Github Codespaces

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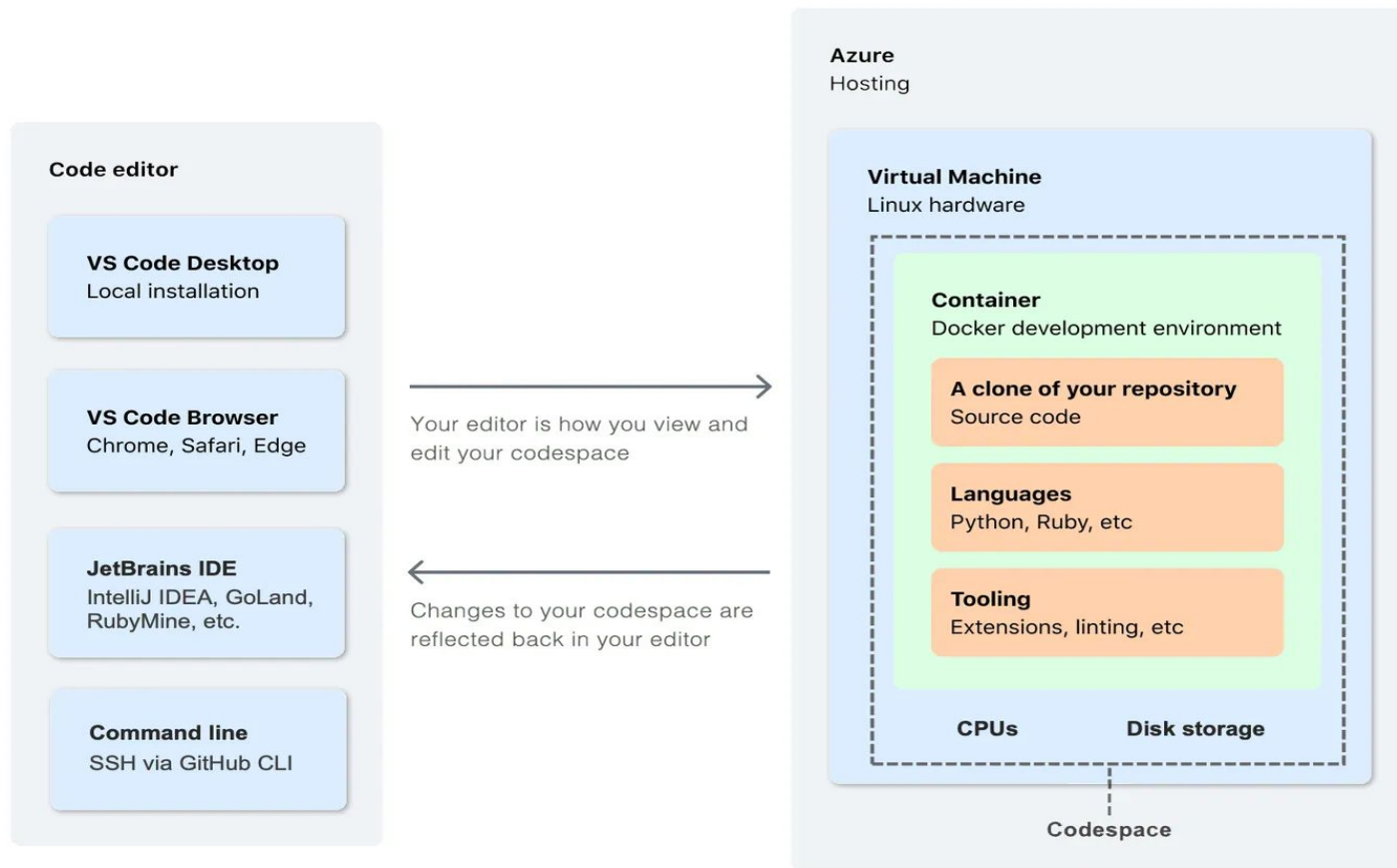Lalithya Sajja

What is Github Codespaces?

GitHub Codespaces is a **cloud-based development environment** that allows you to write, edit, and collaborate on code from anywhere with an internet connection.

Features:
- ❏ Integrated code editor.
- ❏ Terminal.
- ❏ Suite of development tools in the cloud.

Why Github Codespaces?

❏ It streamlines setup, fosters collaboration, and integrates seamlessly with GitHub repositories.

❏ Eliminating the need for complex local development setups and making it easier to work on projects.

❏ Enhancing team collaboration and version control.

❏ Ultimately improving developer productivity and project management.

Code editor

VS Code Desktop
Local installation

VS Code Browser
Chrome, Safari, Edge

JetBrains IDE
IntelliJ IDEA, GoLand, RubyMine, etc.

Command line
SSH via GitHub CLI

Your editor is how you view and edit your codespace

Changes to your codespace are reflected back in your editor

Azure
Hosting

Virtual Machine
Linux hardware

Container
Docker development environment

A clone of your repository
Source code

Languages
Python, Ruby, etc

Tooling
Extensions, linting, etc

CPUs   Disk storage

Codespace

Benefits of GitHub Codespaces

- Accessibility: Work from any device with internet access.
- Collaboration: Real-time code collaboration with team members.
- Environment consistency: Ensure that everyone works with the same setup.
- Easy setup: No need to configure your development environment locally.
- Scalability: Easily scale your development resources.
- Cost savings: Reduced hardware and infrastructure costs.

Getting Started

- Sign up for GitHub Codespaces

- Creating your first Codespace

- Supported programming languages

Cost and Pricing

2 cores	60 hours free /month	$0.18 /additional hour
4 cores	30 hours free /month	$0.36 /additional hour
8 cores	15 hours free /month	$0.72 /additional hour
16+ cores	N/A	**See pricing docs**
Storage	15 GB free /month	$0.07 /GB per month

Supported Editors

- Jupyter Notebook

- Visual Studio Code

- IntelliJ IDEA

- RubyMine

- GoLand

- PyCharm

- PhpStorm

- WebStorm

Alternatives

- Gitpod

- Coder

- Devpod

Things you can do with codespaces

- Generate AI Images
- Manage GitHub Codespaces from the command line
- Pair program with a teammate
- Share your forwarded ports
- Store environment variables

Github Codespaces Lifecycle

The lifecycle of a codespace begins when you create a codespace and ends when you delete it. You can disconnect and reconnect to an active codespace without affecting its running processes. You may stop and restart a codespace without losing changes that you have made to your project.

- Creating a codespace
- Saving changes in a codespace
- Timeouts for GitHub Codespaces
- Rebuilding a codespace
- Stopping a codespace
- Deleting a codespace

Conclusion

GitHub Codespaces represents a cutting-edge solution for modern software development. With its cloud-based, customizable development environments, seamless GitHub integration, and collaborative features, it streamlines the development workflow.

Say goodbye to complex local environment setup and hello to the future of coding. Embrace GitHub Codespaces and unlock a new era of productivity and collaboration in software development.

Codespaces Demo!!

Thank you!