and learn a lot of things!





# Agile Methodology

- **Early and continuous delivery** of valuable software.
- Give to the team the **environment and support** needed.
- **Working software** is the primary measure of progress.
- ...



Source: Roger S. Pressman, Bruce Maxim, *Software Engineering: A Practitioner's Approach*, McGraw Hill

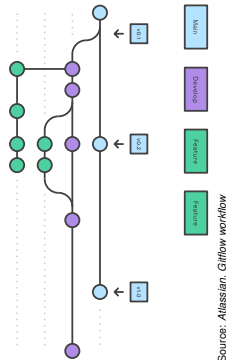
# Table of contents

1. Fundamentals of CI/CD
2. GitLab
3. CI/CD Architecture @ LIPN
4. Development of the LIPN intranet
5. Gitlab Pages

# 1. Fundamentals of CI/CD

# Continuous Integration

- It's a software development **practice**
- Each member of a team **merges** its changes into a codebase (e.g. SCM) **regularly**
- Each of these integrations is verified by an **automated build** to detect **integration errors** (e.g. tests) as quickly as possible



# Continuous Integration

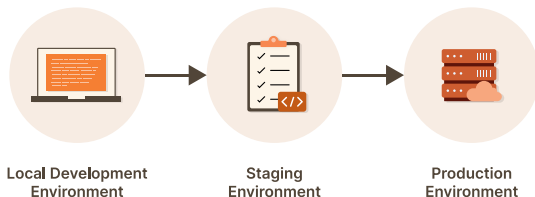
## Benefits

- Less time wasted in integration
- Less bugs (they are also cumulative)
- Enables refactoring for sustained productivity
- Allows to maintain a *release-ready* mainline



# Continuous Delivery/Deployment

- It's a software development **strategy** where code changes are **released (automatically)** into the production environment.
- Eliminates the gap between coding and customer value.



# Continuous Delivery/Deployment

- Improved quality
- Accelerated feedback loop
- Better team collaboration
- Faster time to market
- Enhanced customer experience
- Reduced costs



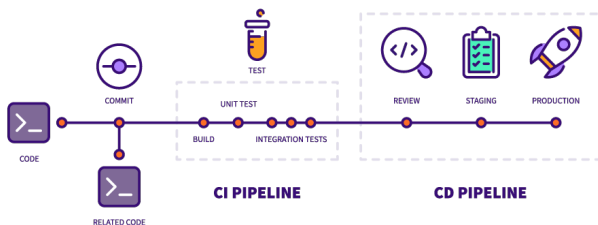
## 2. GitLab



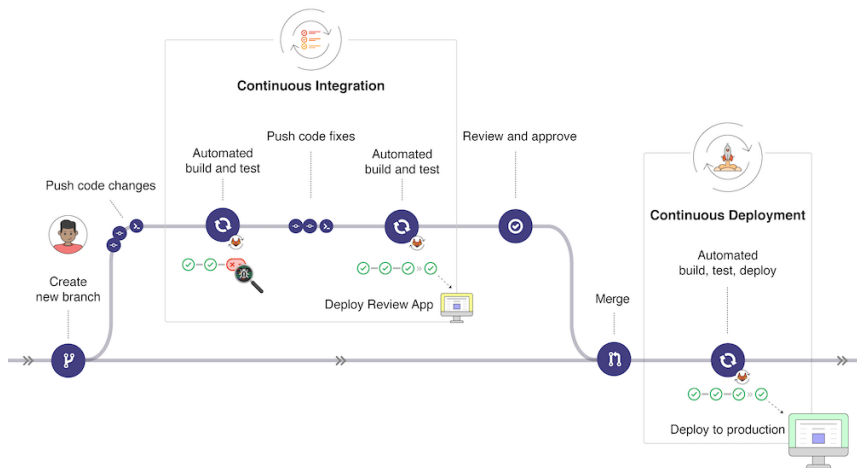


# GitLab

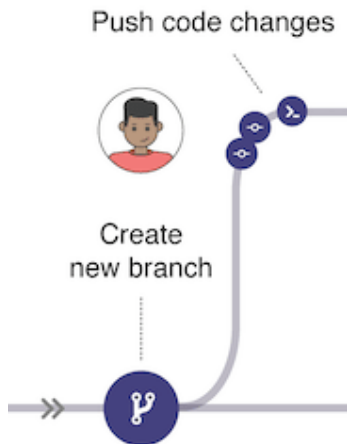
- Open Source code repository and collaborative software development platform.
- It's available as a community edition and a commercial edition.
- It supports CI/CD **pipelines** (`.gitlab-ci.yml`).



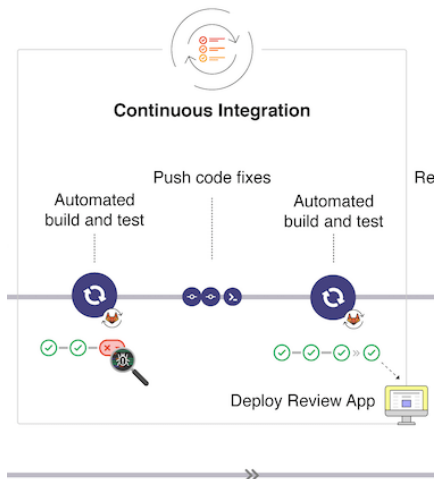
# GitLab CI/CD



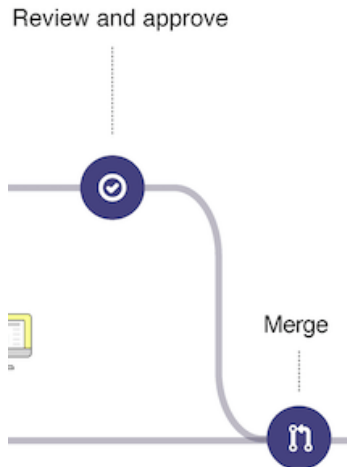
# GitLab CI/CD



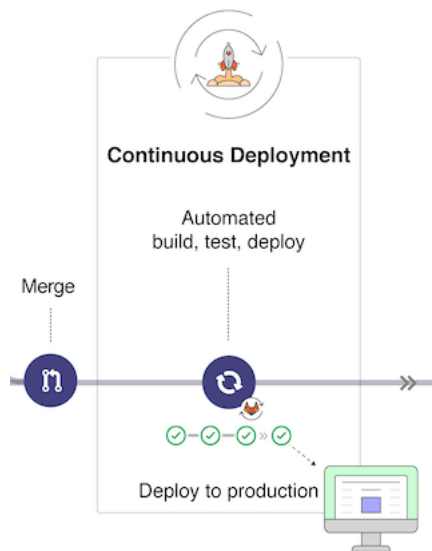
# GitLab CI/CD



# GitLab CI/CD



# GitLab CI/CD



# GitLab CI/CD

`gitlab-ci.yml`

- To use GitLab CI/CD, the file `.gitlab-ci.yml` is placed at the root of your project.
- It specifies the `stages`, `jobs`, and `scripts` to be executed during the CI/CD pipeline.



# GitLab CI/CD

`gitlab-ci.yml`

- To use GitLab CI/CD, the file `.gitlab-ci.yml` is placed at the root of your project.
- It specifies the **stages**, **jobs**, and **scripts** to be executed during the CI/CD pipeline.
- The runners are **agents** that run the jobs. They can run on physical machines or virtual instances.

## Instance runners

These runners are available to all groups and projects.

Enable instance runners for this project



Available instance runners: 10

● #22 (8Pz969XF)

runner-04

docker linux

● #23 (Zh-k7BcW)

runner-05

docker linux

# GitLab CI/CD

`gitlab-ci.yml`

- Pipelines are made up of **stages** and **jobs**:
  - Stages define the **order of execution**: build, test, deploy, release, etc.
  - Jobs specify the **tasks to be performed** in each stage, e.g. compile or test the code.

# GitLab CI/CD

`gitlab-ci.yml`

- Pipelines are made up of **stages** and **jobs**:
  - Stages define the **order of execution**: build, test, deploy, release, etc.
  - Jobs specify the **tasks to be performed** in each stage, e.g. compile or test the code.
- Pipelines can be **triggered** by various events, like commits or merges, or can be on schedule.

# GitLab CI/CD

gitlab-ci.yml

- Use CI/CD **variables** to customize jobs by making values defined elsewhere accessible to jobs.
- Use CI/CD **component templates** for common tasks and integrations.

## Visibility ⓘ

### ☒ Visible

Can be seen in job logs.

### ☐ Masked

Masked in job logs but value can be revealed in CI/CD settings. Requires values to meet [regular expressions requirements](#).

### ☐ Masked and hidden

Masked in job logs, and can never be revealed in the CI/CD settings after the variable is saved.

## Flags

### ☐ Protect variable

Export variable to pipelines running on protected branches and tags only.

### ☒ Expand variable reference

\$ will be treated as the start of a reference to another variable.

## Description (optional)

The description of the variable's value or usage.

## Key

You can use CI/CD variables with the same name in different places, but the variables might overwrite each other. [What is the order of precedence for variables?](#)

## Value

# GitLab CI/CD

gitlab-ci.yml

---

```
1 image: node:16
2
3 stages:
4   - test
5   - e2e
6   - build
7   - deploy
8
9 variables:
10   GIT_SUBMODULE_STRATEGY: recursive
11
12 include:
13   - template: Jobs/SAST.gitlab-ci.yml
```

---

# GitLab CI/CD

gitlab-ci.yml

---

```
1 .only-tags:
2   variables:
3     NODE_ENV: "production"
4     IMAGE_VERSION: $CI_COMMIT_TAG
5     IMAGE_NAME: $ARTIFACT_NAME:$IMAGE_VERSION
6   rules:
7     - if: $CI_COMMIT_TAG
8       when: manual
```

---

# GitLab CI/CD

gitlab-ci.yml

---

```
1 unit_tests:
2   stage: test
3   extends: .tests_setup
4   script:
5     - yarn tests
6   cache:
7     key:
8       files:
9         - yarn.lock
10    paths:
11      - .yarn-cache/
```

---

# GitLab CI/CD

gitlab-ci.yml

---

```
1 e2e_tests:
2   stage: e2e
3   image: cypress/base:16.0.0
4   services:
5     - name: mongo:latest
6   extends: .tests_setup
7   script:
8     - yarn build
9     - yarn start & yarn wait-on http://localhost:3000
10    - yarn tests:e2e
11  artifacts:
12    when: always
13    paths:
14      - tests/e2e/screenshots/
15      - tests/e2e/videos/
16  expire_in: 1 week
```

---



# GitLab CI/CD

gitlab-ci.yml

---

```
1 build_image:
2   extends: .only-tags
3   stage: build
4   image:
5     name: himito/docker-publisher
6     entrypoint: [""]
7   script:
8     - sh /kaniko/publish_to_dockerhub.sh Dockerfile
9       $CI_PROJECT_DIR $ARTIFACT_NAME $IMAGE_VERSION
10      $CI_REGISTRY_AUTH
11   retry: 2
```

---

# GitLab CI/CD

gitlab-ci.yml

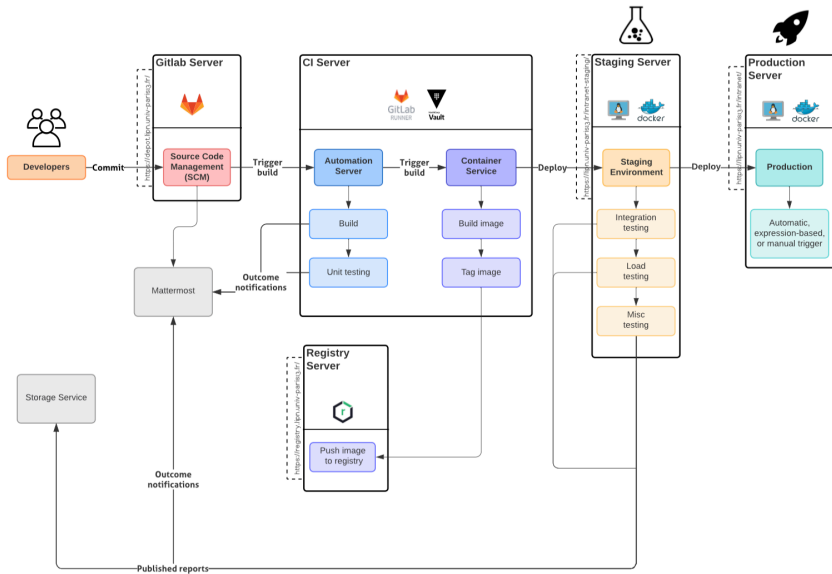
---

```
1 deploy:
2   image: alpine
3   stage: deploy
4   extends: .only-tags
5   variables:
6     USERNAME: "deployer"
7     CONFIG_FILE: "docker-compose.cosyverif.yml"
8   before_script:
9     - apk add --no-cache openssh rsync bash
10    - eval $(ssh-agent -s)
11    - ssh-keyscan $PRODUCTION_SERVER >> ~/.ssh/known_hosts
12   script:
13     - scp docker-compose.prod.yml "$USERNAME@$PRODUCTION_SERVER:${COSYVERIF_PATH}/${CONFIG_FILE}"
14     - docker-compose -f ${CONFIG_FILE} up --detach --no-deps ${SERVICE_NAME}
15   after_script:
16     - ssh-agent -k
```

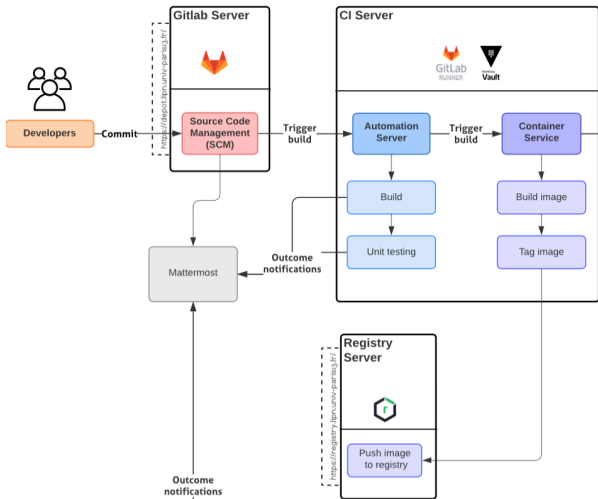
---

### 3. CI/CD Architecture @ LIPN

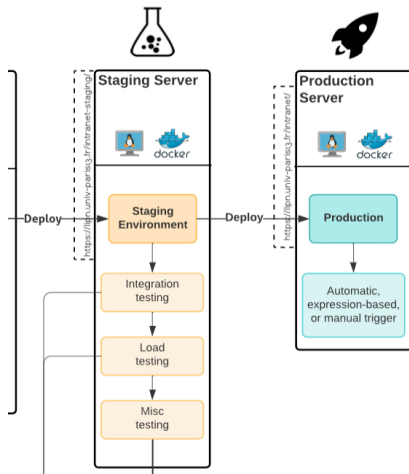
# CI/CD Architecture @ LIPN



# CI/CD Architecture @ LIPN



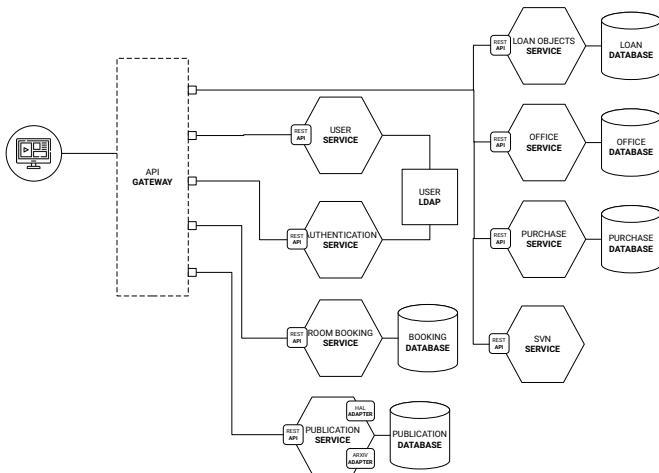
# CI/CD Architecture @ LIPN



## 4. Development of the LIPN intranet

# Development of the LIPN intranet

## Microservice Architecture





# Development of the LIPN intranet

## Source Code Management (SCM)

Intranet / plugins / room booking / Repository

develop / room\_booking / +

Compare Find file Edit Code

fix: empty json if author is not logged  
Jaime Arias authored 1 month ago

Name	Last commit	Last update
.husky	build: setup a vue3 projet	4 months ago
backend	ci: add gitlab-ci for backend	1 month ago
frontend	fix: empty json if author is not logged	1 month ago
.gitignore	build: integrate with the intranet project and gateway	2 years ago
.gitlab-ci.yml	ci: add gitlab-ci for backend	1 month ago
.lintstagedrc.json	build: setup a vue3 projet	4 months ago
AUTHORS.md	build: integrate with the intranet project and gateway	2 years ago
LICENSE	skeleton	6 years ago
README.md	feat: add repeated bookings	2 years ago
package.json	build: update dependencies	1 month ago
renovate.json	refactor: rename backend folder	1 month ago
yarn.lock	build: update dependencies	1 month ago

# Development of the LIPN intranet

## CI/CD Pipeline

Intranet / plugins / room-booking / Pipelines / #10007

### fix: empty json if author is not logged

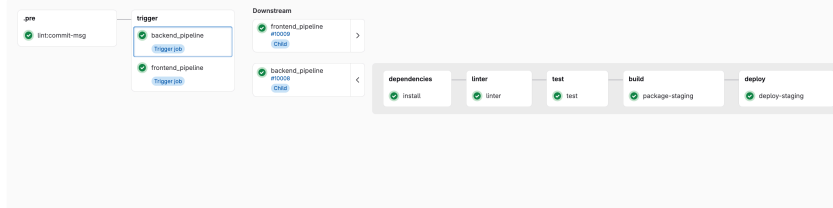
Delete

Passed Jaime Arias created pipeline for commit 2859e2c5 1 month ago, finished 1 month ago

For develop

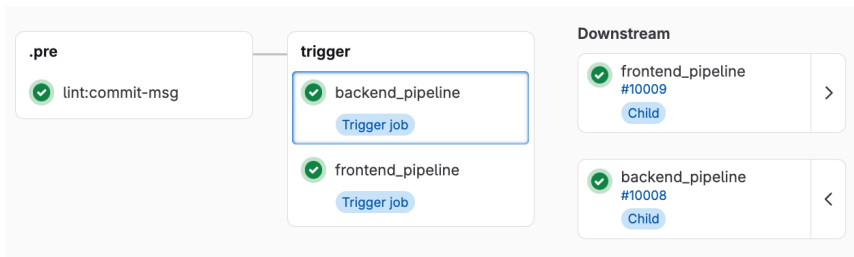
latest branch 0 3 Jobs 5 minutes 51 seconds, queued for 2 seconds

Pipeline Jobs 3 Tests 0



# Development of the LIPN intranet

## CI/CD Pipeline



# Development of the LIPN intranet

## CI/CD Pipeline



# Development of the LIPN intranet

## CI/CD Pipeline

Intranet / plugins / room booking / Pipelines

All 176

Finished

Branches

Tags

[View analytics](#)

[Clear runner caches](#)

[New pipeline](#)

Filter pipelines



Show Pipeline ID ▾

Status	Pipeline	Created by	Stages	Actions
<b>Passed</b> ⌚ 00:08:52 📅 2 years ago	<a href="#">fix: clear localStorage when token is expired</a> #5212  develop -> c1cbb28b <a href="#">branch</a>			▾
<b>Passed</b> ⌚ 00:08:57 📅 2 years ago	<a href="#">refactor: refactoring email templates</a> #5210  develop -> 019352d8 <a href="#">branch</a>			▾
<b>Passed</b> ⌚ 00:08:26 📅 2 years ago	<a href="#">fix: clean email configuration file</a> #5173  develop -> b7aeca64 <a href="#">branch</a>			▾
<b>Passed</b> ⌚ 00:07:50 📅 2 years ago	<a href="#">fix: datetime format</a> #5172  develop -> 8ce98874 <a href="#">branch</a>			▾
<b>Failed</b> ⌚ 00:03:57 📅 2 years ago	<a href="#">fix: path to userService configuration file from ...</a> #5171  develop -> 465f618c <a href="#">branch</a>			▾

# Development of the LIPN intranet

## Code Review

The screenshot displays a GitLab merge request (MR) titled "Migration to vue 3". The interface is divided into several sections:

- Header:** Shows the project path "intranet / plugins / room booking / Merge requests / 15". The title "Migration to vue 3" is prominent, with buttons for "Edit" and "Code". A status bar indicates "Merged" by Jaime Arias, requested to merge "feature/vue3" into "master" one month ago.
- Overview:** The selected tab shows a description: "This MR migrate the frontend application to vue 3. Moreover, it uses the component library ui." It includes a thumbs up/down icon (1 up, 0 down) and a comment icon.
- Pipeline Status:** Two pipeline entries are shown, both marked "passed":
  - Pipeline #9968:** Passed for commit `a2ba899c` on branch `feature/vue3` one month ago.
  - Pipeline #9972:** Passed for commit `24df78cb` on branch `master` one month ago.
- Approval:** A section titled "Approval is optional" with a dropdown menu.
- Merge Details:** A section titled "Merged by Jaime Arias 1 month ago" with a "Cherry-pick" link. It lists merge details:
  - Changes merged into master with `24df78cb`.
  - Deleted the source branch.
- Metadata:** A sidebar on the right contains fields for Assignee (Jaime Arias), Reviewers (0), Labels (None), Milestone (None), Time tracking (No estimate or time spent), and 1 Participant.

# Development of the LIPN intranet

## Code Review



### Pipeline #9968 passed

Pipeline passed for `a2ba099c` on `feature/vue3` 1 month ago



8✓ Approval is optional



Merged by  [Jaime Arias](#) 1 month ago

[Cherry-pick](#)

#### Merge details

- Changes merged into master with [24df70cb](#).
- Deleted the source branch.



### Pipeline #9972 passed

Pipeline passed for `24df70cb` on `master` 1 month ago



# Development of the LIPN intranet

## Test Automation

intranet / plugins / room booking / Jobs / #12530

Search visible log output

```
46 PUT /booking/638b6f1285a79580233a5671?options=only 200 6.772 ms - 230
47 PUT /booking/638b6f1285a79580233a5688?options=all 200 5.843 ms - -
48 DELETE /booking/638b6f1285a79580233a5698 204 5.655 ms - -
49 PASS tests/booking.test.js
50 Booking API
51 GET /booking - get all bookings
52   ✓ should return an array (71ms)
53 GET /booking/room/:id - get bookings for the room by its id
54   ✓ should return a JSON array (61ms)
55 GET /booking/:id - get booking by id
56   ✓ should return a booking object (11ms)
57 POST /booking - create new booking
58   ✓ should add a new booking on the database (29ms)
59   ✓ should reject booking with overlapping time (13ms)
60   ✓ should add occurrence of repeated booking (26ms)
61   ✓ should reject repeated booking with overlapping time (14ms)
62   ✓ should reject repeated booking without date of the latest occurrence (7ms)
63 PUT /booking/:id - update a booking
64   ✓ should update the info of a booking (19ms)
65   ✓ should reject update booking with an overlapping time (16ms)
66   ✓ should duplicate booking when it becomes recurring (32ms)
67   ✓ should reject to duplicate booking when it becomes recurring and has overlapping dates (28ms)
68   ✓ should remove other bookings when it is not more recurring (30ms)
69   ✓ should reject to remove other bookings when it is not more recurring with overlapping dates (24ms)
70   ✓ should update only one booking from the other occurrences (26ms)
71   ✓ should update all the recurring bookings (25ms)
72 DELETE /booking/:id - delete a booking
73   ✓ deletes when given a valid id (14ms)
74   ✓ deletes only the current booking when it is a repeated booking (24ms)
75   ✓ deletes all the repeated bookings (27ms)
76   ✓ deletes repeated bookings after the start date (28ms)
77 DELETE /booking/638b6f1285a79580233a56a3 204 5.343 ms - -
78 DELETE /booking/638b6f1285a79580233a56bd?options=all 204 6.178 ms - -
79 DELETE /booking/638b6f1285a79580233a56d9?options=post 204 6.569 ms - -
```

Duration: 26 seconds  
Finished: 2 years ago  
Queued: 39 seconds  
Timeout: 1h (from project) [?](#)  
Runner: #25 (NdyZbFB9) runner-07  
Coverage: 66.88%  
Test summary: 31

Job artifacts [?](#)  
The artifacts were removed 2 years ago [?](#)

Commit c1cbb28b [?](#)  
fix: clear localStorage when token is expired

Pipeline #5212 Passed for develop  

test

Related jobs

- [lint:client](#)
- [lint:server](#)
- [test:server](#)



# Development of the LIPN intranet

## Test Automation

**Duration:** 26 seconds

**Finished:** 2 years ago

**Queued:** 39 seconds

**Timeout:** 1h (from project) ?

**Runner:** #25 (NdyZbFB9) runner-07

**Coverage:** 66.88%

**Test summary:** 31


---

### Job artifacts ?

The artifacts were removed 2 years ago



---

**Commit** c1cbb28b 

fix: clear localStorage when token is expired

---

**Pipeline #5212**  Passed for develop



test



# Development of the LIPN intranet

## Build Automation

Intranet / plugins / room booking / Jobs / #12532

Search visible log output

```
1 Running with gitlab-runner 15.4.0 (43b2dc3d)
2 on runner-10 TNS_75xh
3 Preparing the "docker" executor
4 Using Docker executor with image himito/docker-publisher ...
5 Pulling docker image himito/docker-publisher ...
6 Using docker image sha256:ed8e4cf7d9a80ca8dc4a8615bf65c8b59d64d52b3485b6cae36f01c9aef564b6 for himito/docker-publisher with digest himi
to/docker-publisher@sha256:3ec041e7ffb15843233c6c3fd0958e42101a4696a85779b4578ca53858a30fc9 ...
7 Preparing environment
8 Running on runner-tn575xh-project-159-concurrent-0 via lipn-ci...
9 Getting source from Git repository
10 Fetching changes...
11 Reinitialized existing Git repository in /builds/etamine/plugins/room_booking/.git/
12 Checking out c1cbb28b as develop...
13 Skipping Git submodule setup
14 Downloading artifacts
15 Downloading artifacts for install:server (12527)...
16 Downloading artifacts from coordinator... ok id=12527 responseStatus=200 OK token=HMKKB9h
17 Downloading artifacts for install:client (12526)...
18 Downloading artifacts from coordinator... ok id=12526 responseStatus=200 OK token=HMKKB9h
19 Executing "stap_script" stage of the job script
20 Using docker image sha256:ed8e4cf7d9a80ca8dc4a8615bf65c8b59d64d52b3485b6cae36f01c9aef564b6 for himito/docker-publisher with digest himi
to/docker-publisher@sha256:3ec041e7ffb15843233c6c3fd0958e42101a4696a85779b4578ca53858a30fc9 ...
21 $ cd $INSTALL_DIRECTORY
22 $ sh /kaniko/publish_to_dockerhub.sh $CI_PROJECT_DIR/$INSTALL_DIRECTORY/dockerfile $CI_PROJECT_DIR/$INSTALL_DIRECTORY $ARTIFACT_NAME $A
RTIFACT_VERSION $CI_REGISTRY_AUTH
23 INFO[0000] Resolved base name node:16-alpine to develop-stage
24 INFO[0000] Resolved base name develop-stage to production-stage
25 INFO[0000] Retrieving image manifest node:16-alpine
26 INFO[0000] Retrieving image node:16-alpine
27 INFO[0001] Retrieving image manifest node:16-alpine
28 INFO[0001] Retrieving image node:16-alpine
29 INFO[0002] Built cross stage deps: map[]
30 INFO[0002] Retrieving image manifest node:16-alpine
31 INFO[0002] Retrieving image node:16-alpine
```

Duration: 1 minute 15 seconds  
Finished: 2 years ago  
Queued: 1 minute 2 seconds  
Timeout: 1h (from project) [?](#)  
Runner: #28 (TNS\_75xh) runner-10

Commit [c1cbb28b](#)  
fix: clear localstorage when token is ex  
pired

Pipeline #5212 Passed for develop  
[?](#)  
package

Related jobs

- package\_staging:client
- package\_staging:server

# Development of the LIPN intranet

## Dependency Update Automation

### chore(deps): update all non-major dependencies

 Merged **Renovate** requested to merge `renovate/all-minor-patch` into `develop` 6 months ago

Overview **0**

Commits **1**

Pipelines **8**

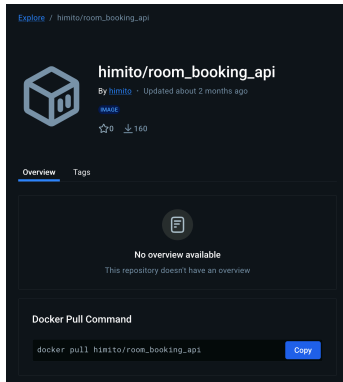
Changes **6**

This MR contains the following updates:

Package	Type	Update	Change
<a href="#">@types/node (source)</a>	devDependencies	patch	22.5.4 -> 22.5.5
<a href="#">debug</a>	dependencies	patch	4.3.6 -> 4.3.7
<a href="#">express (source)</a>	dependencies	minor	4.19.2 -> 4.21.0
<a href="#">husky</a>	devDependencies	patch	9.1.5 -> 9.1.6
<a href="#">mongoose (source)</a>	dependencies	patch	8.6.1 -> 8.6.2
<a href="#">npm-run-all2</a>	devDependencies	patch	6.2.2 -> 6.2.3
<a href="#">start-server-and-test</a>	devDependencies	patch	2.0.5 -> 2.0.7
<a href="#">typescript (source)</a>	devDependencies	minor	5.5.4 -> 5.6.2
<a href="#">vite (source)</a>	devDependencies	patch	5.4.3 -> 5.4.5
<a href="#">vue-router</a>	dependencies	patch	4.4.3 -> 4.4.5

# Development of the LIPN intranet

## Build Automation



# Development of the LIPN intranet

## Notifications

The screenshot displays the Mattermost web interface. The top bar shows the Mattermost logo, 'FREE EDITION', a search bar with 'Rechercher', and a 'View plans' button. The left sidebar contains a navigation menu with 'LIPN' at the top, followed by 'FAVORIS', 'NOTIFICATIONS', 'CANAUX', and 'MESSAGES PERSONNELS'. The main channel view is titled 'Gitlab Intranet' and shows a list of notifications. The notifications are as follows:

- Intranet BOT** 12:41 AM: **Jaime Arias** (arias) approved merge request 14 *Feature: Assign Coordinator to Category* in intranet / plugins / event\_management
- Intranet BOT** 12:41 AM: **Jaime Arias** (arias) merged merge request 14 *Feature: Assign Coordinator to Category* in intranet / plugins / event\_management
- Intranet BOT** 12:54 AM: **Jaime Arias** (arias) approved merge request 15 *feat(category): Add feature to delete all categories by coordinator* in intranet / plugins / event\_management
- Intranet BOT** 12:54 AM: **Jaime Arias** (arias) merged merge request 15 *feat(category): Add feature to delete all categories by coordinator* in intranet / plugins / event\_management
- Intranet BOT** 1:34 AM: **Jaime Arias** (arias) approved merge request 16 *feat(category): assign coordinator to category* *feat(category): allow coordinator deletion from category* in intranet / plugins / event\_management
- Intranet BOT** 1:34 AM: **Jaime Arias** (arias) merged merge request 16 *feat(category): assign coordinator to category* *feat(category): allow coordinator deletion from category* in intranet / plugins / event\_management
- Intranet BOT** 12:47 PM: Emma GRAMI (grami) opened merge request 17 *feat(event): add event entity, repository, factory, mapper, and migration for event management* in intranet / plugins / event\_management
- Intranet BOT** 3:43 PM: **Jaime Arias** (arias) approved merge request 17 *feat(event): add event entity, repository, factory, mapper, and migration for event management* in intranet / plugins / event\_management
- Intranet BOT** 3:43 PM: **Jaime Arias** (arias) merged merge request 17 *feat(event): add event entity, repository, factory, mapper, and migration for event management* in intranet / plugins / event\_management

At the bottom of the channel view, there is a text input field 'Écrire à Gitlab Intranet' and a rich text editor toolbar with buttons for bold, italic, link, code, and other formatting options.

# Development of the LIPN intranet

## Notifications

☆ Gitlab Intranet ▾ 7 ☆ 📄 Channel gathering all the notifications of the intranet project from Gitlab

vendredi



Intranet BOT 12:41 AM

jaime Arias (arias) approved merge request !4 *Feature: Assign Coordinator to Category* in [intranet / plugins / event\\_management](#)

# Development of the LIPN intranet

## Staging Server

The screenshot displays the LIPN intranet staging server interface. The browser address bar shows the URL [https://lipn.univ-paris13.fr/intranet-staging/room\\_booking/](https://lipn.univ-paris13.fr/intranet-staging/room_booking/). The page title is "LIPN intranet".

On the left, a sidebar lists rooms: "A303 Salle partagée..." (marked with a green checkmark) and "B107 Salle de séminaires...".

The main area is a calendar for the period "24 - 28 mars 2025". The calendar view shows a grid of days from Monday, March 24, to Friday, March 28. The time slots range from 07:00 to 19:00. Bookings are represented by green blocks:

- Monday, March 24:** A booking from 16:00 to 18:00 titled "Réunion (lacroix)".
- Wednesday, March 26:** A booking from 10:00 to 18:00 titled "French Polish Workshop on Abstract Machines (lenglet)".
- Thursday, March 27:** A booking from 15:00 to 17:00 titled "Séminaire doctorant (dufour)".
- Friday, March 28:** A booking from 10:00 to 18:00 titled "French Polish Workshop on Abstract Machines (lenglet)".

At the bottom of the calendar, there are three icons: "Publications", "Rooms", and "Déconnexion". The footer of the page shows the copyright symbol and the year "© 2025".

# Development of the LIPN intranet

## Production Server

The screenshot shows a web browser window displaying the LIPN intranet room booking calendar. The browser's address bar shows the URL `https://lipn.univ-paris13.fr/intranet/room_booking/calendar`. The page has a green header with the text "LIPN intranet" and navigation links "BOOK ROOM" and "DÉCONNEXION".

On the left, a sidebar titled "Rooms" lists two options: "A303 Salle partagée LAGA/LIPN" with a green checkmark, and "B107 Salle de séminaires LIPN".

The main area is a calendar for the dates "24 – 28 mars 2025". It features a time slot grid from 07:00 to 20:00. Bookings are shown as green blocks:

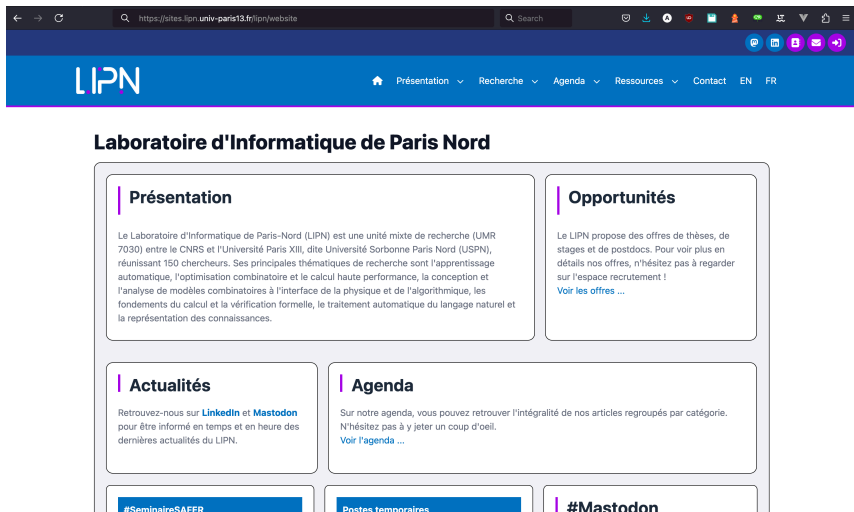
- Monday, March 24/03:** A booking from 16:00 to 18:00 labeled "Réunion (1. lacroix)".
- Tuesday, March 25/03:** A booking from 10:00 to 18:00 labeled "French Polish Workshop on Abstract Machines (1. lenglet)".
- Wednesday, March 26/03:** A booking from 15:00 to 17:00 labeled "Séminaire doctorant (1. dufour)".
- Friday, March 28/03:** A booking from 15:00 to 18:00 labeled "French Polish Workshop on Abstract Machines (1. lenglet)".

A red circular button with a white "+" sign is located in the bottom right corner of the calendar grid. The footer of the page shows "© 2025".



## 5. Gitlab Pages

# Gitlab Pages



# Gitlab Pages

```
1 image: ruby:latest
2
3 variables:
4   JEKYLL_ENV: production
5   LC_ALL: C.UTF-8
6
7 before_script:
8   - gem install jekyll bundler
9   - bundle install
10
11 pages:
12   stage: deploy
13   script:
14     - bundle exec jekyll build -d public
15   artifacts:
16     paths:
17       - public
18   only:
19     - main
```

## deploy



pages



pages:deploy

# Gitlab Pages

## URL Convention

Group  Project 

`https://sites.lipn.univ-paris13.fr/cosyverif/documentation`

Thank you!

# CI/CD at LIPN

Jaime Arias

`arias@lipn.univ-paris13.fr`

**Journée Respire**

April 1, 2025

