

# FinistDevs



## How CDEs have changed my life (yeah, they have!)

Horacio Gonzalez

2023-03-22

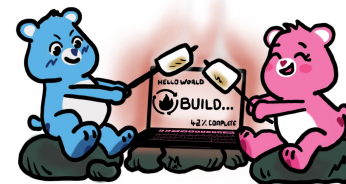


@LostInBrittany

# Horacio Gonzalez

**@LostInBrittany**

Spaniard lost in Brittany,  
developer, dreamer and  
all-around geek



# OVHcloud: A global leader



**Web Cloud & Telecom**



**Private Cloud**



**Public Cloud**



**Storage**



**Network & Security**



**30 Data Centers**  
in 12 locations



**34 Points of Presence**  
on a 20 TBPS Bandwidth Network



**2200 Employees**  
worldwide



**115K Private Cloud**  
VMS running



**300K Public Cloud**  
instances running



**380K Physical Servers**  
running in our data centers



**1 Million+ Servers**  
produced since 1999



**1.5 Million Customers**  
across 132 countries



**3.8 Million Websites**  
hosting



**1.5 Billion Euros Invested**  
since 2016



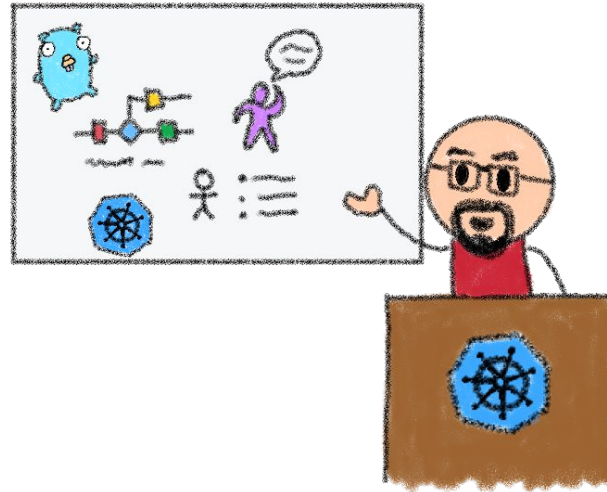
**P.U.E. 1.09**  
Energy efficiency indicator



**20+ Years in Business**  
Disrupting since 1999

# It's conferences fault

Conference-driven learning...



# I got good news... didn't I?

## Congratulations Horacio

From: Big Conference <[organization@bigconference.com](mailto:organization@bigconference.com)>

To: Horacio Gonzalez <[horacio.gonzalez@gmail.com](mailto:horacio.gonzalez@gmail.com)>



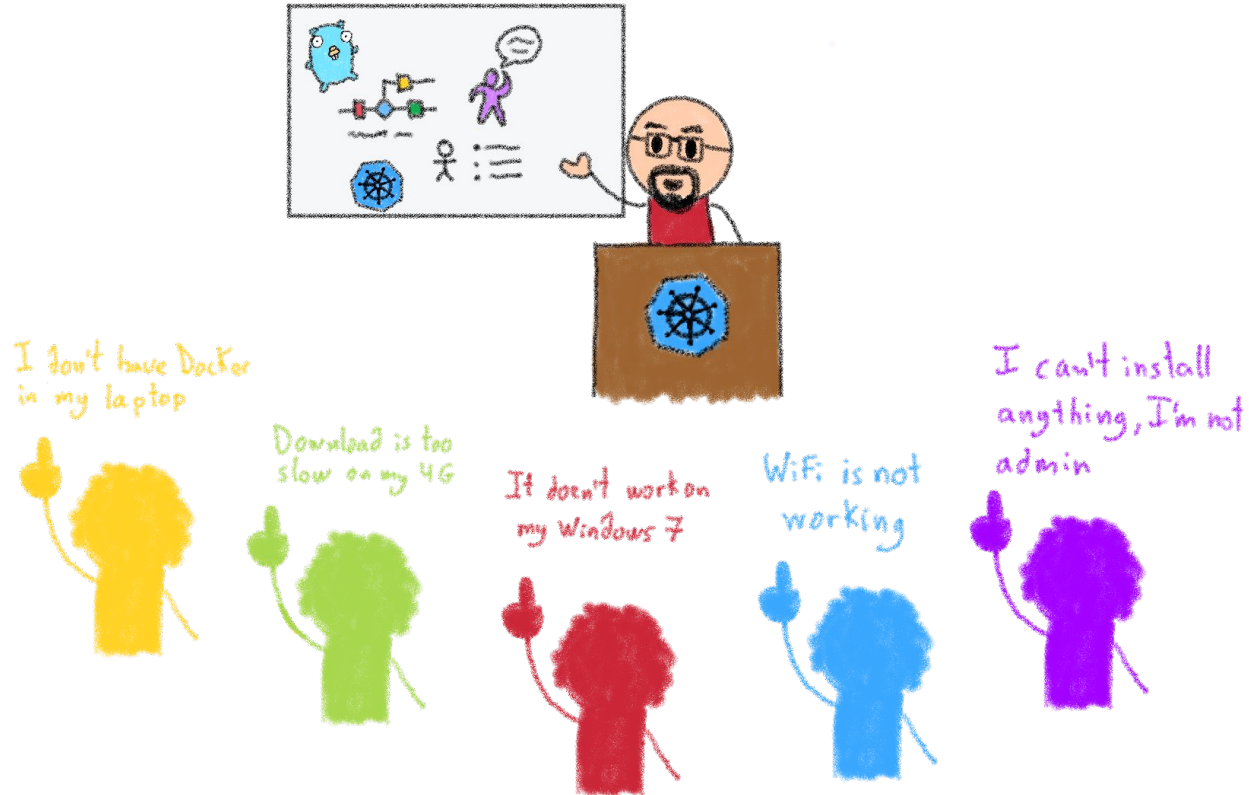
Hi Horacio!

We are happy to tell you that your workshop "Learn Web Components in two hours" has been accepted at Big Conference 2021.

As we are an hybrid conference, you will have 50 attendees physically in the room and 200 remote attendees. The onboarding is critical in this setup, please be sure that attendees can easily spawn a working environment in several minutes, even with a bad network or old computers.



# I had already tried to do it right



Spoiler: it was an impossible mission



# I began asking around

I need a way to  
do an online workshop...

Let me tell you  
about  Gitpod



Philippe  
@k33g\_.org

Until Philippe introduced me to GitPod



# It sounded too good to be real



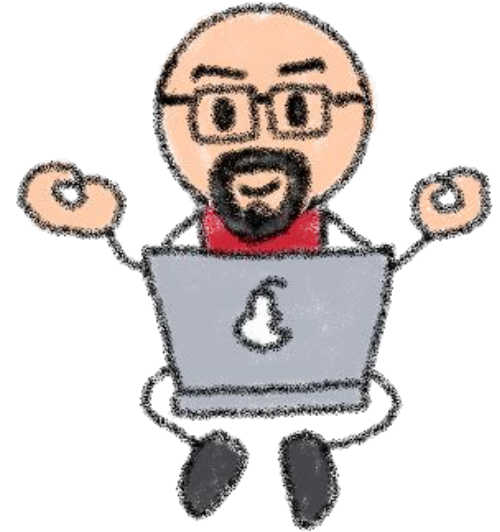
An Integrated Development Environment as a Service



# But after testing it, I was reassured



Gitpod

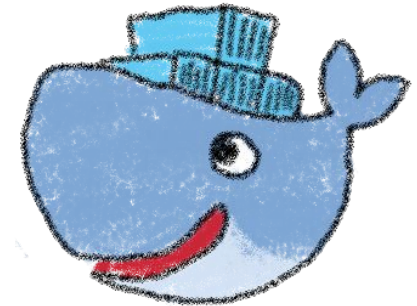


It was more than a simple editor in a browser:  
an automated, ephemeral developer environment in the web



# I learnt how to tweak the config

- Modifying the default  Docker image:  
`gitpod/workspace-full`
- And the two optional  configuration files:  
`.gitpod.dockerfile`  
`.gitpod.yml`




# And added GitPod to my repository



## 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 bellow.

 [Open in Gitpod](#)

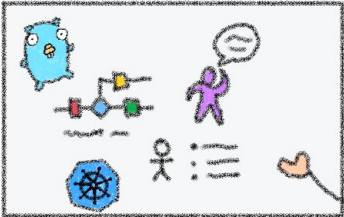
If you want to do the tutorial locally in your computer, you will need a modern web browser (ideally [Chrome](#) or [Chromium](#)), a text editor (we suggest the excellent [Visual Studio Code](#) or [Atom](#))) and [NodeJS](#).

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

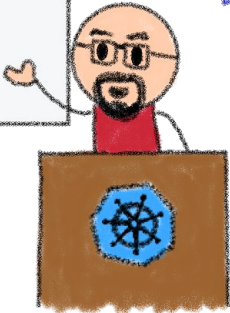
<https://github.com/LostInBrittany/stencil-beers>



# The workshop was a success



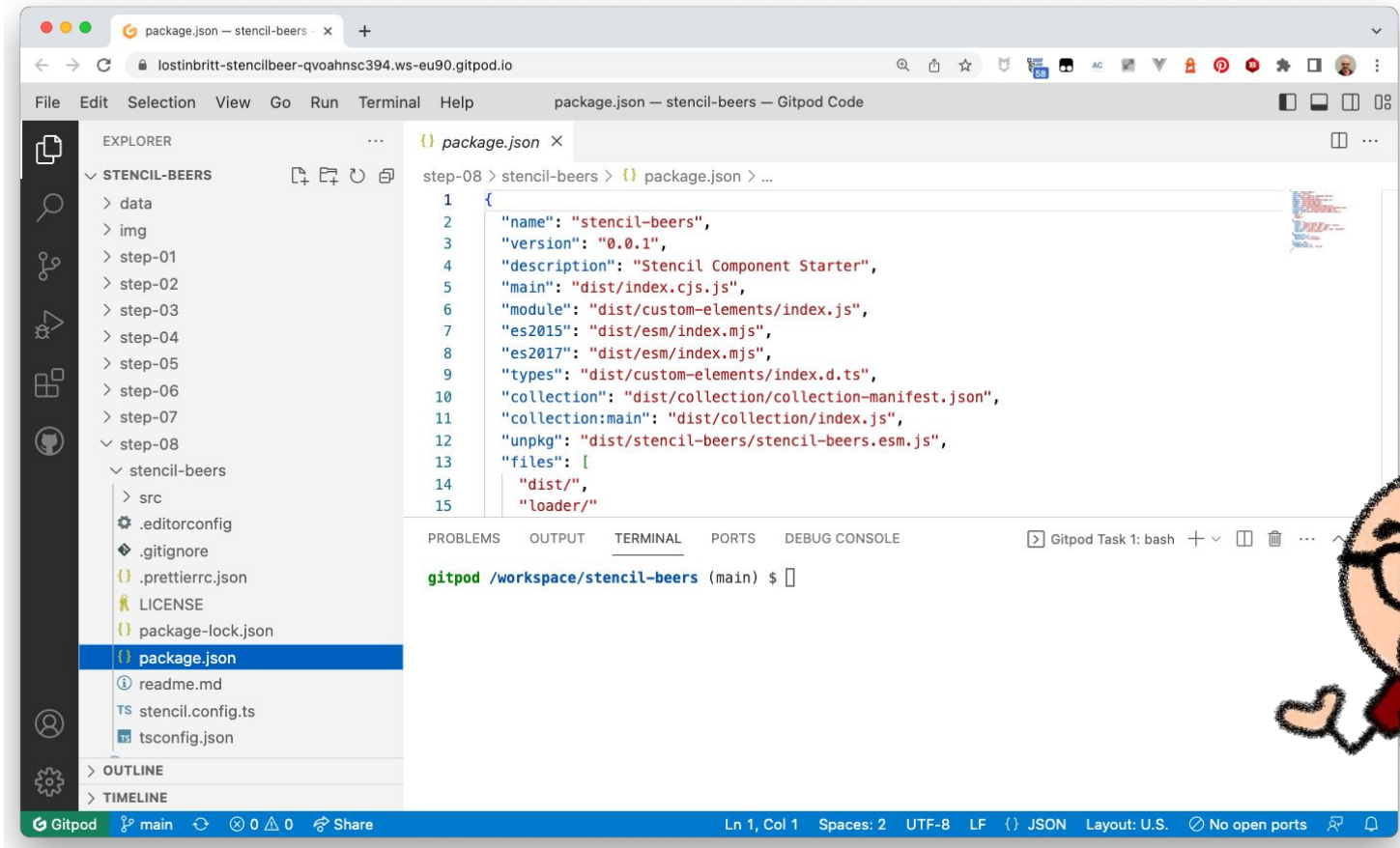
And this is the end.  
Did you like it?



And I was fully convinced



# Demo time!



The screenshot shows a Gitpod IDE interface. The Explorer on the left shows a project structure with a folder named 'step-08' containing a subfolder 'stencil-beers'. The 'package.json' file is selected and its content is displayed in the main editor. The terminal at the bottom shows the command prompt 'gitpod /workspace/stencil-beers (main) \$'.

```
1 {
2   "name": "stencil-beers",
3   "version": "0.0.1",
4   "description": "Stencil Component Starter",
5   "main": "dist/index.cjs.js",
6   "module": "dist/custom-elements/index.js",
7   "es2015": "dist/esm/index.mjs",
8   "es2017": "dist/esm/index.mjs",
9   "types": "dist/custom-elements/index.d.ts",
10  "collection": "dist/collection/collection-manifest.json",
11  "collection:main": "dist/collection/index.js",
12  "unpkg": "dist/stencil-beers/stencil-beers.esm.js",
13  "files": [
14    "dist/",
15    "loader/"
```



# GitPod in the classroom

The more I used GitPod,  
the more use-cases I saw



# Integrated learning platform

## OVHcloud Managed Kubernetes course

From: Training Partner <[organization@training@partner.com](mailto:organization@training@partner.com)>

To: Horacio Gonzalez <[horacio.gonzalez@ovhcloud.com](mailto:horacio.gonzalez@ovhcloud.com)>



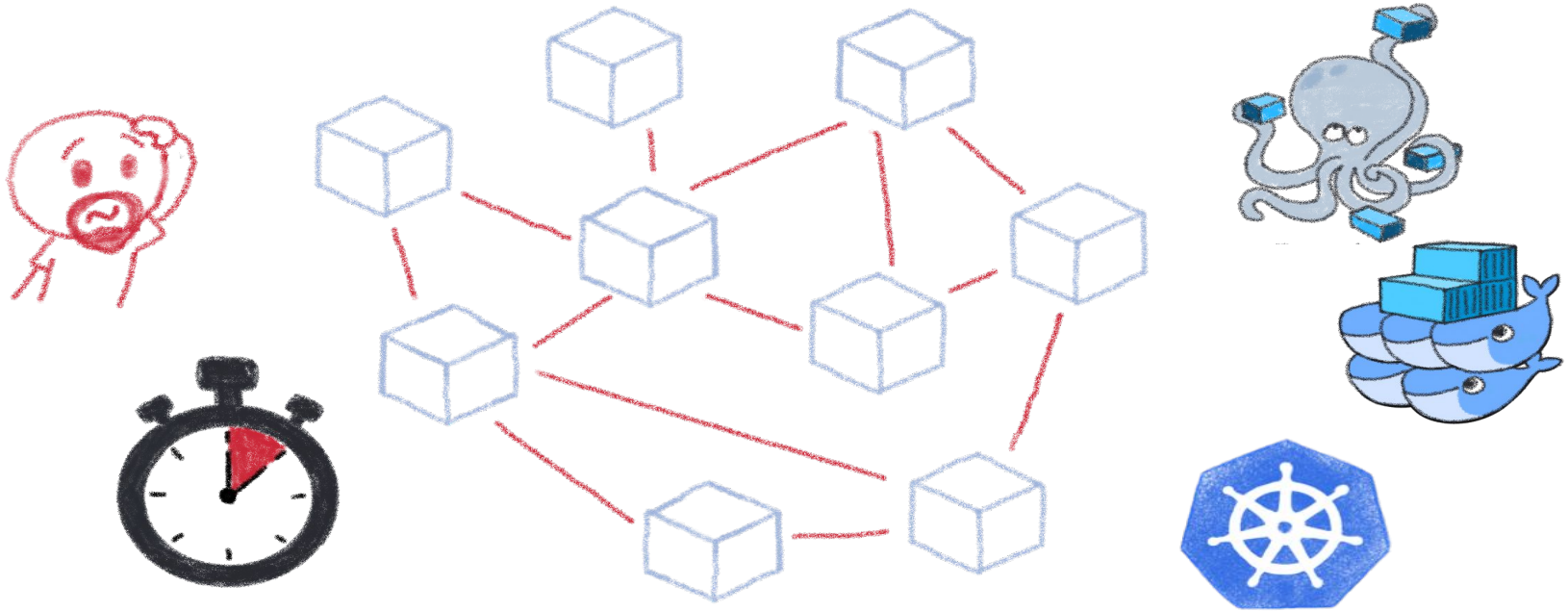
Hi Horacio!

As explained by phone, we would like you to do an OVHcloud Managed Kubernetes course for our organisation. We need to be fully web based, attendees won't be able to install anything in their computers (not even `kubectl`, `helm` or any other tool).

Attendees will only have their browsers and their OVHcloud API credentials.



# Kubernetes is complex



Even more if you need to install lots of things before beginning the course: kubectl, helm, docker...




# Integrated learning platform for 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](#)

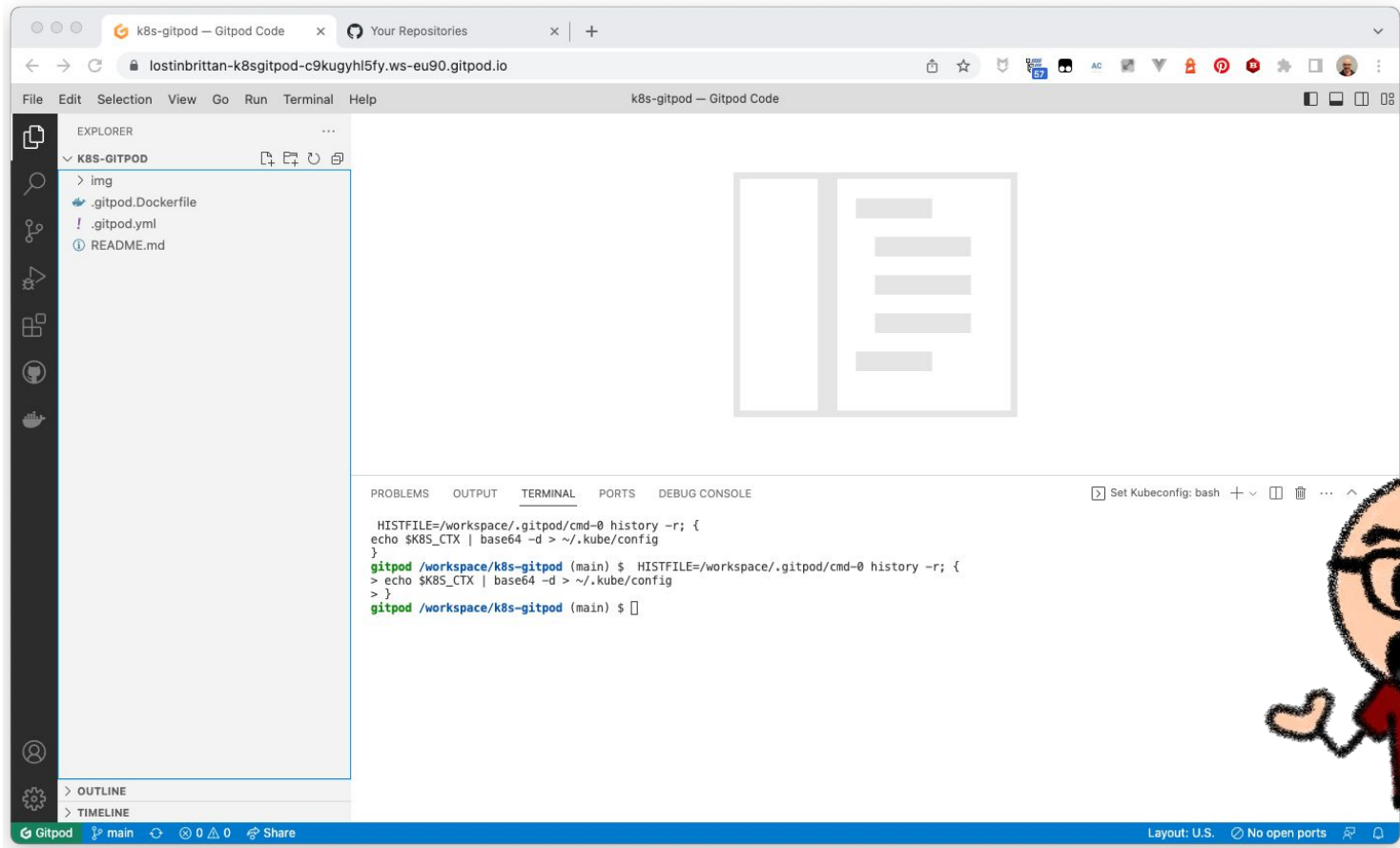
## Packages

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

<https://github.com/LostInBrittany/k8s-gitpod>



# Demo time!



The screenshot shows a Gitpod IDE window with the following components:

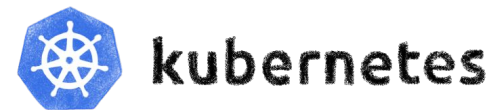
- Browser Tab:** k8s-gitpod — Gitpod Code
- Address Bar:** lostinbrittan-k8sgitpod-c9kugyh15fy.ws-eu90.gitpod.io
- File Explorer (Left Panel):**
  - Root: K8S-GITPOD
  - Subfolders: > img
  - Files: .gitpod.Dockerfile, ! .gitpod.yml, README.md
- Terminal (Bottom Panel):**

```
HISTFILE=/workspace/.gitpod/cmd-0 history -r; {  
echo $K8S_CTX | base64 -d > ~/.kube/config  
}  
gitpod /workspace/k8s-gitpod (main) $ HISTFILE=/workspace/.gitpod/cmd-0 history -r; {  
> echo $K8S_CTX | base64 -d > ~/.kube/config  
> }  
gitpod /workspace/k8s-gitpod (main) $
```
- Terminal Title Bar:** Set Kubeconfig: bash
- Bottom Status Bar:** Gitpod | main | 0 0 0 | Share | Layout: U.S. | No open ports

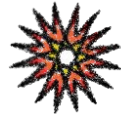


**OpenStack + S3 + K8s +... = 🤖 ?**

**First steps with OVHcloud Public Cloud**



# Openstack-based Public Cloud



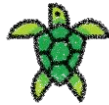
NOVA



GLANCE



NEUTRON



KEYSTONE



HORIZON



CINDER

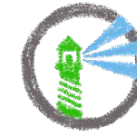
And the whole galaxy of OpenStack components...



# With many managed services



kubernetes



HARBOR



How to simplify the first steps?




# GitPod eliminates client-side complexity



Working IDE and tooling in a few minutes



# An example: Kubernetes & OpenStack


☰ README.md 

## Gitpod GitPod Workspace for OVHcloud Openstack and Kubernetes

A working Gitpod setup to work with OVHcloud Openstack and Managed Kubernetes. The workspace includes:

- For Openstack: Openstack, Nova, Cinder, Neutron, Swift, Glance, Octavia, Mistral, Barbican and ironic clients, awscli
- For Kubernetes: Kubectl, Helm, Velero & Kustomize.

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

 Open in Gitpod

If you prefer manually setting up the variables, you can also source the `scripts/setOpenstack.sh` file.

```
source ./scripts/setOpenstack.sh
```



<https://github.com/LostInBrittany/k8s-and-openstack-gitpod>

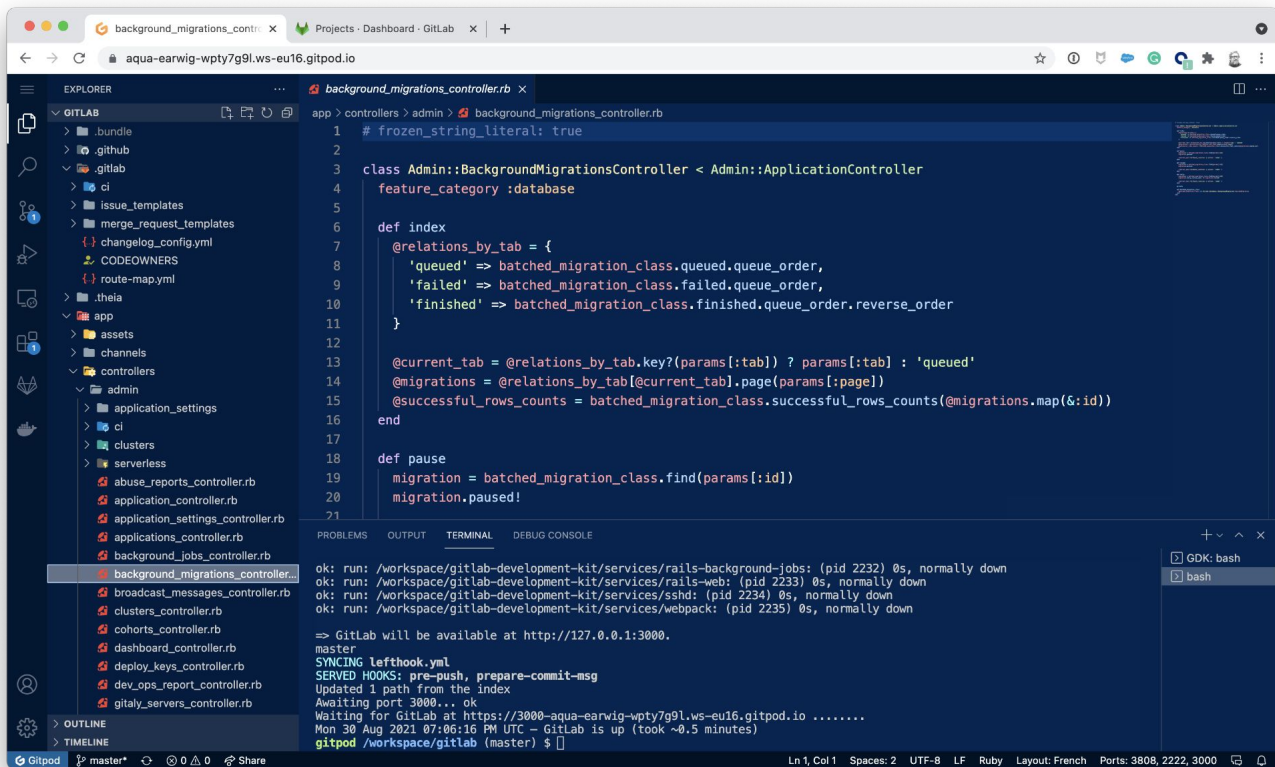


# And then I got a Team

## The Wonderful DevRel Dream Team



# And GitPod was quickly accepted



The screenshot shows a GitPod workspace with a file explorer on the left, a code editor in the center, and a terminal at the bottom. The code editor displays the following Ruby code:

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

The terminal output shows the following messages:

```
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) $
```

A powerful tool in our DevRel arsenal



# It made complicated things easy

How to layout, test and prepare for publishing  
a hand-drawn book on  kubernetes on a laptop  
with neither admin account nor  docker?

Easy! Simply use  Gitpod!

@AurelieVache



# It made complicated things easy

So in order to render the doc I need  
a virtual env Python, a hundred of libs,  
Pelican site generator and several  
custom plugins?

Give me two days, I am putting it all  
on  Gitpod!




@RacLePoulpe



# It made complicated things easy

I really love Open Source, and  Gitpod is the perfect tool to make contributors' onboarding fast & painless 






Oh, and I also love how it makes easy to prepare a workshop on  kubernetes operators in  Java with  QUARKUS without any problem!

@WilJagsx



# It made complicated things easy

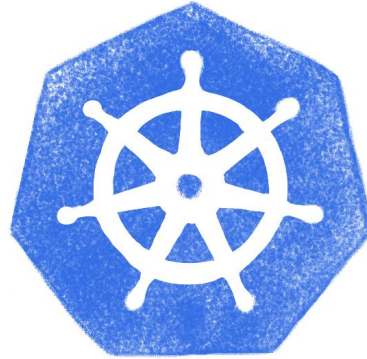
When I want to experiment with  Wasm, or to verify if @k33g-org's latest idea is as wonderful as it seems, I need a quick way to have the latest  Rust &  TinyGo environments.

@TitiMoby



# Installing GitPod Open Source

You only need a Kubernetes...



# Good and bad reasons

Good reasons to use GitPod Open Source:

- I can't use a SaaS to deal with my source code
  - That also means no GitHub, GitLab or BitBucket...

Bad reasons to use GitPod Open Source:

- I am cheap and I don't want to pay the SaaS
  - It's going to cost you time and money to host it



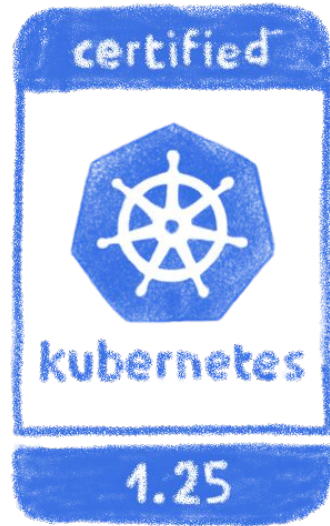
# Not a straightforward task...



You need some Kubernetes skills...



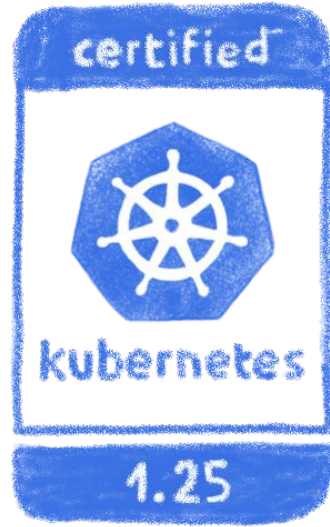
# If you don't need to build it, choose a certified managed solution



You get the cluster,  
the operator get the problems



# Using OVHcloud Managed Kubernetes



A easy, cost-effective solution

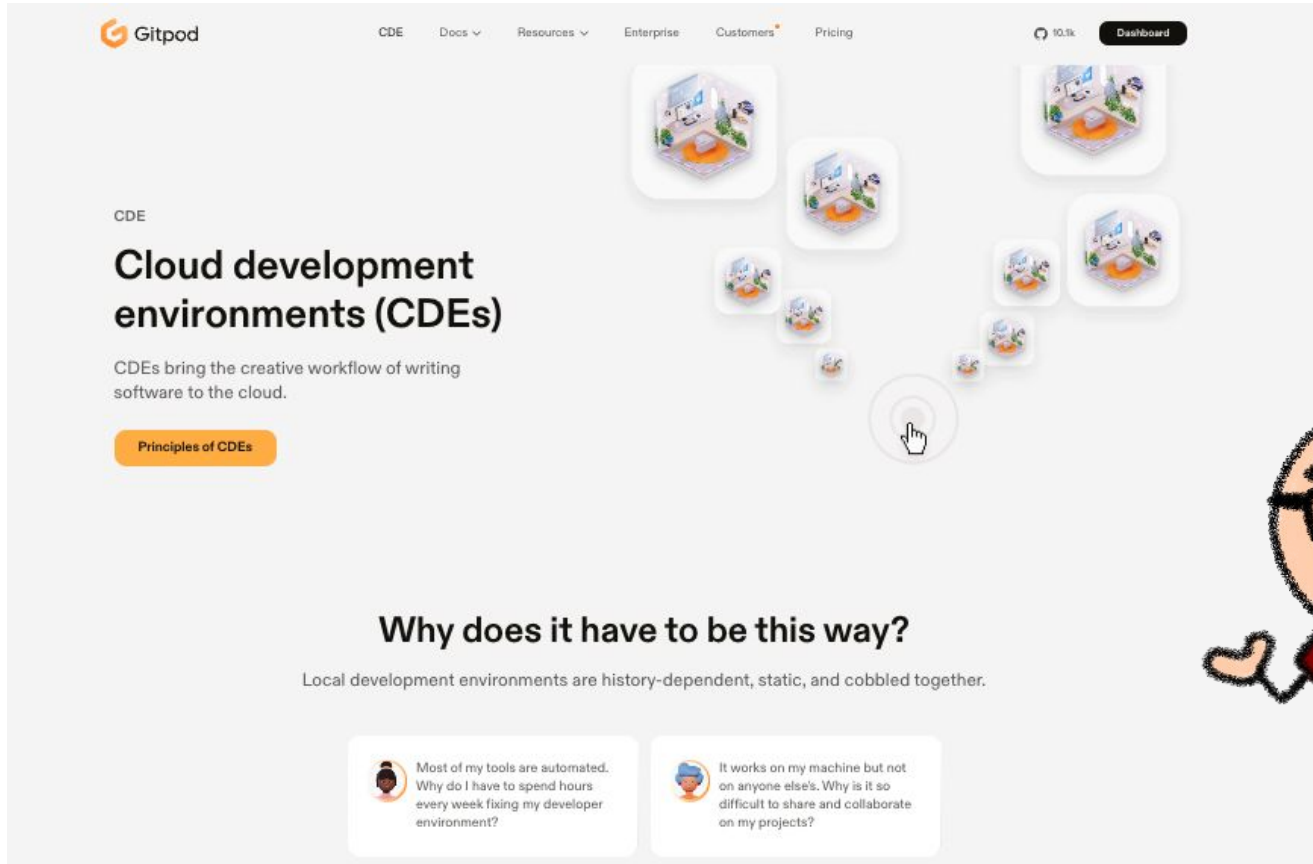


# Cloud Developer Environments

What are those CDEs in the title?



# Cloud Developer Environments



The screenshot shows the Gitpod website's landing page for Cloud Developer Environments (CDEs). The header includes the Gitpod logo, navigation links for CDE, Docs, Resources, Enterprise, Customers, and Pricing, and a user profile icon with '10.1k' and a 'Dashboard' button. The main content area features a large heading 'Cloud development environments (CDEs)' and a sub-heading 'CDEs bring the creative workflow of writing software to the cloud.' Below this is a button labeled 'Principles of CDEs'. A large graphic of several floating 3D-style icons representing developer environments is positioned to the right. At the bottom, a section titled 'Why does it have to be this way?' explains that local development environments are history-dependent, static, and cobbled together. Two callout boxes provide examples: one about automated tools and another about machine-specific configurations.

Gitpod

CDE Docs Resources Enterprise Customers Pricing

10.1k Dashboard

CDE

## Cloud development environments (CDEs)

CDEs bring the creative workflow of writing software to the cloud.

Principles of CDEs

### Why does it have to be this way?

Local development environments are history-dependent, static, and cobbled together.

Most of my tools are automated. Why do I have to spend hours every week fixing my developer environment?

It works on my machine but not on anyone else's. Why is it so difficult to share and collaborate on my projects?



# GitHub Codespaces



The screenshot shows a web browser window displaying a GitHub Codespace. The browser's address bar shows the URL `lostinbrittany-legendary-couscous-j6g9gx75xfqj9.github.dev`. The interface is divided into several sections:

- EXPLORER (Left Panel):** Shows a file tree for the repository `STENCIL-BEERS [CODESPACES]`. The tree includes a `data` folder, an `img` folder, a series of `step-01` through `step-08` folders, and files for `.gitignore`, `LICENSE.md`, and `README.md`.
- Main Content Area:** Displays the content of the selected `README.md` file. It features a button `Open in Gitpod` and a heading `Stencil Beers`. Below the heading, there is a paragraph: "I have built this [Stencil tutorial](#) as a quick entry point to [Stencil](#)." A code block follows, containing the text: "Stencil is a toolchain for building reusable, scalable Design Systems. Generate small, blazing fast, and 100% standards based Web Components that run in every browser."
- Terminal (Bottom Panel):** Shows a terminal window with the prompt `@LostInBrittany → /workspaces/stencil-beers (main) $`. The terminal is currently empty.
- Bottom Status Bar:** Displays `Codespaces`, the current branch `main`, and a `Live Share` button. The layout is set to `U.S.`

# GitLab Web IDE



The screenshot displays the GitLab Web IDE interface in a browser window. The address bar shows the URL `gitlab.com/-/ide/project/LostInBrittany/stencil-beers/edit/main/-/`. The interface is divided into several sections:

- EXPLORER:** A sidebar on the left showing a file tree. The current project is `stencil-beers`, which contains a `src` directory and several configuration files including `.editorconfig`, `.gitignore`, `.prettierrc.json`, `LICENSE`, `package-lock.json`, `package.json`, `readme.md`, `stencil.config.ts`, `tsconfig.json`, `README.md`, and another `.gitignore`, `LICENSE.md`, and `README.md`.
- Get Started:** A central panel with a heading "Get started with the new GitLab Web IDE". It includes a sub-heading "Give the new Web IDE a spin" and a message: "Don't worry, you can always switch back to the legacy Web IDE in your user preferences. The legacy Web IDE will be available until the new Web IDE is out of beta." There is a blue button labeled "Configure a remote connection".
- TERMINAL:** A panel at the bottom with tabs for "PROBLEMS", "OUTPUT", and "TERMINAL". The terminal area contains the text: "The terminal requires a runtime environment capable of executing code. For more information, see Remote Development." and a blue button labeled "Configure a remote connection".

The bottom status bar shows "GitLab", "main", "0 0 0", and "Layout: U.S."



**Your Self-Hosted Remote Development Platform**

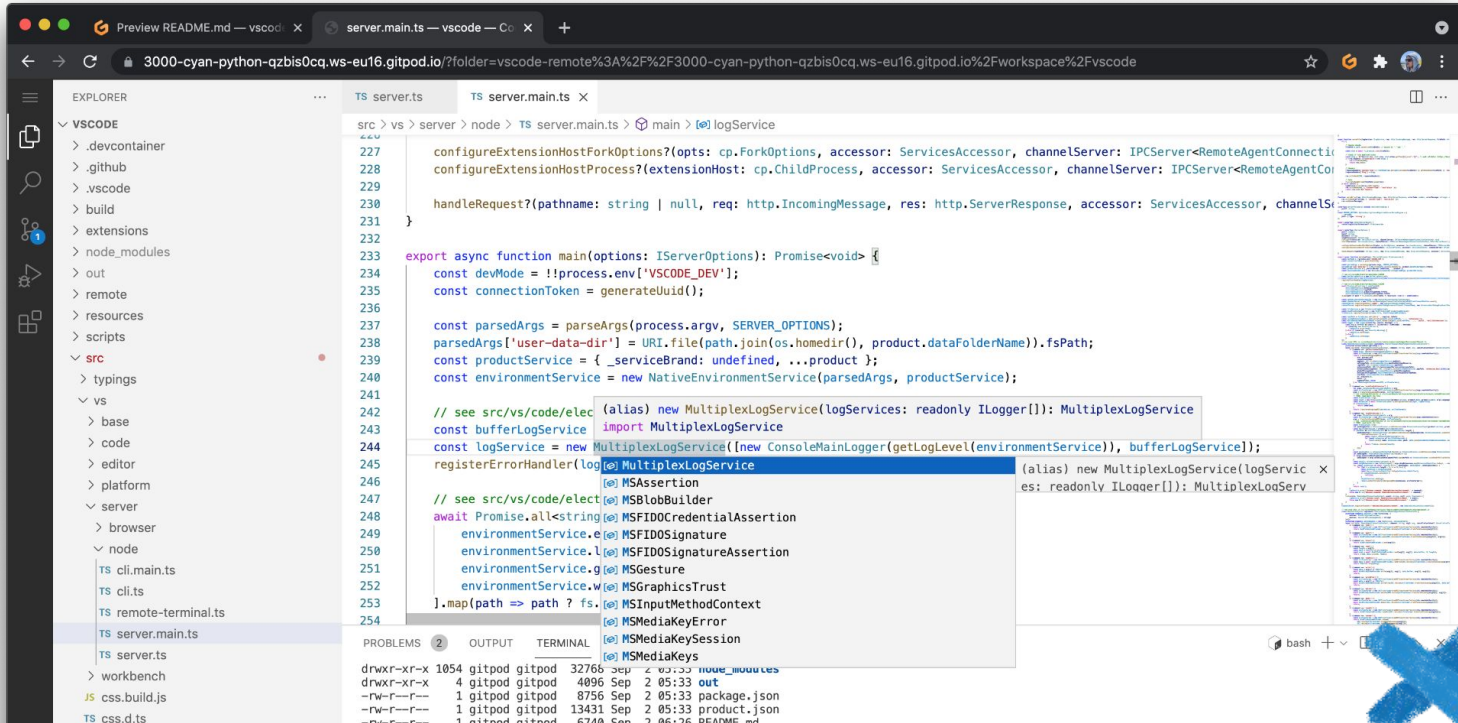
Coder shifts software development from local machines to on-prem and public cloud infrastructure. Onboard new developers in minutes, build code on powerful servers—all while keeping source code and data secure behind your firewall.

[Start a trial](#) [Why Coder](#)

**Infrastructure Team**  
Defines development environments in Terraform

**Software Developers**  
Create workspaces to start coding in a few clicks

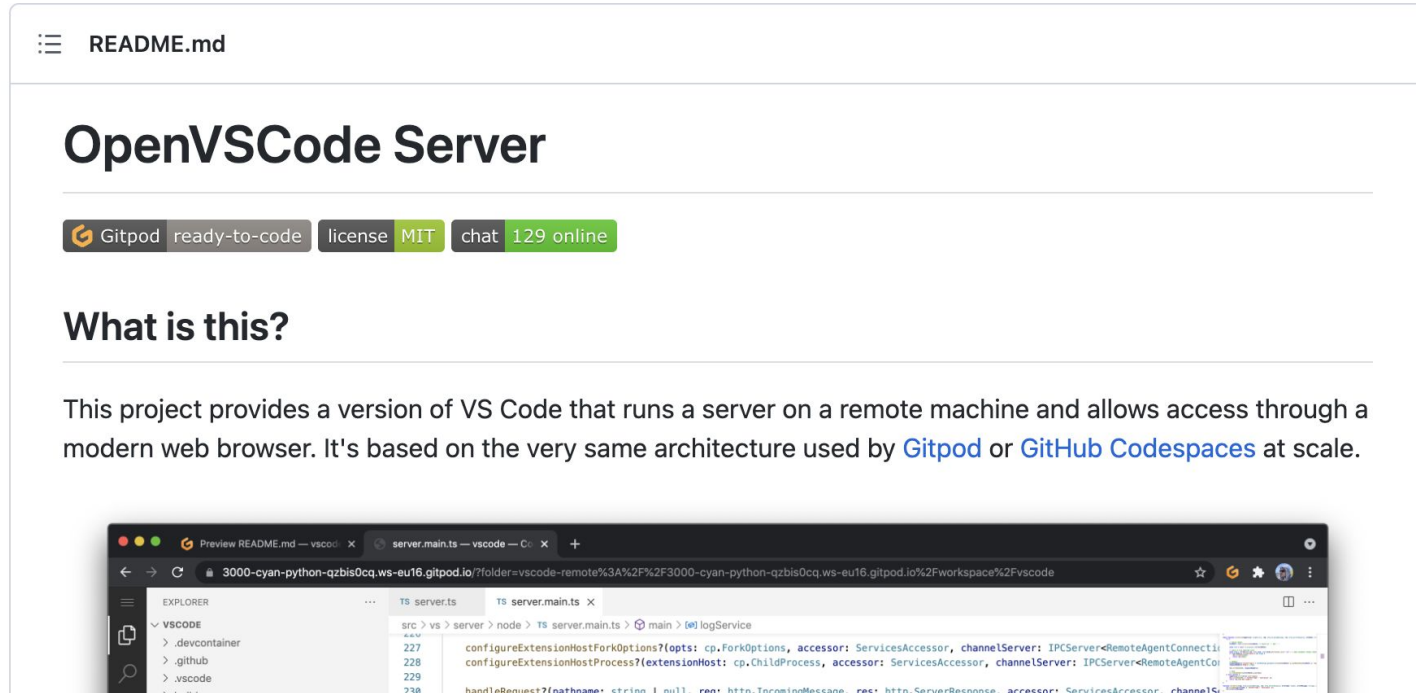
# OpenVSCode Server



VSCode in the browser for everyone



# Open source project by GitPod



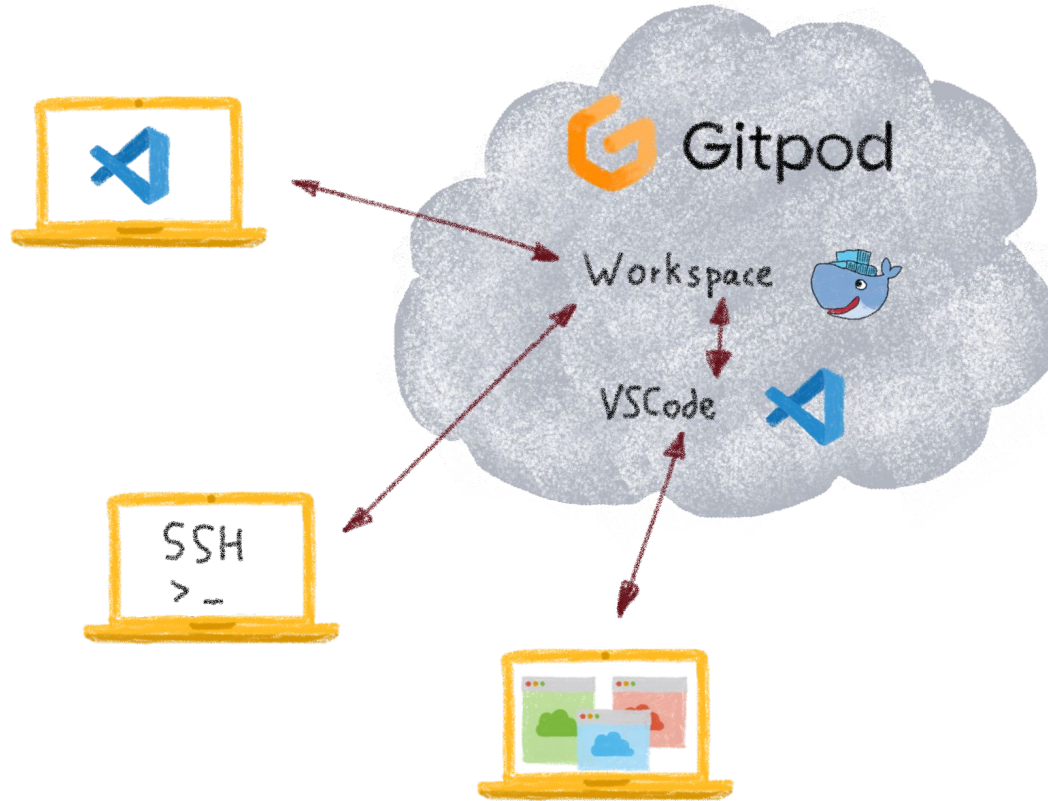
The screenshot shows the README for the OpenVSCode Server project. At the top, it says 'README.md'. The main heading is 'OpenVSCode Server'. Below the heading, there are several badges: 'Gitpod ready-to-code', 'license MIT', 'chat', and '129 online'. The section 'What is this?' contains the following text: '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.' Below the text is a screenshot of a web browser displaying the OpenVSCode Server interface. The browser address bar shows a URL starting with '3000-cyan-python-qzbi0cq.ws-eu16.gitpod.io'. The interface includes an Explorer sidebar on the left showing a file tree with folders like '.devcontainer', '.github', and '.vscode'. The main area shows a code editor with a file named 'server.main.ts' open, displaying TypeScript code.

Backed by GitLab, VMware, Uber, SAP, Sourcegraph, SUSE...

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

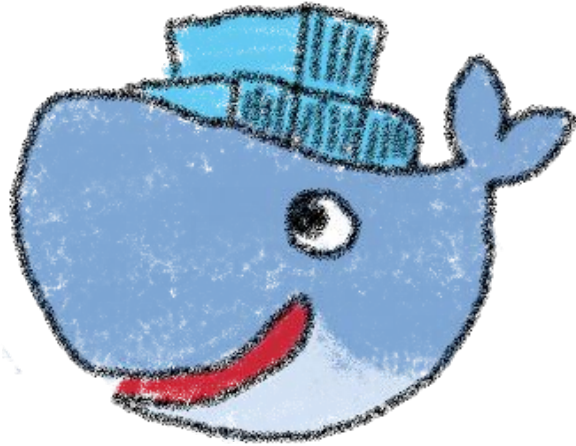


# How is this different to Gitpod?



GitPod is more than an IDE

# Very simple to deploy



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



# IMHO, CDEs are here to stay!



No overpowered laptop needed

- Low cost ultraportable laptop
- Chromebook
- iPad\*
- Android tablet\*

No setup time

Multiple environments in no time

Because as we said in another conference,  
do we really need 5000\$ laptops to develop an app?



**One last thing more...**

**You should be stopping now, Horacio!**



# It's all your fault, mate!



Many thanks to Philippe Charrière (@k33g\_org)



