

DotNet 2022

TECH CONFERENCE

28th June

GitHub Codespaces

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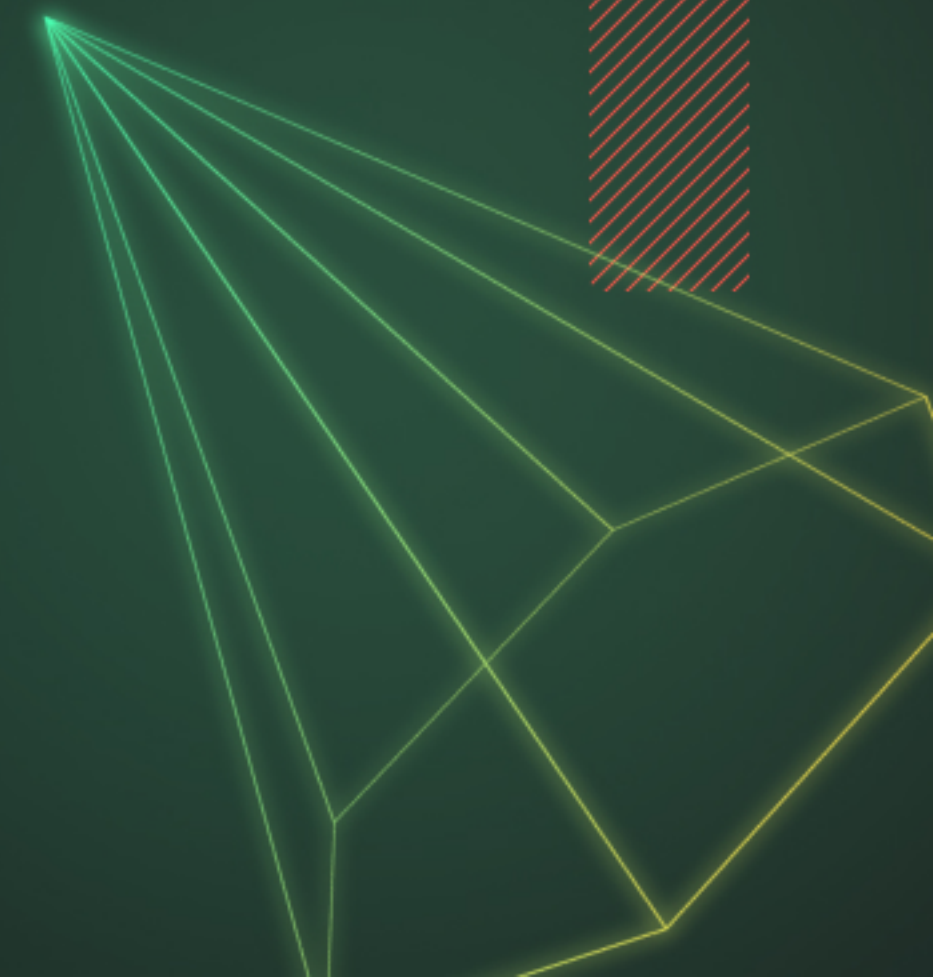
Luis Fraile

DevOps Consultant

Helping teams to create and deploy better software.

@lfraile

lfraile@plainconcepts.com



¿GitHub Codespaces?

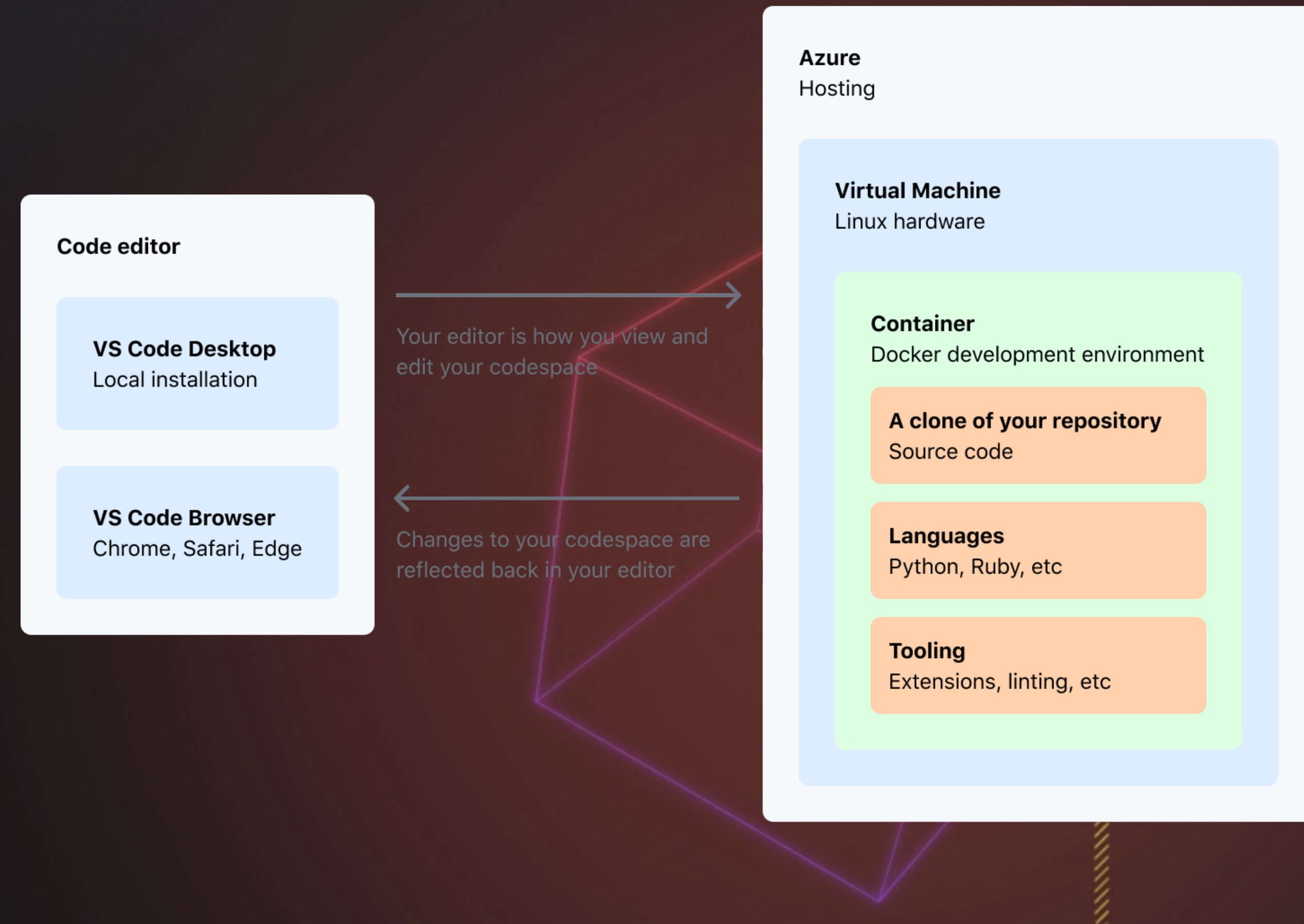
Entornos de desarrollo en la nube!!

Configuration-as-Code (devcontainer)

Basado en
Contenedores
VS Code

<https://github.com/features/codespaces>

<https://github.blog/2021-08-11-githubs-engineering-team-moved-codespaces/>



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Configuración del Codespace

Se basa todo en el contenedor

Se aplica imagen base Docker

Pero: fichero devcontainer.json

Instalación de tools

Comandos de inicialización

Env variables

Plantillas adicionales de GitHub

Documentación algo escasa ...

```
"service": "app",
"workspaceFolder": "/workspace",
"mounts": [ "source=/var/run/docker.sock,target=/var/run/docker-host.sock,type=bind" ],
"remoteEnv": {
    "ASPNETCORE_ENVIRONMENT": "Codespaces"
},
// Set *default* container specific settings.json values on container create.
"settings": {
    "terminal.integrated.shell.linux": "/bin/bash",
    "mssql.connections": [
        {
            "server": "localhost,1433",
            "database": "",
            "authenticationType": "SqlLogin",
            "user": "sa",
            "password": " ",
            "emptyPasswordInput": false,
            "savePassword": false,
            "profileName": "mssql-container"
        }
    ]
},

// Add the IDs of extensions you want installed when the container is created.
"extensions": [
    "ms-dotnettools.csharp",
    "ms-mssql.mssql"
],
```

<https://code.visualstudio.com/docs/remote/devcontainerjson-reference>

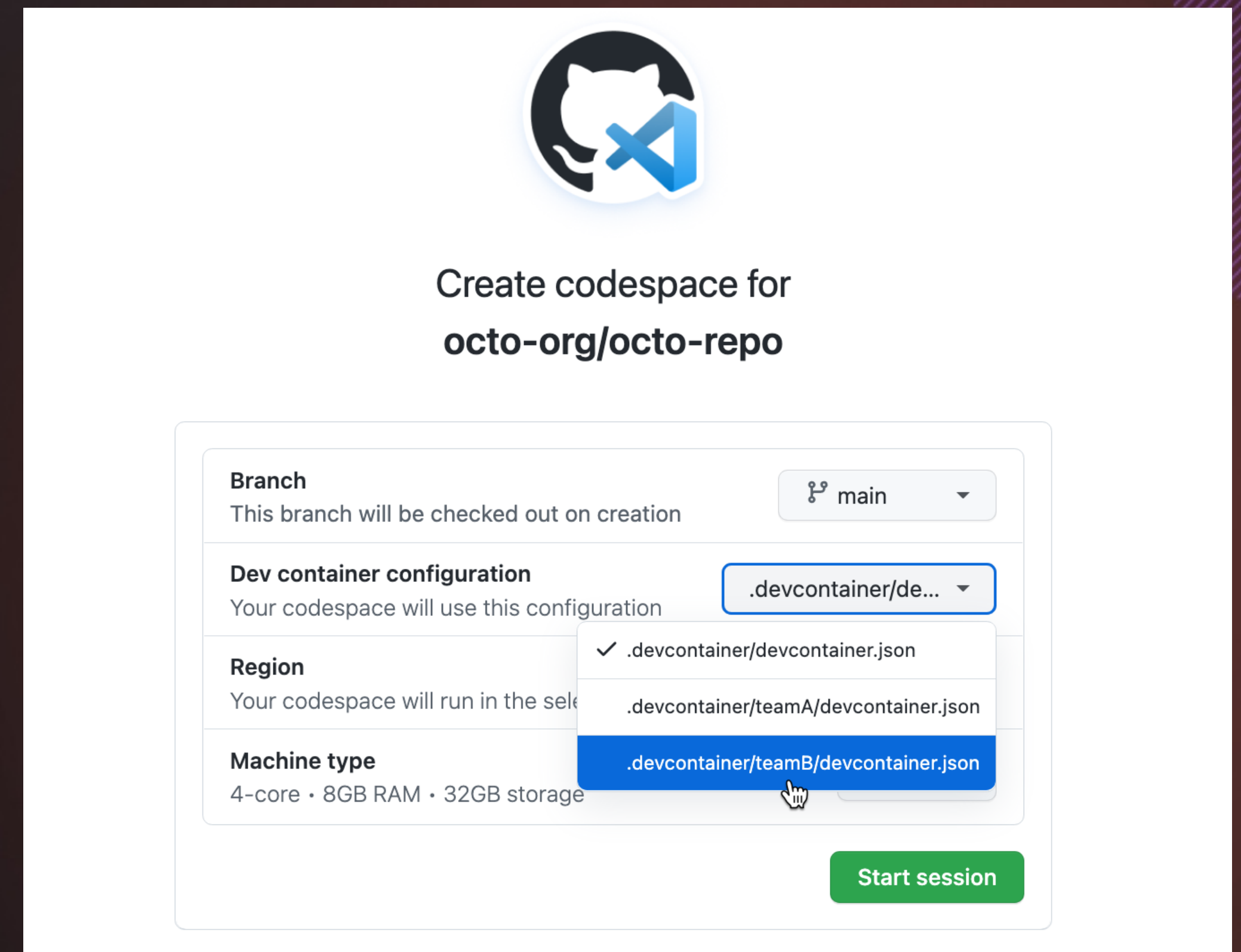
<https://github.com/microsoft/vscode-dev-containers>

Codespaces: Monorepo

Múltiples configuraciones en un único repo

Separados en diferentes directorios

Podemos seleccionar la configuración en la creación



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Ejecución de la app

Se ejecuta dentro del contenedor

Tenemos acceso a el resto de herramientas configuradas

Port forwarding

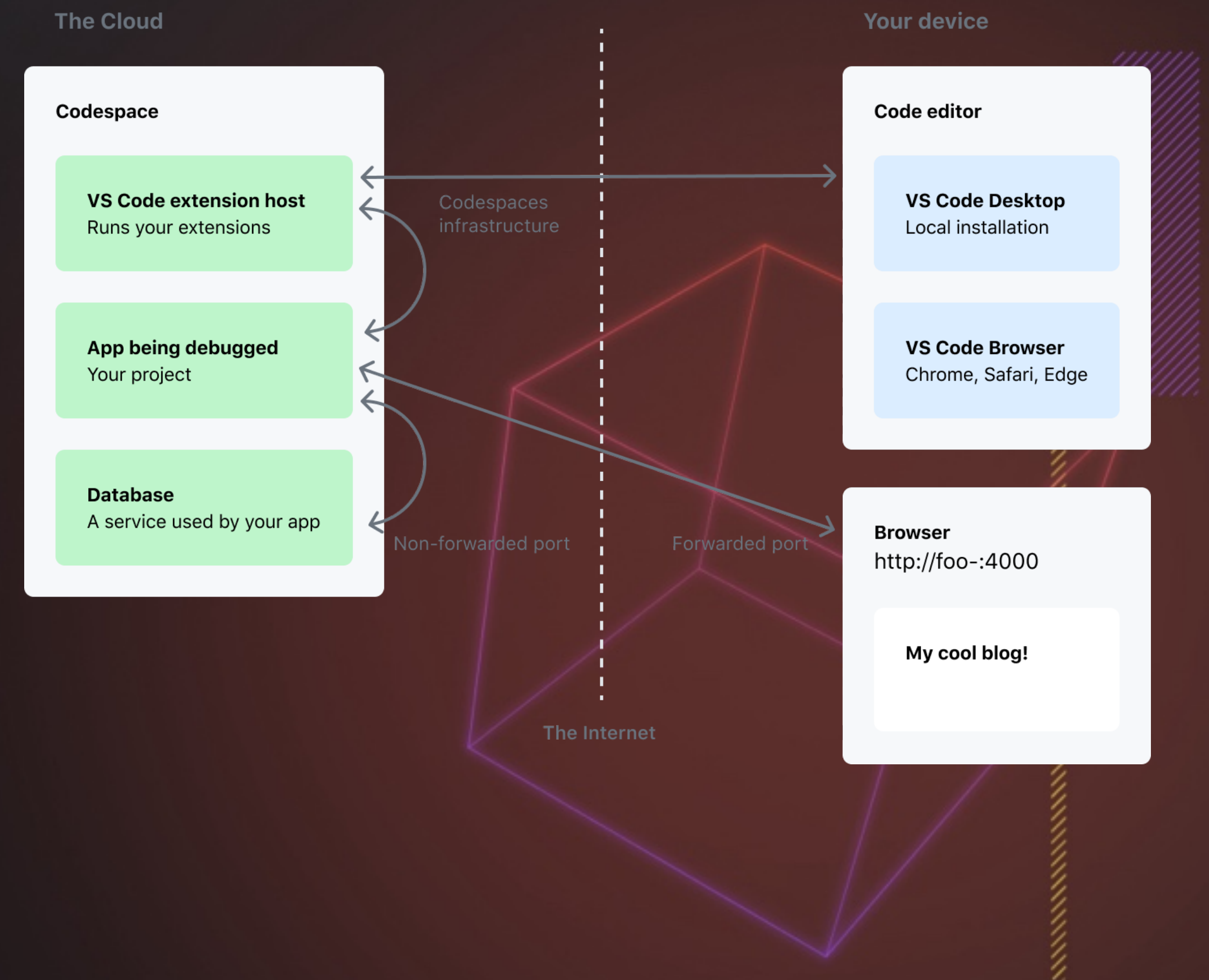
Permite exponer puertos al exterior

Públicos y privados (para el usuario)

Se definen en configuración

Se hace el forward automático al ejecutar algo

Y por supuesto: **soporta depuración (puntos de ruptura, etc.)**



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Codespaces: Multirepo

Por defecto sólo hay permisos en el propio repo

En devcontainer.json podemos configurar permisos adicionales

Se autorizan los permisos en la creación del Codespace

Pueden ser a varios niveles y a varios repos

```
    "customizations": {  
      "codespaces": {  
        "repositories": {  
          "lfrailorg/github-runners": {  
            "permissions": {  
              "contents": "write"  
            }  
          }  
        }  
      }  
    }
```


Mejorando el rendimiento

La creación de un Codespace puede ser “lenta”

Se pueden mejorar con las prebuilds

Se generan mediante GitHub Actions

Se definen a nivel de:

Rama (no disponible para configs monorepo)

Región

Disparador de generación

Prebuilds / New configuration

Configuration

Your prebuild will be built from the branch selected below. Learn more about [prebuild configuration](#).

 develop/codespaces

Access and cost control

Prebuild triggers

You can specify how often to prebuild your codespace based on changes to your repository or a schedule to manage Actions usage. [Learn more](#)

☒ **Every push** Default

Your codespace will prebuild on every push to this branch

☐ **On configuration change**

Your codespace will prebuild when a change is detected on the devcontainer.json and associated configuration files

☐ **Scheduled**

Your codespace will prebuild on a schedule

Region availability

☒ **Reduce prebuild available to only specific regions**

By default, your prebuilt image will be available to all regions where codespaces are available and storage costs will apply for each region. You can adjust this to manage your storage usage. [Learn more](#)

☒ **US East**

☒ **US West**

☒ **Europe West**

☒ **Southeast Asia**

Template history

You can specify the number of prebuild template versions retained to speed up codespaces from an older commit to manage storage costs. The maximum value is 5 versions. [Learn more](#)

2 versions

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Let's talk about money and politics policies

Control a nivel de políticas de organización

Usuarios que pueden usarlo

Límites de tamaño de máquinas

Posibilidad de ajustar el límite de gasto

Codespaces

User permissions

Codespaces are development environments in the cloud, powered by Visual Studio Code. [Manage secrets for this organization.](#)

☐ Disabled

Do not allow Codespaces for my organization

☐ Selected users

Only allow specific users access to Codespaces

☒ Allow for all members

Allow all organization members access to Codespaces

☐ Allow for all members and outside collaborators

Allow all organization members and outside collaborators access to Codespaces

Save

<>

Codespaces

Pay-as-you-go, billed monthly

Compute	0 hours used	\$0.00
Used hours		
2-core	0	\$0.00
4-core	0	\$0.00
8-core	0	\$0.00
16-core	0	\$0.00
32-core	0	\$0.00
0 GB used		
		\$0.00

Product	SKU	Unit of measure	Price
Codespaces Compute	2 core	1 hour	\$0.18
	4 core	1 hour	\$0.36
	8 core	1 hour	\$0.72
	16 core	1 hour	\$1.44
	32 core	1 hour	\$2.88
Codespaces Storage	Storage	1 GB-month	\$0.07

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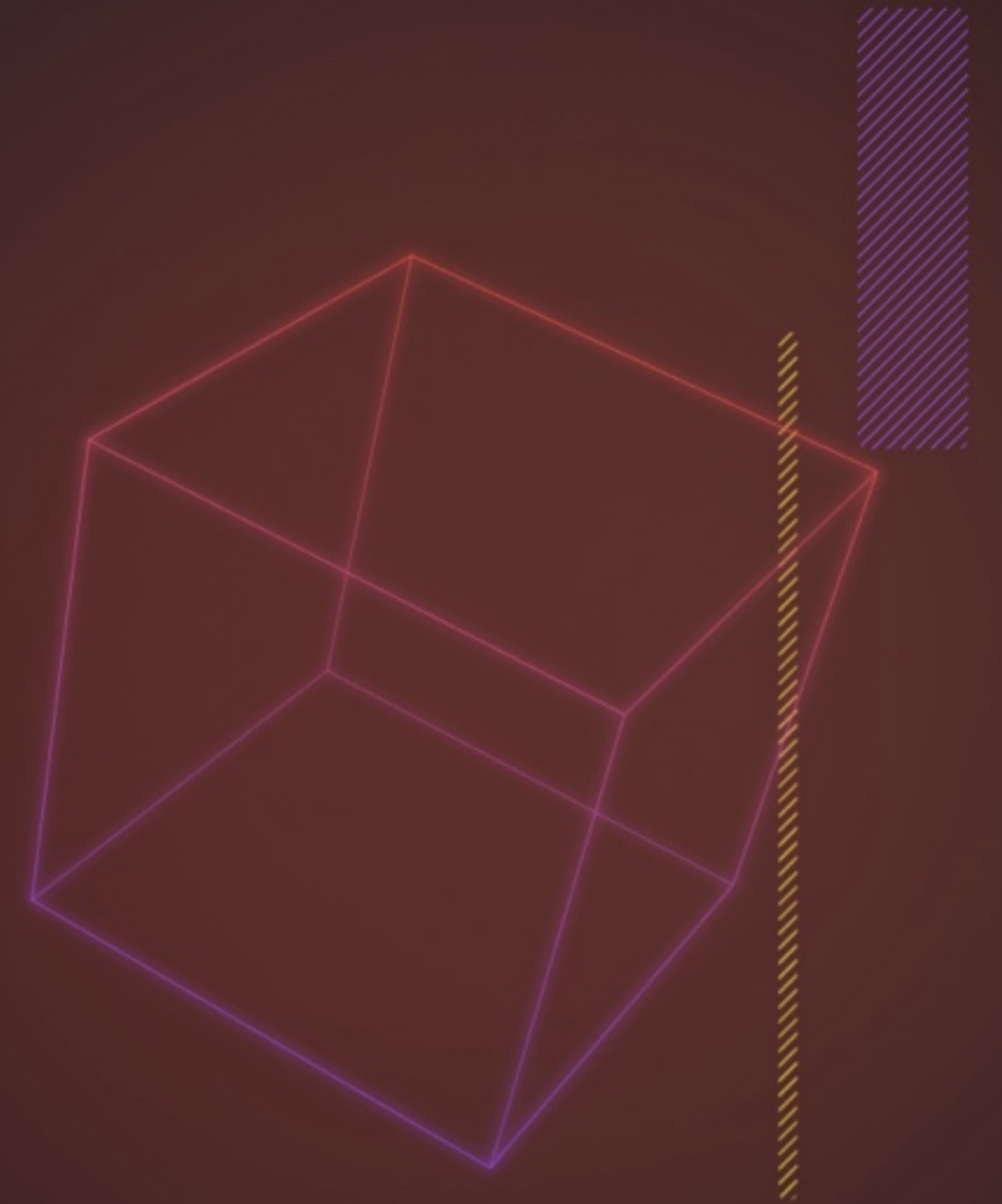
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Questions & Answers

<http://aka.ms/ghcs-roadmap>

<http://aka.ms/ghcs-feedback>



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