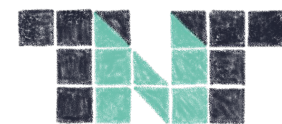


IDE as a Service

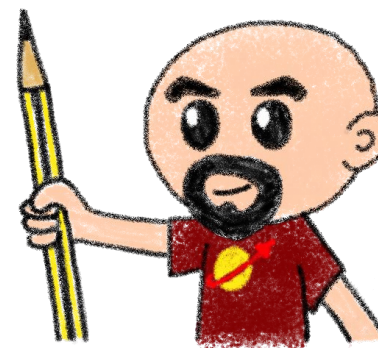
Philippe Charrière
@k33g_org

Horacio Gonzalez
@LostInBrittany





Qui sommes nous?

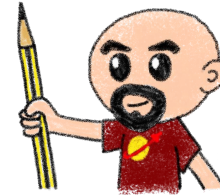


Qui sommes nous ?



Horacio Gonzalez:

Espagnol perdu en Bretagne
Head of DevRel @OVHcloud



Philippe Charrière:

TAM @ GitLab & Side Projects' Gardener 🌸🌸🌼

“Free DevRel” for beloved products





Gitpod Heroes



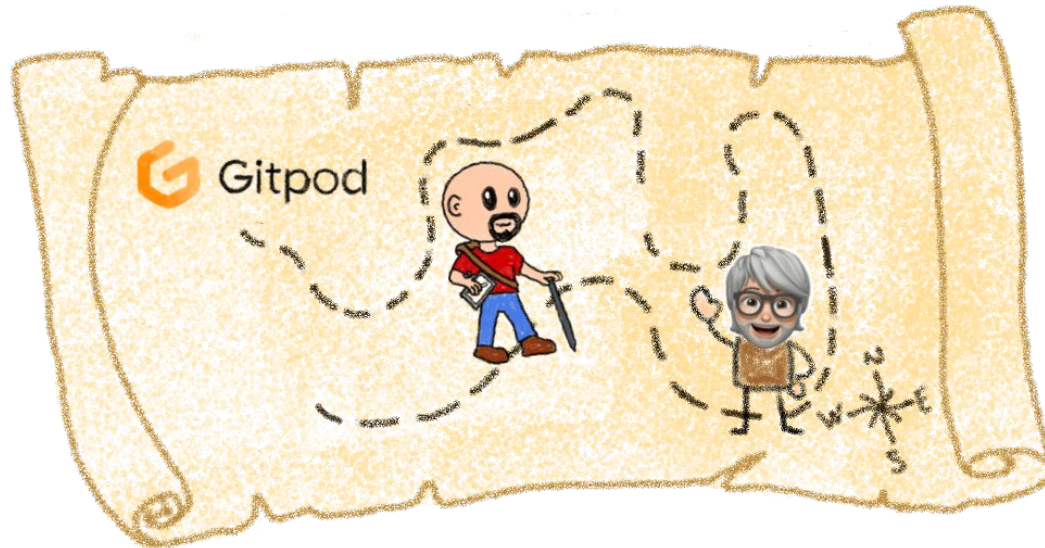
<https://www.gitpod.io/community/heroes>



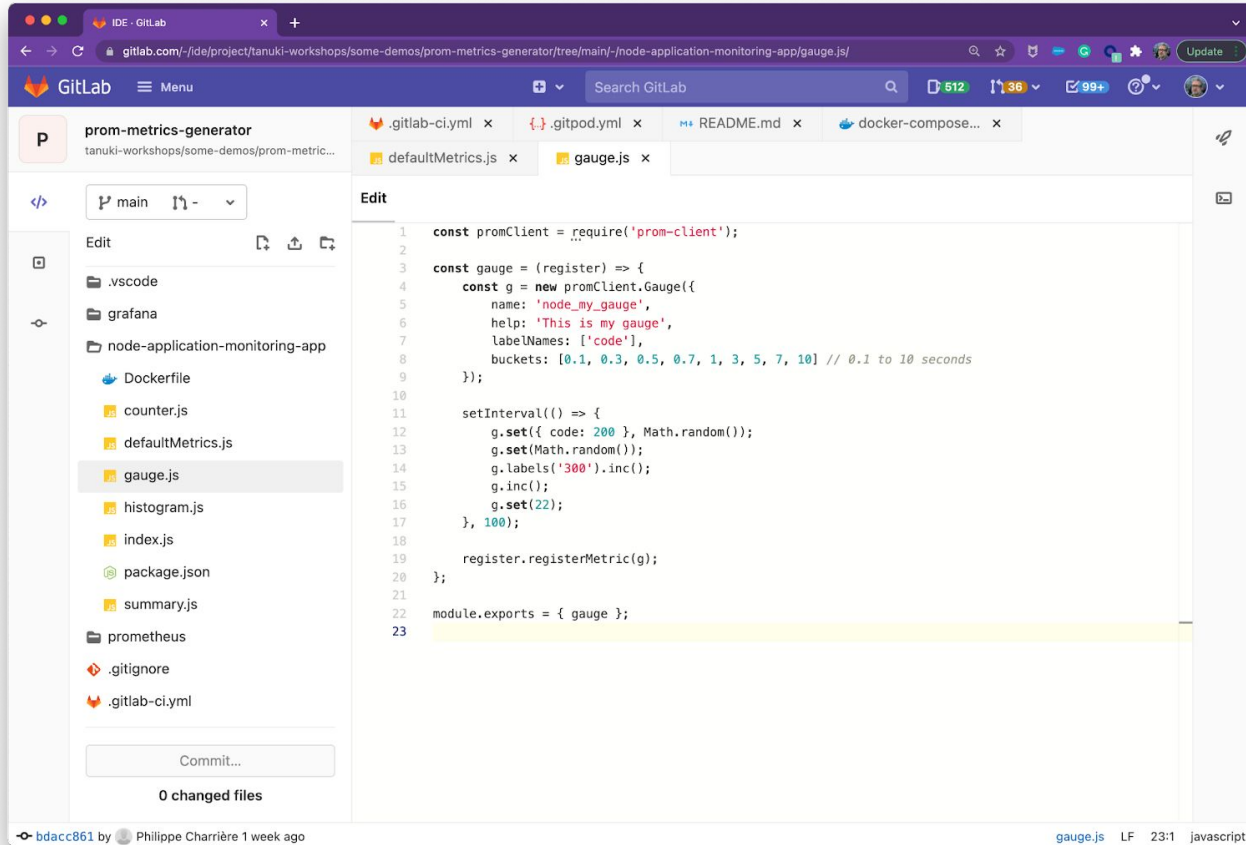
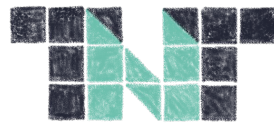
Comment on est tombés sur GitPod



Deux chemins vers la même destination..



GitLab WebIDE



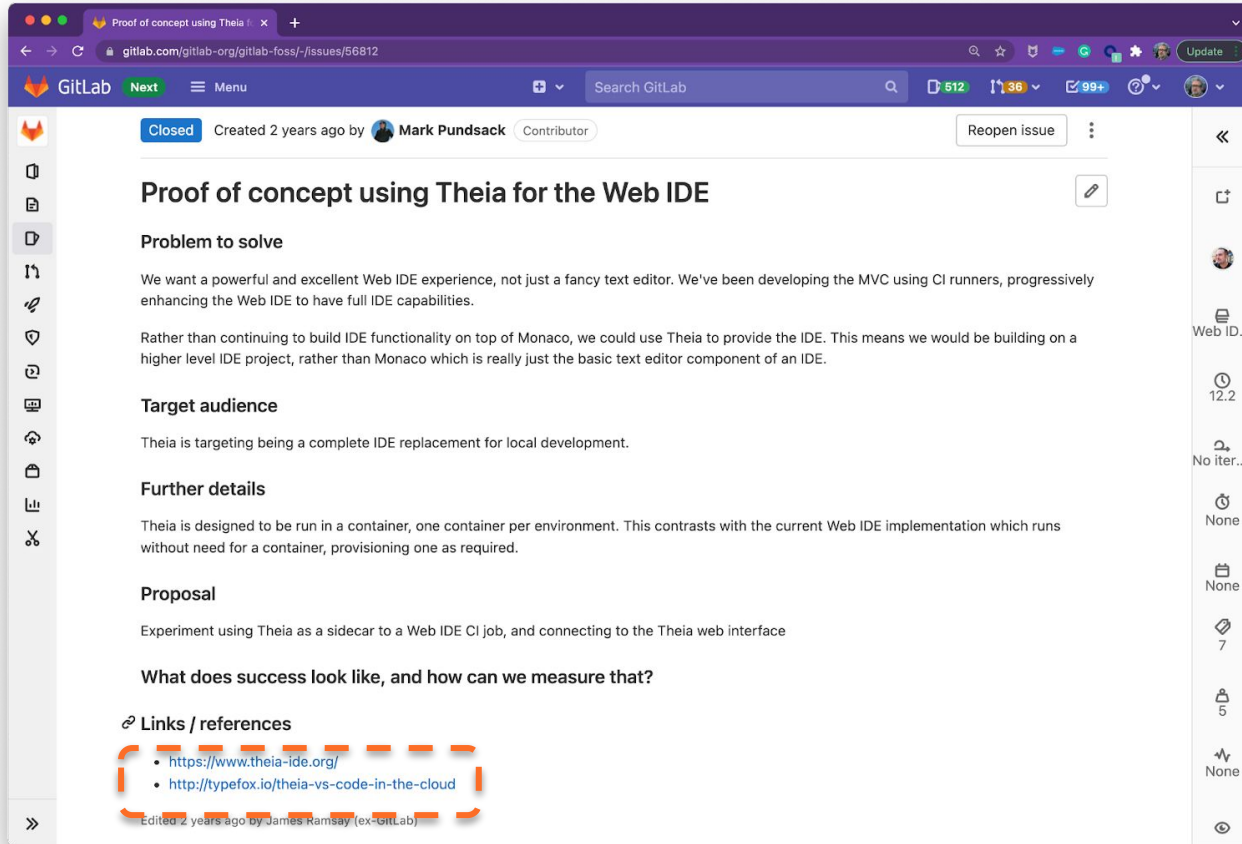
The screenshot shows the GitLab WebIDE interface. The browser address bar displays the URL: `gitlab.com/~fide/project/tanuki-workshops/some-demos/prom-metrics-generator/tree/main/~node-application-monitoring-app/gauge.js/`. The interface includes a sidebar with a file explorer showing the project structure, including folders like `grafana` and `node-application-monitoring-app`, and files like `gauge.js`. The main editor area shows the content of `gauge.js` with the following code:

```
1  const promClient = require('prom-client');
2
3  const gauge = (register) => {
4    const g = new promClient.Gauge({
5      name: 'node_my_gauge',
6      help: 'This is my gauge',
7      labelNames: ['code'],
8      buckets: [0.1, 0.3, 0.5, 0.7, 1, 3, 5, 7, 10] // 0.1 to 10 seconds
9    });
10
11    setInterval(() => {
12      g.set({ code: 200 }, Math.random());
13      g.set(Math.random());
14      g.labels('300').inc();
15      g.inc();
16      g.set(22);
17    }, 100);
18
19    register.registerMetric(g);
20  };
21
22  module.exports = { gauge };
23
```

The status bar at the bottom indicates the current file is `gauge.js`, the branch is `LF`, and the time is `23:1`. The user is identified as `bdacc861` by `Philippe Charrière`, with a commit made 1 week ago.

<https://github.com/microsoft/monaco-editor>

Theia-ide, TypeFox



The screenshot shows a GitLab issue page for the project 'gitlab-org/gitlab-foss'. The issue is titled 'Proof of concept using Theia for the Web IDE' and is marked as 'Closed'. It was created 2 years ago by Mark Pundsack. The issue content is structured as follows:

- Problem to solve**

We want a powerful and excellent Web IDE experience, not just a fancy text editor. We've been developing the MVC using CI runners, progressively enhancing the Web IDE to have full IDE capabilities.

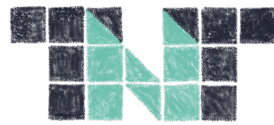
Rather than continuing to build IDE functionality on top of Monaco, we could use Theia to provide the IDE. This means we would be building on a higher level IDE project, rather than Monaco which is really just the basic text editor component of an IDE.
- Target audience**

Theia is targeting being a complete IDE replacement for local development.
- Further details**

Theia is designed to be run in a container, one container per environment. This contrasts with the current Web IDE implementation which runs without need for a container, provisioning one as required.
- Proposal**

Experiment using Theia as a sidecar to a Web IDE CI job, and connecting to the Theia web interface
- What does success look like, and how can we measure that?**
- Links / references**
 - <https://www.theia-ide.org/>
 - <http://typefox.io/theia-vs-code-in-the-cloud>

The issue was edited 2 years ago by James Ramsay (ex-GitLab).



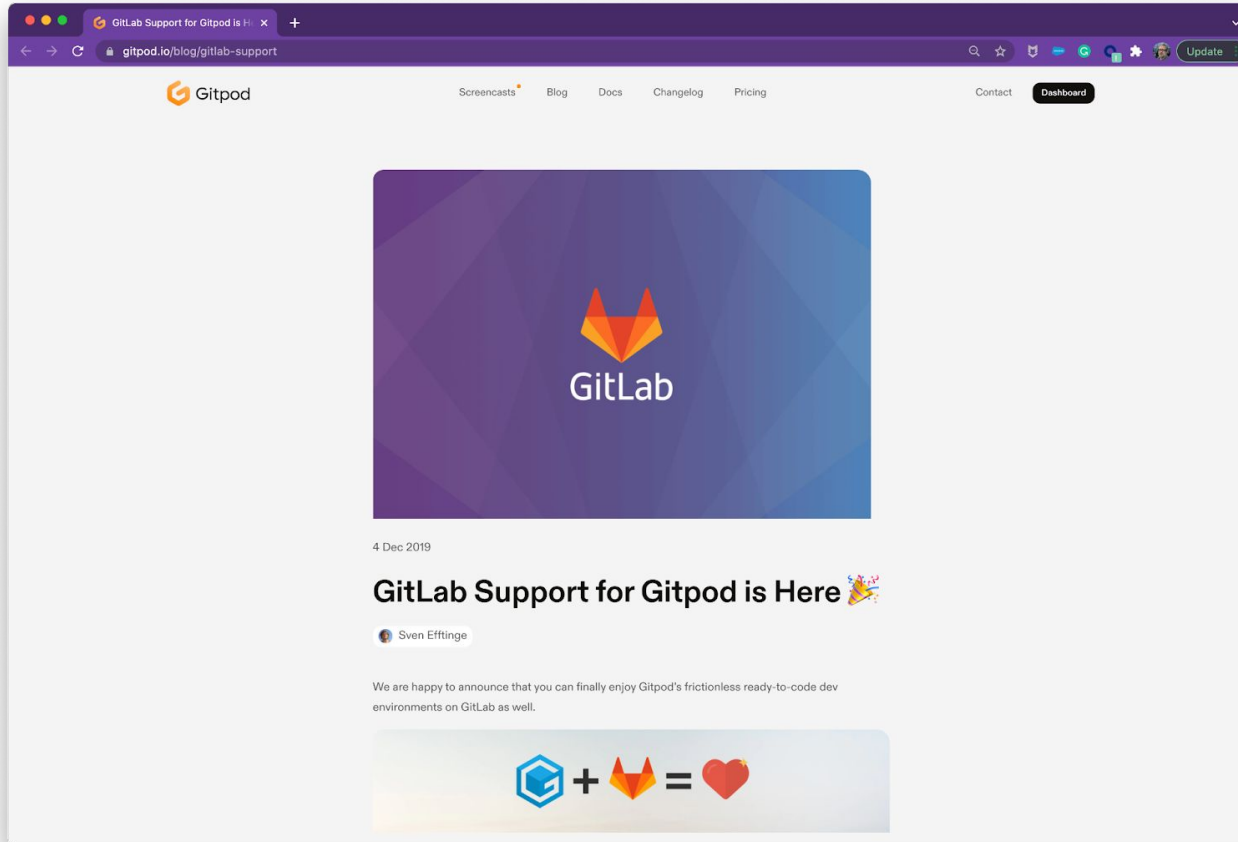
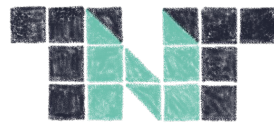
TypeFox Services Blog About Careers Contact

Gitpod: A One-Click Online IDE

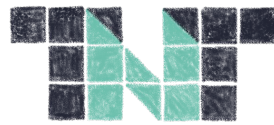
Tue Aug 28 2018 by [Moritz Eysholdt](#)

The screenshot shows a browser window with the URL `typefox.io/blog/gitpod-a-one-click-online-ide`. The main content area displays a code editor with a file explorer on the left and a terminal at the bottom. A sidebar on the right of the code editor shows a list of contributors, with a red circle highlighting a 'Gitpod' button next to a contributor's name. The Gitpod logo is also visible in the bottom right corner of the code editor interface.

We at TypeFox are thrilled to announce the public beta of [Gitpod](#). So far we have not been particularly loud about it, so it's likely you haven't heard about our first



Vous avez un workshop à préparer...



Félicitations Horacio

De : Big Conference <organization@bigconference.com>

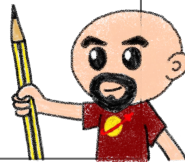
À : Horacio Gonzalez <horacio.gonzalez@gmail.com>



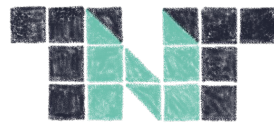
Salut Horacio !

Nous sommes heureux de vous annoncer que votre atelier "Apprendre les composants Web en deux heures" a été accepté à la Grande Conférence 2021.

Comme nous sommes une conférence hybride, vous aurez 50 participants physiquement dans la salle et 200 participants à distance. L'intégration est essentielle dans cette configuration, assurez-vous que les participants puissent facilement créer un environnement de travail en quelques minutes, même avec un mauvais réseau ou de vieux ordinateurs.



¡Hola Horacio!



What do I need to use this tutorial?

The only tool strictly needed to do this tutorial is a modern web browser (ideally [Chrome](#) or [Chromium](#)). The whole tutorial can be done via the browser on [GitPod](#), without installing anything in your computer. Simply click [here](#) or in the *Open in GitPod* button below.

 Open in Gitpod

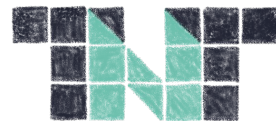
If you want to do the tutorial locally in your computer, you will need a modern web browser (ideally [Chrome](#) or [Chromium](#)), a text editor (we suggest the excellent [Visual Studio Code](#) or [Atom](#)) and [NodeJS](#).

Stencil requires a recent LTS version of NodeJS and `npm`. Make sure you've installed and/or updated Node before continuing.



<https://github.com/LostInBrittany/stencil-beers>



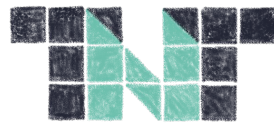


2022

A-t-on réellement besoin
d'un laptop à 6000€ ?



Laissez moi vous raconter une histoire...



Your next project

From: Boss <boss@mycompany.com>

To: Developer <dev@mycompany.com>

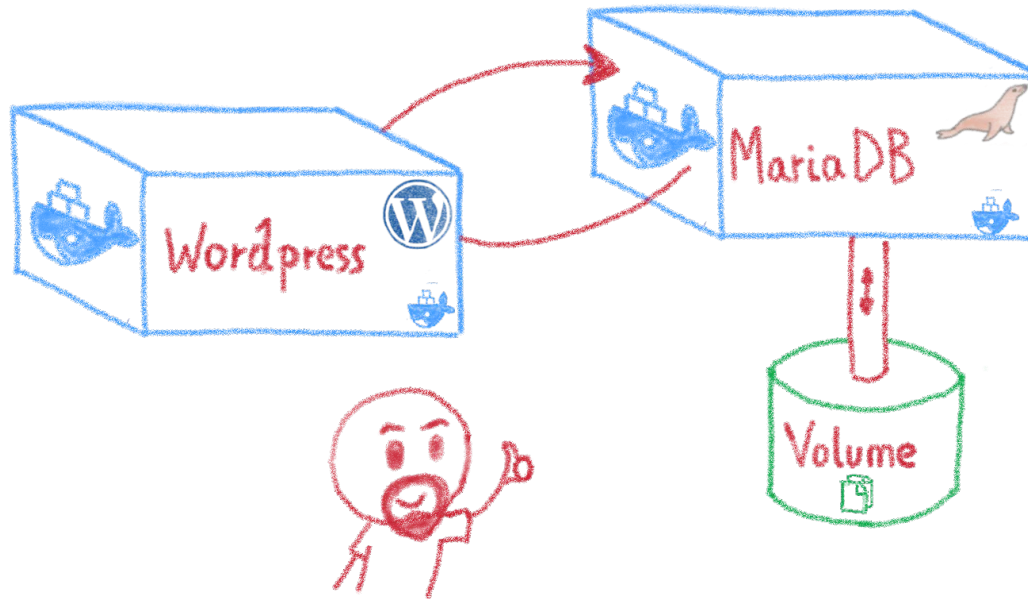
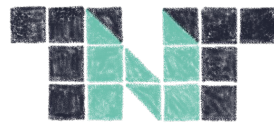
Hi Developer!

Next Monday you will begin a new project with Big Customer. You will be in a team building a system with a distributed architecture, using Redis & MariaDB storage, Go Python and Java applications, RabbitMQ event bus, ...

And here you have your new laptop, a good one this time, it has 8 GB RAM!

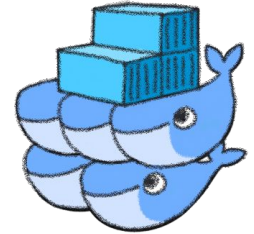
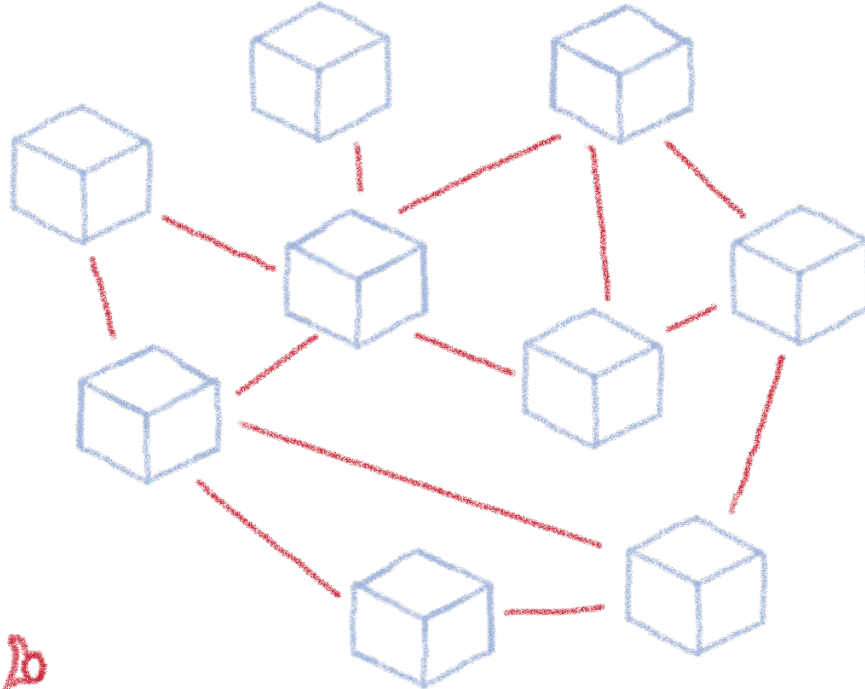


Les containers ont changé le jeu

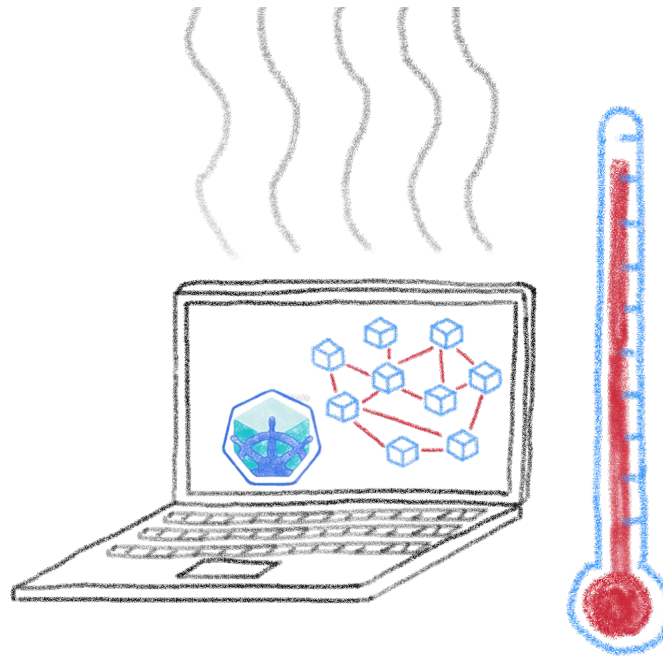
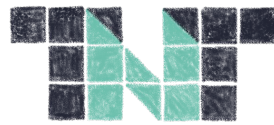


On peut utiliser dans son portable
la même archi qu'en prod

Même pour des architectures complexes

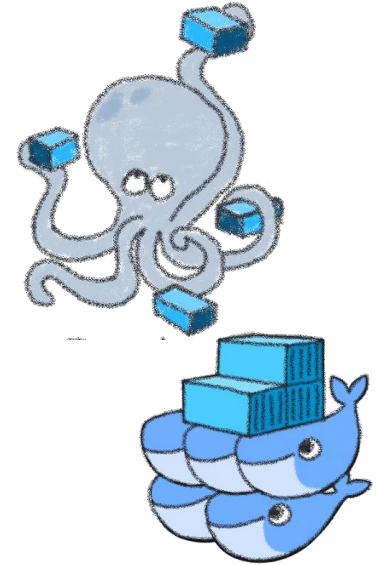
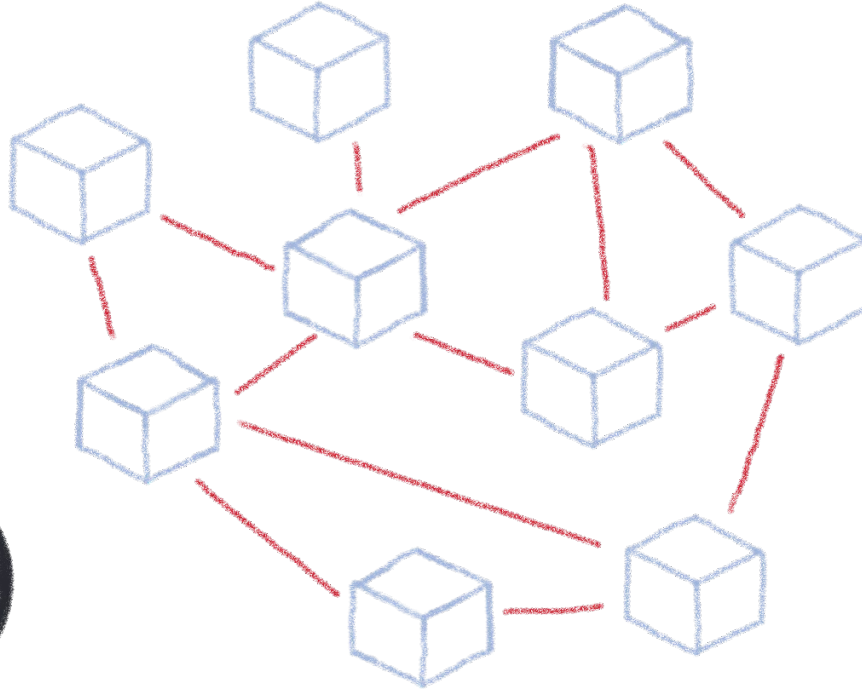
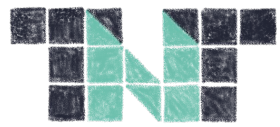


Mais un laptop reste un laptop...



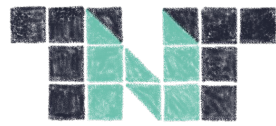
Et tous ces containers bouffent beaucoup de RAM et CPU

Sans parler du temps et effort



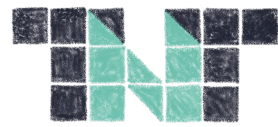
L'installation et la configuration ne sont pas si simples...

Dans l'idéal je voudrais un IDEaaS



Integrated Development Environment as a Service

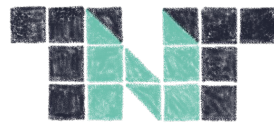
C'est là que Philippe m'a parlé de GitPod



Gitpod



Un IDE complet dans un onglet

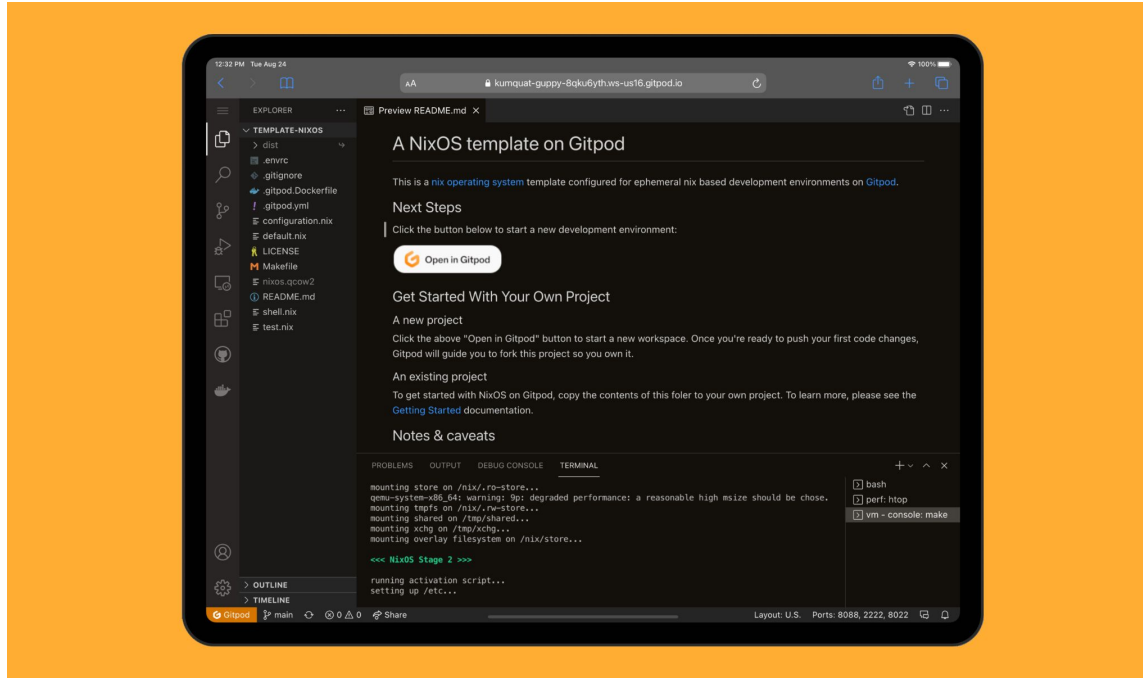
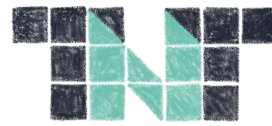


Un IDE sur le Web 🌐

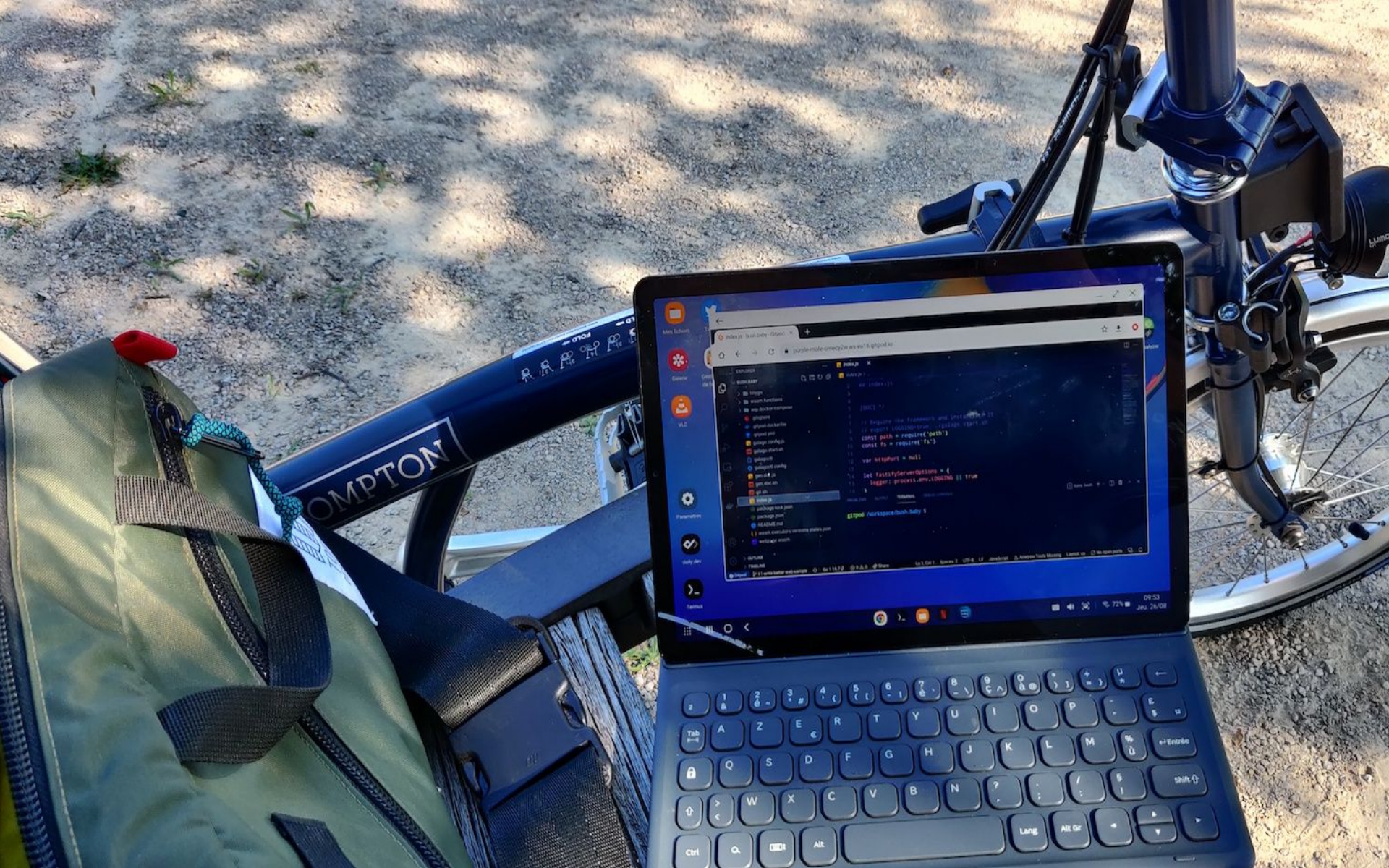
- Eclipse Theia → VS Code
- Remote
- Workspaces



Il est plus qu'un IDE



Un IDE n'est qu'un élément constitutif de
un environnement de dev basé sur le cloud



OMPTON

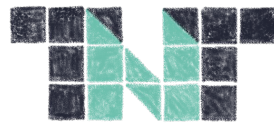
```
const path = require('path')
const fs = require('fs')

var httpPort = null
let fastifyServerOptions = {}
logger.process.env.DEBUG || true

getopt({
  // Requires the framework and starts the server
  // const path = require('path')
  // const fs = require('fs')
  // var httpPort = null
  // let fastifyServerOptions = {}
  // logger.process.env.DEBUG || true
})
```

Tab
A Z E R T Y U I O P
Q S D F G H J K L M % Ü
W X C V B N ? : ; ' / < > |
ctrl search Alt Lang Alt Gr

Sans avoir besoin d'un laptop surpuissant

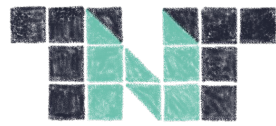


- Low cost ultraportable laptop
- Chromebook
- iPad / Tablette Android*



* L'expérience est encore un peu décevante dans certains cas...

Les projets GitPod se basent sur Git



Il peut se connecter sur :

- N'importe quelle version de GitPod:
 - GitLab
 - GitHub
 - BitBucket
- Versions on-premises ou open source
 - Votre propre dépôt Git privé



Gitpod

Gitpod - comment y accéder ?



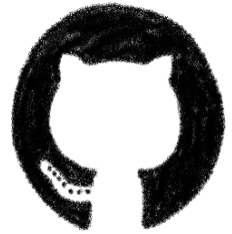
Gitpod.io ou Gitpod self hosted

Partir d'un dépôt Git

Ajout de <https://gitpod.io/#>


Extension navigateur

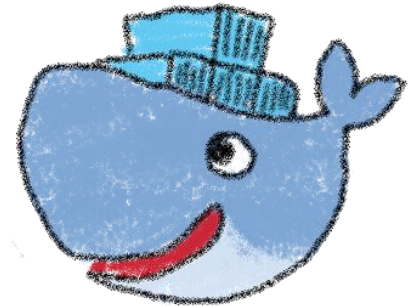
Gitlab integration



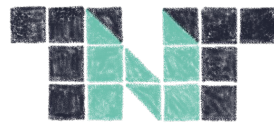
Anatomie d'un projet GitPod




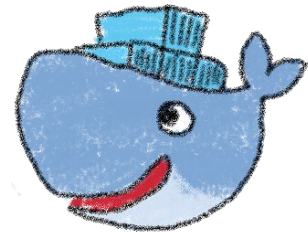
- Une image  Docker par défaut :
`gitpod/workspace-full`
- Deux fichiers  de configuration :
`.gitpod.dockerfile`
`.gitpod.yml`



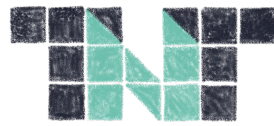
Projects & Workspaces



- Un workspace est un environnement  Docker complet
- Des workspaces multiples pour chaque projet
 - Par exemple pour des branches ou des commits spécifiques
- Les workspaces sont peuvent être partagés
- Communication possible entre workspaces



Combien ça coûte ?



- SaaS version

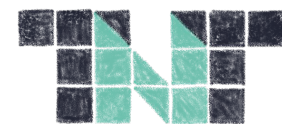


Basic Free	Personal €8 Per User/Month	Professional €23 Per User/Month	Unleashed €35 Per User/Month
<ul style="list-style-type: none">✓ 50 hours/month✓ Private & Public Repos✓ Unlimited Prebuilds✓ Shared Workspaces✓ Snapshots	<ul style="list-style-type: none">✓ 100 hours/month✓ 4 Parallel Workspaces✓ Unlimited Prebuilds✓ Shared Workspaces✓ Snapshots✓ 30min Timeout	<ul style="list-style-type: none">✓ All in Personal✓ 8 Parallel Workspaces✓ Unlimited Hours✓ Teams	<ul style="list-style-type: none">✓ All in Professional✓ 16 Parallel Workspaces✓ 1hr Timeout✓ 3hr Timeout boost
Try Now	Buy Now	Buy Now	Buy Now

- Free Professional Open Source plan: no limit (public projects)

- Self hosted (K8S) Open Source (Free) et Pro (29€)



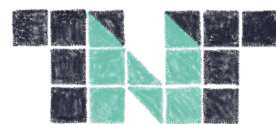


Pourquoi Gitpod plutôt que CodeSpace ?



VS





Pourquoi GitPod plutôt que CodeSpace ?

- Plus de ressources machine (cpu & ram)
- Disponible pour GitLab, BitBucket, GitHub
- **Open source**
- Self-Hosted possible (GCP, AWS, K8S)
- SnapShots
- PreBuilds



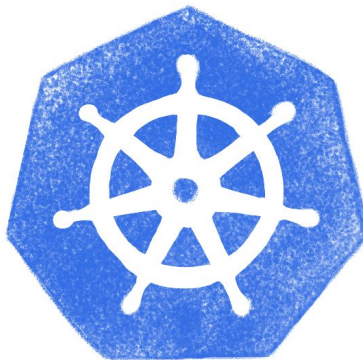
VS



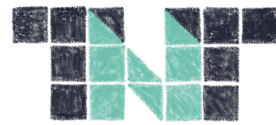


Installation de GitPod Open Source

Vous n'avez besoin que de Kubernetes...



Gitpod



Bonnes raisons d'utiliser GitPod Open Source :

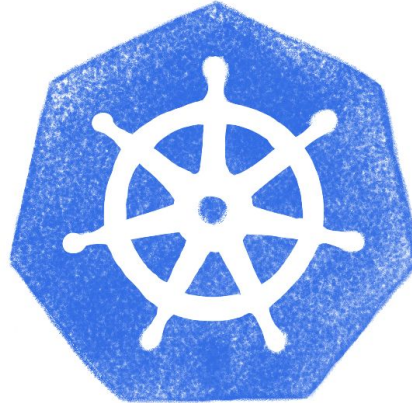
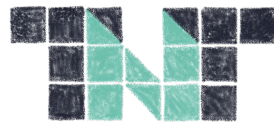
- Je ne peux pas utiliser un SaaS avec mon code source
 - Ça veut aussi dire pas de GitHub, GitLab or BitBucket...

Mauvaises raisons d'utiliser GitPod Open Source:

- Je suis radin et je ne veux pas payer le SaaS
 - Héberger GitPod vous coûtera du temps et de l'argent

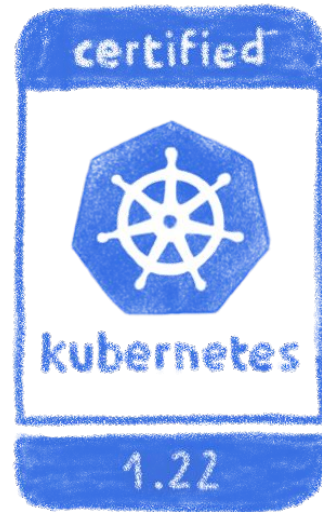
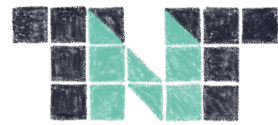


Pas trop compliqué à installer



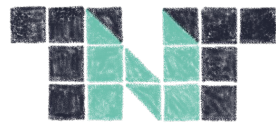
Mais vous avez besoin de connaître Kubernetes...

Choisissez plutôt une solution managée



Vous utilisez le cluster,
l'opérateur s'occupe des soucis

K3S sur une VM... ou avec CiVo



K3S

Pas besoin de cluster Kubernetes

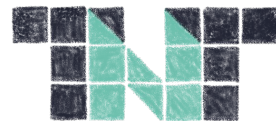
CIVO



Pourquoi ?

Mais avec des démos



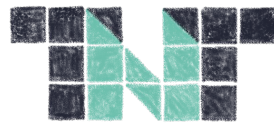


Hello World



https://gitlab.com/k33g_org/tnt2022/readme.md

Vous avez un workshop à préparer...



Félicitations Horacio

De : Big Conference <organization@bigconference.com>

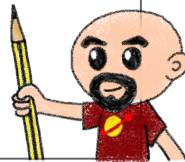
À : Horacio Gonzalez <horacio.gonzalez@gmail.com>



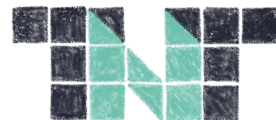
Salut Horacio !

Nous sommes heureux de vous annoncer que votre atelier "Apprendre les composants Web en deux heures" a été accepté à la Grande Conférence 2021.

Comme nous sommes une conférence hybride, vous aurez 50 participants physiquement dans la salle et 200 participants à distance. L'intégration est essentielle dans cette configuration, assurez-vous que les participants puissent facilement créer un environnement de travail en quelques minutes, même avec un mauvais réseau ou de vieux ordinateurs.



👋 ¡Hola Horacio!



What do I need to use this tutorial?

The only tool strictly needed to do this tutorial is a modern web browser (ideally [Chrome](#) or [Chromium](#)). The whole tutorial can be done via the browser on [GitPod](#), without installing anything in your computer. Simply click [here](#) or in the *Open in GitPod* button below.

 Open in Gitpod

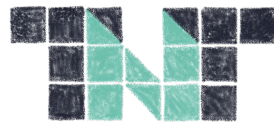
If you want to do the tutorial locally in your computer, you will need a modern web browser (ideally [Chrome](#) or [Chromium](#)), a text editor (we suggest the excellent [Visual Studio Code](#) or [Atom](#)) and [NodeJS](#).

Stencil requires a recent LTS version of NodeJS and `npm`. Make sure you've installed and/or updated Node before continuing.



<https://github.com/LostInBrittany/stencil-beers>





La nouvelle équipe arrive lundi

De : Patron <boss@mycompany.com>

À : Chef de projet <pm@mycompany.com>



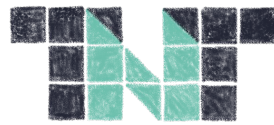
Salut chef de projet !

Votre équipe Shiny Project arrivera lundi prochain. Vous aurez 15 développeurs dans l'équipe, et ils doivent être productifs dès le premier jour. Un lot de 15 ordinateurs portables et 3 serveurs a été envoyé par DHL à votre bureau, veuillez vous assurer qu'ils sont installés et fonctionnent d'ici lundi matin.

Passé un bon weekend!

https://gitlab.com/k33g_org/tnt2022/prometheus-metrics-generator

👋 Hello again, Horacio!



Cours sur OVHcloud Managed Kubernetes

De : Partenaire <training@partner.com>

À : Horacio Gonzalez <horacio.gonzalez@ovhcloud.com>

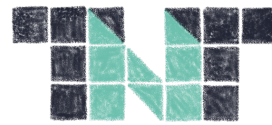


Salut Horacio !

Comme expliqué par téléphone, nous aimerions que vous suiviez une formation OVHcloud Managed Kubernetes pour notre organisation. Nous devons être entièrement basés sur le Web, les participants ne pourront rien installer sur leurs ordinateurs (même pas kubectl, helm ou tout autre outil).

Les participants n'auront que leurs navigateurs et leurs identifiants API OVHcloud.

Une plateforme prête à utiliser pour K8s




☰ README.md ✎

Gitpod for K8s

A working Gitpod setup for managing Kubernetes clusters. The workspace includes Kubectl, Helm & Kustomize.

To open the workspace, simply click on the *Open in Gitpod* button, or use [this link](#).

 Open in Gitpod

Configuring Kubeconfig

To administrate your Kubernetes cluster from Gitpod, you need to add your Kubeconfig to your Gitpod workspace. There are two ways to do it:

1- Copying the into your workspace

Copy your kubeconfig into a `~/.kube/config` file in your Gitpod workspace.

Releases

No releases published
[Create a new release](#)

Packages

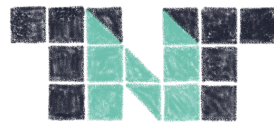
No packages published
[Publish your first package](#)

<https://github.com/LostInBrittany/gitpod4k8s>





Coucou Kristen

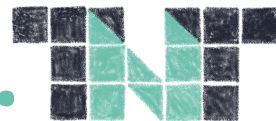


Coucou Kristen, il faudrait préparer 30 postes de développement Rust & Node.js pour le nouveau projet wasm pour le client Pouillou

https://gitlab.com/k33g_org/tnt2022/rust.wasm



Au fait Philippe, tes side-projects ...



Au fait Philippe pour tes side-projects, tu utilises aussi GitPod ?

amélioration workflow:

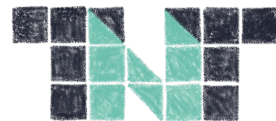
http://gitlab.com/k33g_org/tnt2022/rust.wasm/-/issues

boulot: runners on demand

https://gitlab.com/k33g_org/gitlab-cookbook/runners/six-runners-in-docker

oss: <https://github.com/suborbital/sat>

 **Hey Jane !**



Salut Jane, bienvenue chez GitLab, tu vas contribuer au code source d'une application avec une architecture multi nodes, avec du Redis, du PostgreSQL, du Ruby, du Go, du NodeJS, du ...

... Et voici ton portable avec 8Go de RAM 😊

<https://gitlab.com/gitlab-org/gitlab-development-kit/-/blob/main/doc/howto/gitpod.md>



GitLab.org / GitLab · GitLab x background_migrations_contr x Groups · Explore · GitLab x +

gitlab.com/gitlab-org/gitlab/

GitLab Next Menu Search GitLab 431 30 99+

GitLab Project ID: 278964 3042 Star 4344 Fork

249,555 Commits 8,208 Branches 1,977 Tags 8 GB Files 66.1 TB Storage 115 Releases

GitLab is an open source end-to-end software development platform with built-in version control, issue tracking, code review, CI/CD, and more. Self-host GitLab on your own servers, in a container, or on a cloud provider.

pipeline passed Ruby Coverage unknown JS Coverage 77.87%

Launch a ready-to-code development environment for your project.

Gitpod

master gitlab / + History Find file Gitpod Clone

Merge branch 'aqualls-feature-flag-fixes' into 'master' ... 2694f275

README Other CHANGELOG CONTRIBUTING CI/CD configuration

Name	Last commit	Last update
.github	Rename GitLab CE to FOSS in GitHub issue...	1 year ago
.gitlab	Merge branch '339312-consider-running-r...	7 hours ago
.theia	Revert "Move host authorization to to gitpo...	10 months ago
app	Merge branch 'fix-broken-image' into 'mas...	3 hours ago

<< Collapse sidebar

https://gitpod.io/#https://gitlab.com/gitlab-org/gitlab/-/tree/master/



background_migrations_contr... Projects - Dashboard - GitLab

aqua-earwig-wpty7g9l.ws-eu16.gitpod.io

EXPLORER

GITLAB

- .bundle
- .github
- .gitlab
- ci
- issue_templates
- merge_request_templates
- changelog_config.yml
- CODEOWNERS
- route-map.yml
- .theia
- app
- assets
- channels
- controllers
 - admin
 - application_settings
 - ci
 - clusters
 - serverless
 - abuse_reports_controller.rb
 - application_controller.rb
 - application_settings_controller.rb
 - applications_controller.rb
 - background_jobs_controller.rb
 - background_migrations_controller...**
 - broadcast_messages_controller.rb
 - clusters_controller.rb
 - cohorts_controller.rb
 - dashboard_controller.rb
 - deploy_keys_controller.rb
 - dev_ops_report_controller.rb
 - gitaly_servers_controller.rb

OUTLINE

TIMELINE

background_migrations_controller.rb

```
1 # frozen_string_literal: true
2
3 class Admin::BackgroundMigrationsController < Admin::ApplicationController
4   feature_category :database
5
6   def index
7     @relations_by_tab = {
8       'queued' => batched_migration_class.queued.queue_order,
9       'failed' => batched_migration_class.failed.queue_order,
10      'finished' => batched_migration_class.finished.queue_order.reverse_order
11    }
12
13    @current_tab = @relations_by_tab.key?(params[:tab]) ? params[:tab] : 'queued'
14    @migrations = @relations_by_tab[@current_tab].page(params[:page])
15    @successful_rows_counts = batched_migration_class.successful_rows_counts(@migrations.map(&:id))
16  end
17
18  def pause
19    migration = batched_migration_class.find(params[:id])
20    migration.paused!
21  end
end
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
ok: run: /workspace/gitlab-development-kit/services/rails-background-jobs: (pid 2232) 0s, normally down
ok: run: /workspace/gitlab-development-kit/services/rails-web: (pid 2233) 0s, normally down
ok: run: /workspace/gitlab-development-kit/services/sshd: (pid 2234) 0s, normally down
ok: run: /workspace/gitlab-development-kit/services/webpack: (pid 2235) 0s, normally down

=> GitLab will be available at http://127.0.0.1:3000.
master
SYNCING lefthook.yml
SERVED HOOKS: pre-push, prepare-commit-msg
Updated 1 path from the index
Awaiting port 3000... ok
Waiting for GitLab at https://3000-aqua-earwig-wpty7g9l.ws-eu16.gitpod.io .....
Mon 30 Aug 2021 07:06:16 PM UTC - GitLab is up (took ~0.5 minutes)
gitpod /workspace/gitlab (master) $
```

GDK: bash

bash

Ln 1, Col 1 Spaces: 2 UTF-8 LF Ruby Layout: French Ports: 3808, 2222, 3000



background_migrations_contr... Groups - Explore - GitLab

3000-aqua-earwig-wpty7g9l.ws-eu16.gitpod.io/explore/groups

ws-77f99086-86dd-4849-a2fa-fbb53d7f2a00 17ms / 17 pg 0 gitaly 3ms / 9 redis 0 es 6ms / 1 external 603 | 648 | 1097 / 22 total Download groups

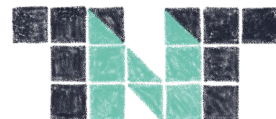
GitLab Menu Search GitLab

Groups New group

Your groups **Explore public groups**

G GitLab Instance Owner	0 1 1
H H5bp Owner At corporis libero ut neque nisi dolores.	0 1 5
T Twitter Owner Enim quis alias aut exercitationem natus.	0 1 5
F Flightjs Owner Animi delectus dignissimos hic ullam nam.	0 1 5
J Jashkenas Owner Nisi voluptas...	0 1 5
C Commit451 Owner Quibusdam enim...	0 1 5
G Gnuwget Owner Sunt quis nisi perferendis nulla at aut.	0 1 5
G Gitlab Org Owner Mollitia quos consequuntur ut et deleniti.	0 2 5

5 minutes

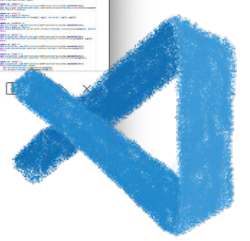
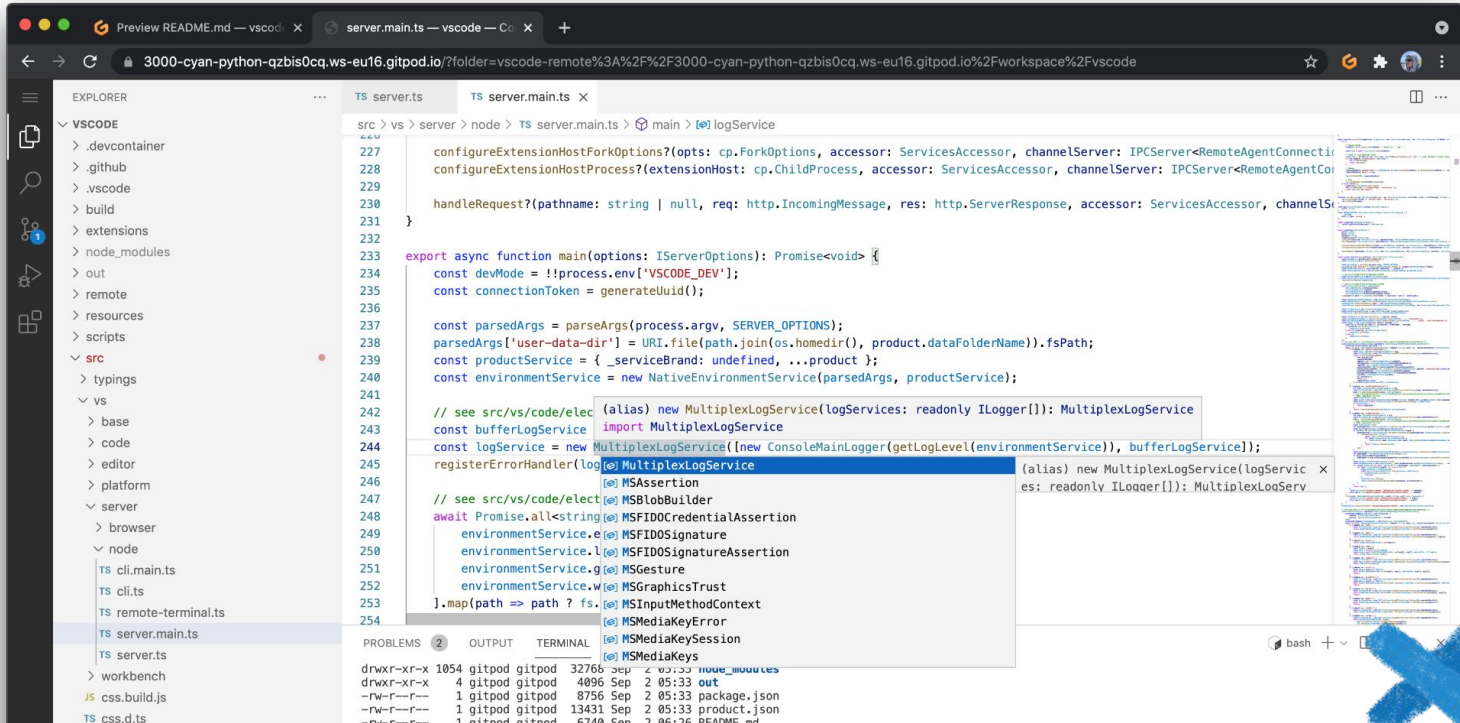


One more thing...

Comme disait le maître



VS Code dans le navigateur pour tout le monde






OpenVSCode Server

Projet open source par GitPod



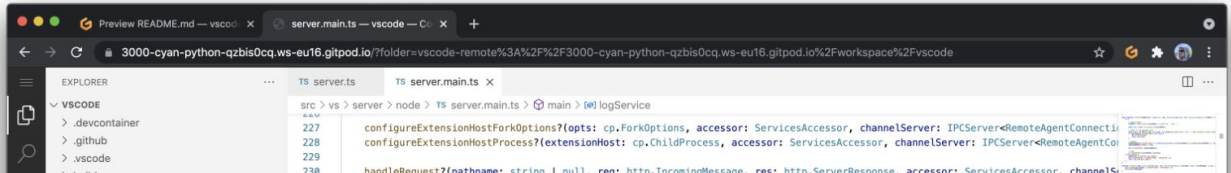
☰ README.md

OpenVSCode Server

 Gitpod ready-to-code  chat 

What is this?

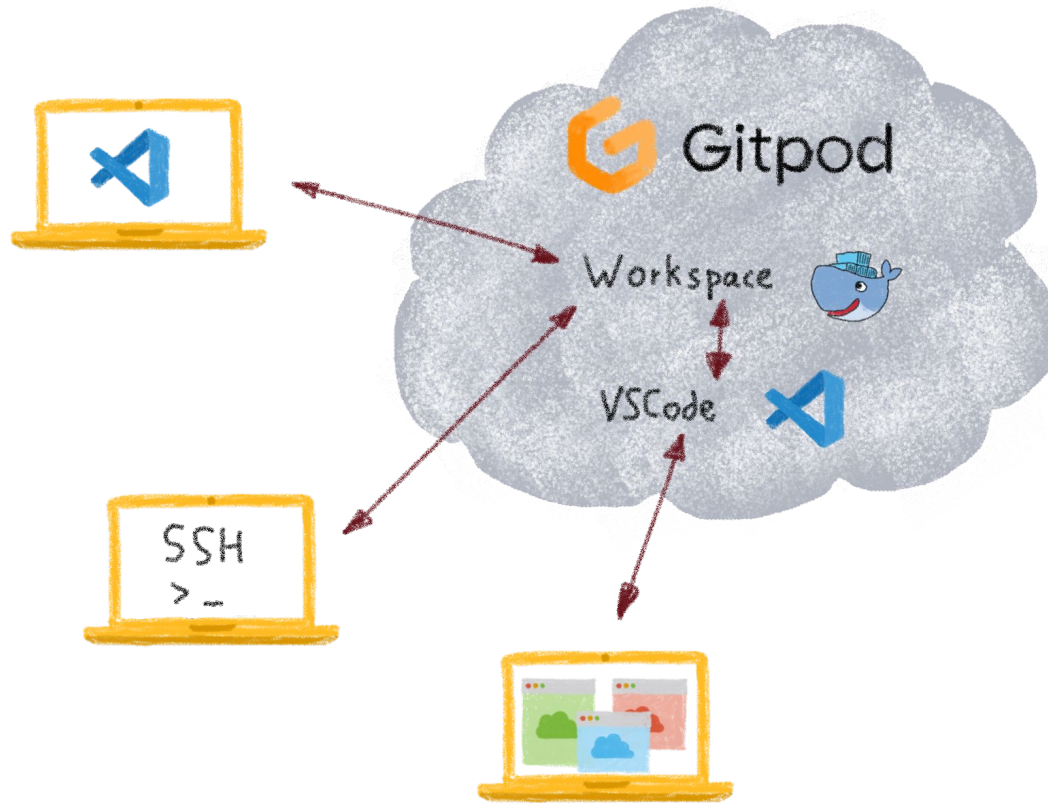
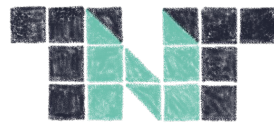
This project provides a version of VS Code that runs a server on a remote machine and allows access through a modern web browser. It's based on the very same architecture used by [Gitpod](#) or [GitHub Codespaces](#) at scale.



Supporté par GitLab, VMware, Uber, SAP, Sourcegraph, SUSE...

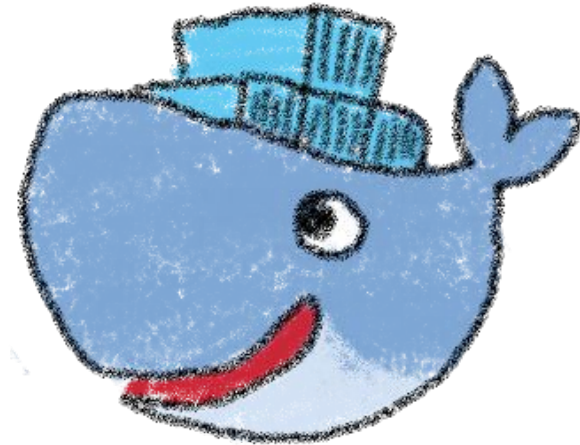
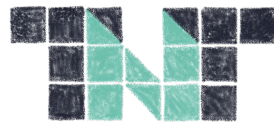
<https://github.com/gitpod-io/openvscode-server/>

C'est quoi la différence avec Gitpod?



GitPod est plus qu'un IDE

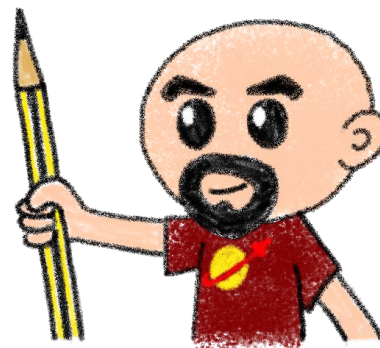
Très simple à déployer



```
docker run -it --init -p 3000:3000 -v  
"$ (pwd) :/home/workspace:cached" gitpod/openvscode-server
```



Conclusion



Bossez léger 😊





```
1 /* [DOC]
2 ## routes.wasm.build
3
4 |
5 [DOC] */
6
7 const fs = require('fs')
8 const spawn = require('child_process').spawn
9 const fork = require('child_process').fork
10
11 const streamToFile = require('./stream.helper').streamToFile
12
13 /*
14 think to externalize this part => to another server
15 route(s) to remove a function (and it's worker)
16 handle the running status of the worker
17 handle the timeout of the workers
18 */
19
20 /*
21 perhaps don't wait for the end of the build
22 or use SSE?
23 or something else
24 */
25
26 async function build (fastify, options) {
27
28 /* [DOC]
29 ### route: `//functions/build`
30
31 This route allows to post a GoLang code. The code will be built by the server (TinyGo is
32 installed on the server side). Then a worker will be created to handle the new function.
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
```



Bossez ... 😊



