



## **GITHUB NEWS FOR CLOUD DEVELOPERS (AND MORE...)**

Lorenzo Barbieri **Microsoft** lobarbie@microsoft.com datomo@microsoft.com

Daniela Tomoiaga **Microsoft** 



#CLOUDDAY2021

## **Kudos to Sponsors & Partners**





CODICEPLASTICO



#### managed/designs





## Microsoft acquires GitHub for \$7.5B

The planet's largest developer platform



## What's new?



## Codespaces

Your instant dev environment

#### Code without compromise

Code, build, test, debug, and deploy with a complete development environment in your browser.

#### Simplify your workflow

Automatically set up dependencies and SSH keys. Go from code to commit faster on any project.

#### **Extend and customize**

Configure your editor with dotfiles and VS Code extensions to create a consistent environment in every codespace.

https://github.com/Features/Codespaces



## Codespaces

Reducing time to set up development environments from hours per week to seconds.

Consistent development experience for the whole team - no more "works on my machine"

Fully integrated into the GitHub developer experience.

• •		☐ github.com
G	EXPLORER	Js index.js × Ts App.ts
	✓ OPEN EDITORS	<pre>1 \sigma const express = require('express') 2 const path = require('path');</pre>
=	× JS index.js	<pre>const path = require( path ); const app = express()</pre>
	TS App.ts	4 const bodyParser = require('body-pars
С С	VISITOR-APP [CODESPACES] > .github	<pre>5 const Pool = require('pg').Pool 6</pre>
	> .vscode	<pre>7 const http = require('http').createSe</pre>
	> node_modules	8
2º	> public	<pre>9 app.use(express.static(path.join(di 10 app.use(bodyParser.urlencoded({ exter</pre>
P. P	> src	11 app.use(body)arser.json())
<b>Q</b> 5	6 .babelrc	12
53	<ul> <li>.gitignore</li> </ul>	<pre>13 app.get('/', function (req, res) { 14 res.sendFile(path.join(dirname, '</pre>
- <del>\S</del> -	Js index.js	15 });
187	{} package-lock.json	16
B	PEADME md	<pre>17 app.get('/visits/day', (request, resp 18 pool.query(`SELECT * FROM visits WH</pre>
	(i) README.md	19 if (error) {
		20 throw error
<u></u>		<pre>21 } 22 response.status(200).json(results)</pre>
		23 })
		24 })
		<pre>25 26 app.get('/visits/week', (request, res </pre>
		27 pool.query(`SELECT * FROM visits Wh
		PROBLEMS OUTPUT DEBUG CONSOLE TERMIN
		<pre>califa visitor-app(feature-branch-1) \$ npm r</pre>
gust 11, 2021 — Engineering, Product		Starting server on port 3000
JITHUD'S ENGINE	ering Team has	
noved to Cada		
noved to Code	spaces	
Cory Wilkerson		
tps://github.blog	/2021-08-11-githubs-	ifa
<u>ngineering-team</u> -	-moved-codespaces/	

## Demo Codespaces

## Pay as you go



Available today for GitHub Teams and GitHub Enterprise Cloud customers

Get started >

**Codespaces Compute** 

Isolated VMs billed per second

Cores	RAM	Price
2 core	4GB	<b>\$.18</b> per hour
4 core	8GB	<b>\$.36</b> per hour
8 core	16GB	<b>\$.72</b> per hour
16 core	32GB	<b>\$1.44</b> per hour
32 core	64GB	<b>\$2.88</b> per hour

Codespaces storage

charged when inactive

**\$0.07** per gigabyte per month

Prices as of 19<sup>th</sup> of October

#### Public preview: Visual Studio Code for the Web





#### https://vscode.dev

## **GitHub Issues**

A planning and tracking tool designed for ambitious engineering teams.

Projects are now faster, and with new capabilities like **custom fields**, a stunning and powerful **spreadsheet-like table view**, rank, **group-by** and filtered **saved views**, plus an updated board experience.

≡∣  $\Box$ OctoArcade / Projects / M OctoArcade Invaders OctoArcade Invaders The Plan 💌 Team View 🗄 Needs Help III Board + New view Q Team Assignees Title Status Prototype 🍾 👍  $\sim$  Intial concept art Art 🌈 pmarsceill Complete 🔽 brocc0lini • Engine (physics, rendering) prototype Engine 🏶 Complete 🔽 katestud • Game logic (alien, cannon, score) prototype Engine 🏶 Complete 🗹 • Game brief and go-no-go 😭 mariorod Producers 🞬 Complete 🗸 Add item Alpha 🔼 📧  $\sim$ • New rendering engine for game Engine 🏶 Complete 🗹 A n3rdneha • Polished alien, beam, and cannon sprite files Art 🌈 Complete 🗸 pmarsceill • Updates to aliens and cannon game logic brocc0lini Game loop 🧖 Complete 🗹 New start screen () pmarsceill, ka Game loop 🎢 Complete 🔽 • Score and game reset logic Game loop 륐 Building 江 leereilly 😭 mariorod Alpha go-no-go meeting Producers 🞬 Planning 🕅 Add item Beta 🖪 🛛 14  $\sim$ • Creative design update to aliens for variety Art 🌈 Not Started 🕑 A n3rdneha Updates to game background image Art 🌈 Building 江 brocc0lini 12 () pmarsceill, ka • Updates to alien, beam, bomb and cannon sprites Art 🌈 Planning 📷 katestud 14 Updates to collision logic Engine 🏶 Building 江 If the beam leaves the window reset it A n3rdneha 15 Engine 🏶 Behind Þ 16 O Updates to velocity of the ship and alien movements leereilly Engine 🏶 Building 江 17 • General bug fixes from Alpha feedback bd0ugie Game loop 🧖 Behind Þ

/github.com/features/issues/

11 Read

Front-end

 $\odot$ 

In QA

Sign up for the beta

Beta is still private, you should sign up and wait for the confirmation emal.

Some features are still missing, there are some rough edges.

https://github.com/features/issues/

# Project planning for developers

Create issues, break them into tasks, track relationships, add custom fields, and have conversations. Visualize large projects as spreadsheets or boards, and automate everything with code.

Sign up for the beta >

Pull requests Issues Marketplace Explore

User story

Watch video 🕑

Ready for rev

## Issues Forms and Task Lists are in public beta

You can enable them without waiting for being approved for the private beta.



## Demo GitHub Issues & Project planning

## Code Scanning

- Find vulnerabilities before they are merged into the code base with automated CodeQL scans
- Integrate results directly into the developer workflow
- Upcoming Improvements:
  - Expanded framework support
  - Alert notifications
  - Ruby language support
  - CodeQL query console

Search or jump to	Pull requests Issues Codespaces Marketplace Explore		
A dsp-testing / code-scan	ning-demo Private 💿 Watch 1 🛱 Star		
<> Code 1 Pull requests 1	🕑 Actions ( Security 1 🗠 Insights 🕸 Settings		
Overview	Server-side URL redirect (Beta) Give us feedback Server-side URL redirection based on unvalidated user input may cause redirection to malicious web sites.		
Security policy	Open 🛆 Warning 🕞 CWE-601 🕞 security		
Security advisories 0	Branch: master 👻		
Dependabot alerts 0	test.ts 🖺		
Code scanning alerts	<pre>8 */ 9 const sendRedirect = async (res: ServerResponse, url: string, statusCode = 307) =&gt; {</pre>		
CodeQL	<pre>10 res.statusCode = statusCode; 11 res.setHeader('Location', url);</pre>		
Detected secrets	Untrusted URL redirection due to user-provided value.		
	CodeQL 12 await new Promise(resolve => res.end(resolve)); 13 }; 14		
	Tool         Rule ID         Query           CodeQL         js/server-side-unvalidated-url-redirection         View source		
	Directly incorporating user input into a URL redirect request without validating the input can facilitate phis attacks, unsuspecting users can be redirected to a malicious site that looks very similar to the real site the which is controlled by the attacker.  Show more  First appeared in commit 1a36781 on Apr 9		
	I Mistakes were made test.ts#L11 on branch mistakes-were-made-2		
	Appeared in branch mistakes-were-made-2 on Apr 9		
	Code Scanning - Action #4: Commit 1a367815		
	I jhutchings1 closed this as used in tests on Apr 9		

## Secret scanning for private repositories

- Find secrets the moment they're pushed to GitHub
- Scan your entire git history
- Supports user defined patterns
- Upcoming Improvements:
  - Org-wide triage
  - Pre-receive hooks (push protection)
  - Automated verification

C) Se	earch or jump to / Pull requests Issues Marketplace Explore
~	2 /src/DataModel/LoginHelper/LoginHelper.cs 🛱
1	namespace DataModel
2	{
3	public static class LoginHelper
4	{
5	<pre>public static String ServiceUrl = "https://cloud.exam</pre>
6	<pre>public static String ClientID = "DataModel-0001";</pre>
7	<pre>public static String ClientSecret = "A002019DRBES\$%FA</pre>
8	public static String RedirectURL = Windows Security./
9	A002019DRBES\$%FAXFWEBGZYH5H736
10	/// <summa.< th=""></summa.<>
11	/// Handles acquiring all relevant tokens for the app
12	///
13	<pre>/// <returns>Async progress task.</returns></pre>
14	<pre>public static async Task<bool> Authenticate()</bool></pre>
15	{

### **Dependency Review**

- Understand and review dependency changes in pull requests
- Catch additions and changes of vulnerable or out of date dependencies
- Avoid "after the fact" alerts and remediation

Search or jump to / Pull requests Issues Codespaces Marketp	lace Explore 🗳 📫 🔊 -
Anthophila / my-new-private-repo Private	O Watch ▼     6     ★ Star     0     % Fork     0
<> Code ① Issues ﴾ Pull requests 8 • Actions III Projects III Wiki ① So	ecurity 25 🔟 Insights 🔅 Settings
Open       kaylee.frye wants to merge 1 commit into serenity-main from repair-parts	Edit
Changes from all commits + File filter + × Clear filters Jump to + 🕸 +	0 / 1 files viewed ③ Review
✓ 2 ■■■■ website/package.json □	
Dependency review summary	Status • Severity • License •
> 🛨 jsonwebtoken 4.1.1 (critical severity)	2m dependents <b>M</b> BS
> 🗄 acorn 6.4.0 (moderate severity)	5.9m dependents Ap
	8m dependents 🌆 MIT
+ express-jwt 3.3.0	69k dependents 🐴 MI
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mongoose updated to 4.4.10 H isonwebtoken 4.1	
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Slug 0.9.1	мп
> 🕂 acorn 6.4.0 (mod	erate severity

#### GITHUB CLI

### Take GitHub to the command line

GitHub CLI brings GitHub to your terminal. Free and open source.

#### **Download for Windows**

View installation instructions ightarrow

#### 💲 gh pr chec

View your pull requests' checks

#### 0.0

\$

remote: Enumerating objects: 66, done. remote: Counting objects: 100% (66/66), done. remote: Total 83 (delta 66), reused 66 (delta 66), pack-reused 17 Unpacking objects: 100% (83/83), done. From https://github.com/owner/repo \* [new ref] refs/pull/8896/head -> patch-2 M README.md Switched to branch 'patch-2' gh pr chec

gh pr status

gh release create

gh alias set

#### All GitHub Codespaces guides

Quickstart for Codespaces QUICKSTART

Try out Codespaces in 5 minutes.

Codespaces

Setting up your Python project for Codespaces

Get started with your Python project in Codespaces by creating a custom dev container.

Codespaces Developer Python

#### Configuring Codespaces for your project HOW-TO GUIDE

You can use a devcontainer.json file to define a Codespaces environment for your repository.



Deep dive into Codespaces QUICKSTART

Understand how Codespaces works.

Codespaces

### Setting up your C# (.NET) project for Codespaces

Get started with your C# (.NET) project in Codespaces by creating a custom dev container.

Codespaces

#### Personalizing Codespaces for your account HOW-TO GUIDE

You can personalize Codespaces by using a dotfiles repository on GitHub or by using Settings Sync.



### Setting up your Node.js project for Codespaces

Get started with your JavaScript, Node.js, or TypeScript project in Codespaces by creating a custom dev container.

Codespaces Developer Node JavaScript

#### Setting up your Java project for Codespaces

Get started with your Java project in Codespaces by creating a custom dev container.

#### Codespaces

#### Creating a codespace

HOW-TO GUIDE

You can create a codespace for a branch in a repository to develop online.

Codespaces Fundamentals Developer

#### https://docs.github.com/en/codespaces/guides

## GitHub Universe 2021 – October, 27th and 28th

O Universe 2021

Schedule Ways To Engage - FAQ

Register 7

Log In

October 27-28, 2021 PDT - Streaming Everywhere

# The global developer event

Connect with the people and tech defining the industry. Build skills, explore new tools, and celebrate the developer community over two days of live, interactive, and on demand content.

Register for free 7

Microsoft Italia Innovation Morning, **December, 2nd** 

**Universe Prime Time** 





## **THANK YOU!**

Lorenzo BarbieriDaniela TomoiagaMicrosoftMicrosoftIobarbie@microsoft.comdatomo@microsoft.com