



KubeCon



CloudNativeCon

Europe 2023

USING DEVSPACE TO USHER IN AN ERA OF PEACE FOR OUR DEVELOPERS

Rajsimman Ravichandiran {Raj}





KubeCon



CloudNativeCon

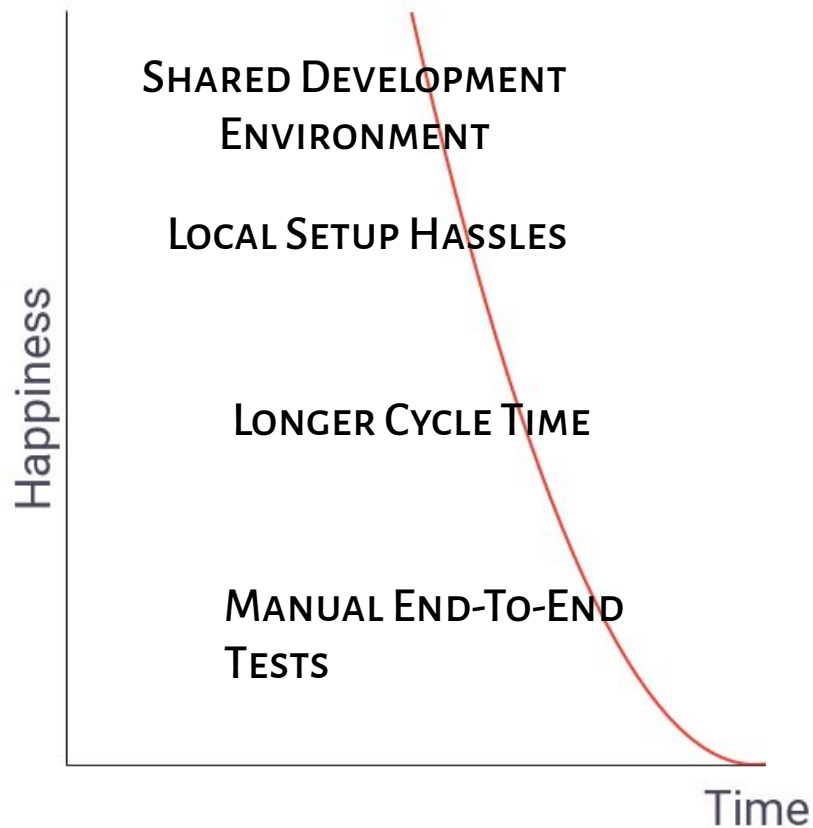
Europe 2023

Software Engineer

Specialize in Cloud computing

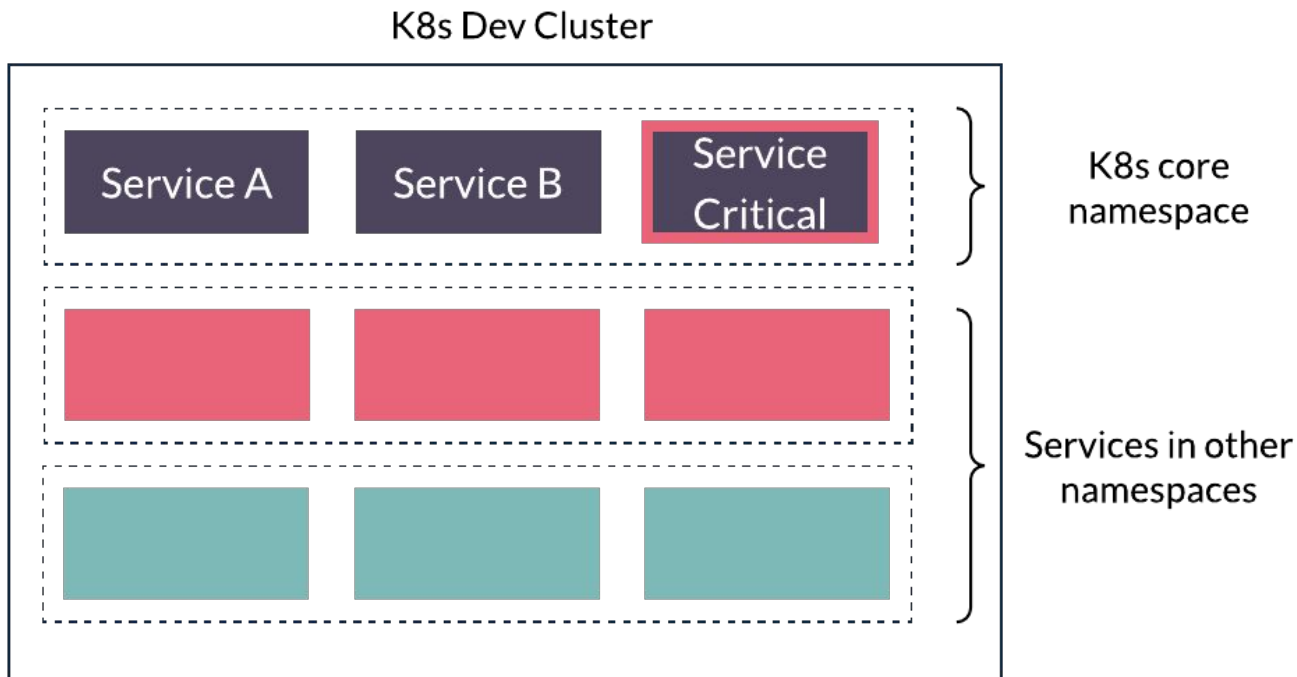
Site Reliability Engineer -> Developer Experience

DEVELOPER CHALLENGES OVERVIEW

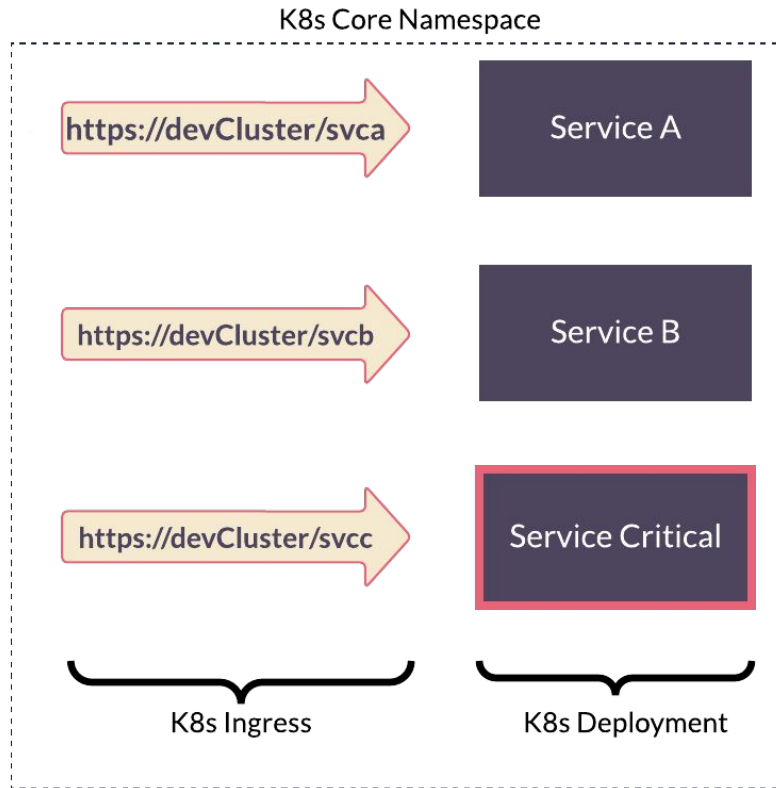


K8s DEVELOPMENT (DEV) CLUSTER

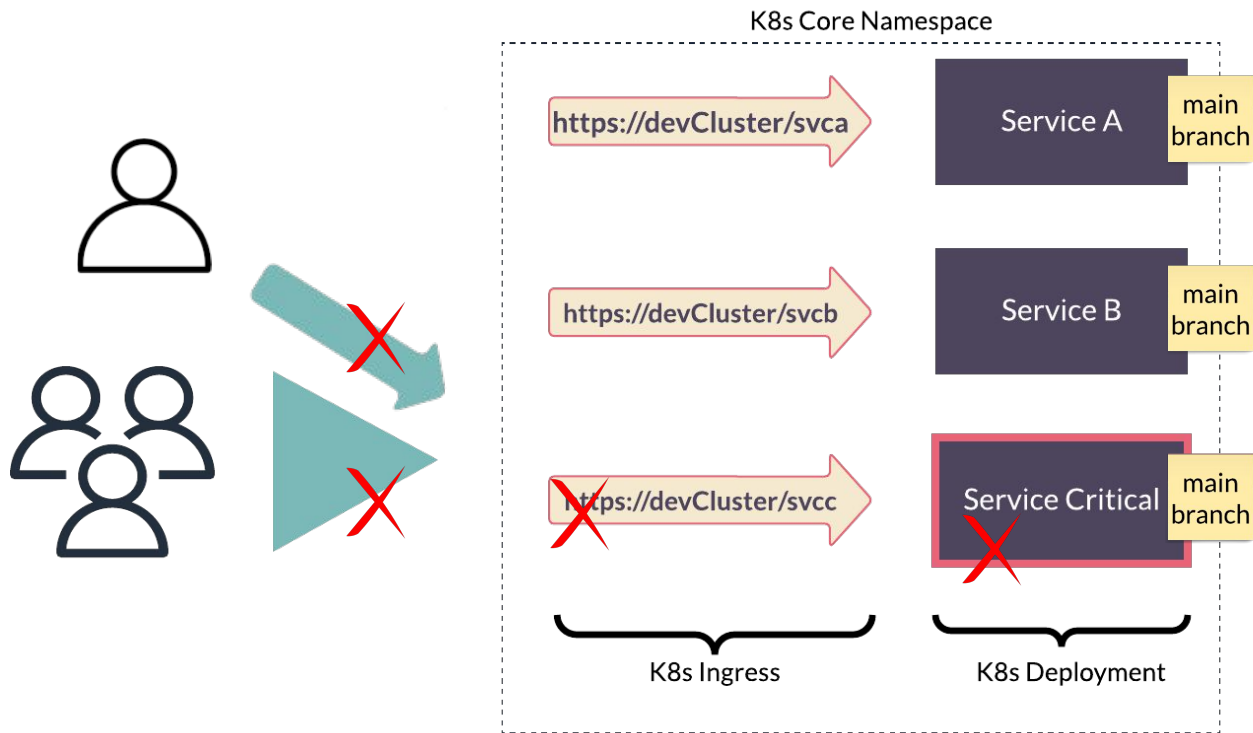
➔ Dev cluster shared by 100 Developers



K8s CORE NAMESPACE



DEPLOY TEST BRANCH TO DEV CLUSTER





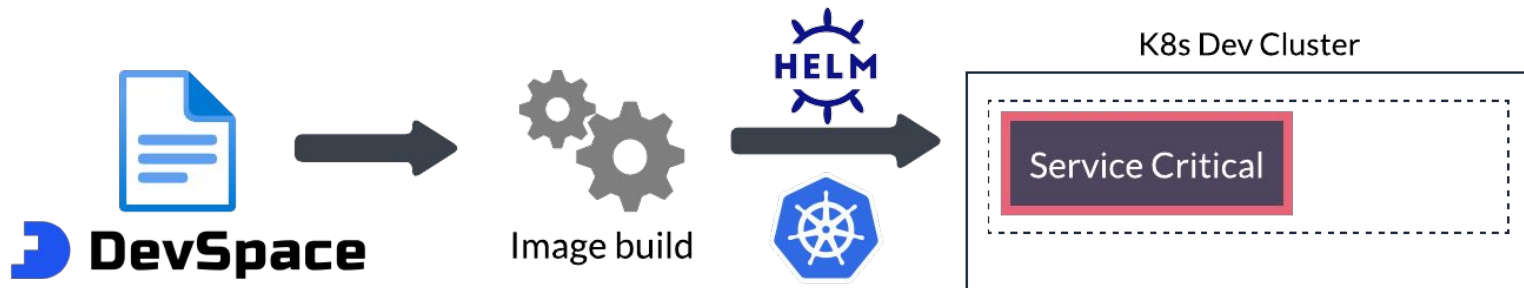
BAND-AID SOLUTION: GOOGLE CALENDAR!

Service 2 - Dev X 9:30 – 11am	Service 1 - Dev T 9 – 11am	Service 2 - Dev S 9:30 – 11am	Service 1 - Dev O 9 – 11am	Service 2 - Dev W 9 – 11am
Service 1 - Dev Y 11am – 12pm	Service 2 - Dev J 11am – 12:30pm	Service 3 - Dev B 11am – 12:30pm	Service 3 - Dev C 11am – 1pm	Service 1 - Dev Q 11am – 12pm
Service 3 - Dev Z 12 – 2pm	Service 1 - Dev G 12:30 – 2pm	Service 1 - Dev L 1 – 2:30pm	Service 2 - Dev P 1:15 – 3pm	Service 3 - Dev Z 12 – 2pm
Service 2 - Dev A 2 – 4:30pm	Service 3 - Dev F 2:30 – 4:30pm	Service 2 - Dev P 2:30 – 5pm	Service 2 - Dev Y 3 – 5pm	Service 2 - Dev H 2 – 3:30pm
				Service 1 - Dev L 3:30 – 5pm



DevSpace Overview

- ➔ CNCF project
- ➔ Docker-compose for K8s
- ➔ Command line tool to develop and deploy apps on K8s clusters
- ➔ Abstracts K8s functionalities



DEDICATED EPHEMERAL TESTING ENVIRONMENTS

- ➔ Dedicated ephemeral testing environments via **devspace** **deploy** for core services
- ➔ **Dependency** feature deploys multiple services

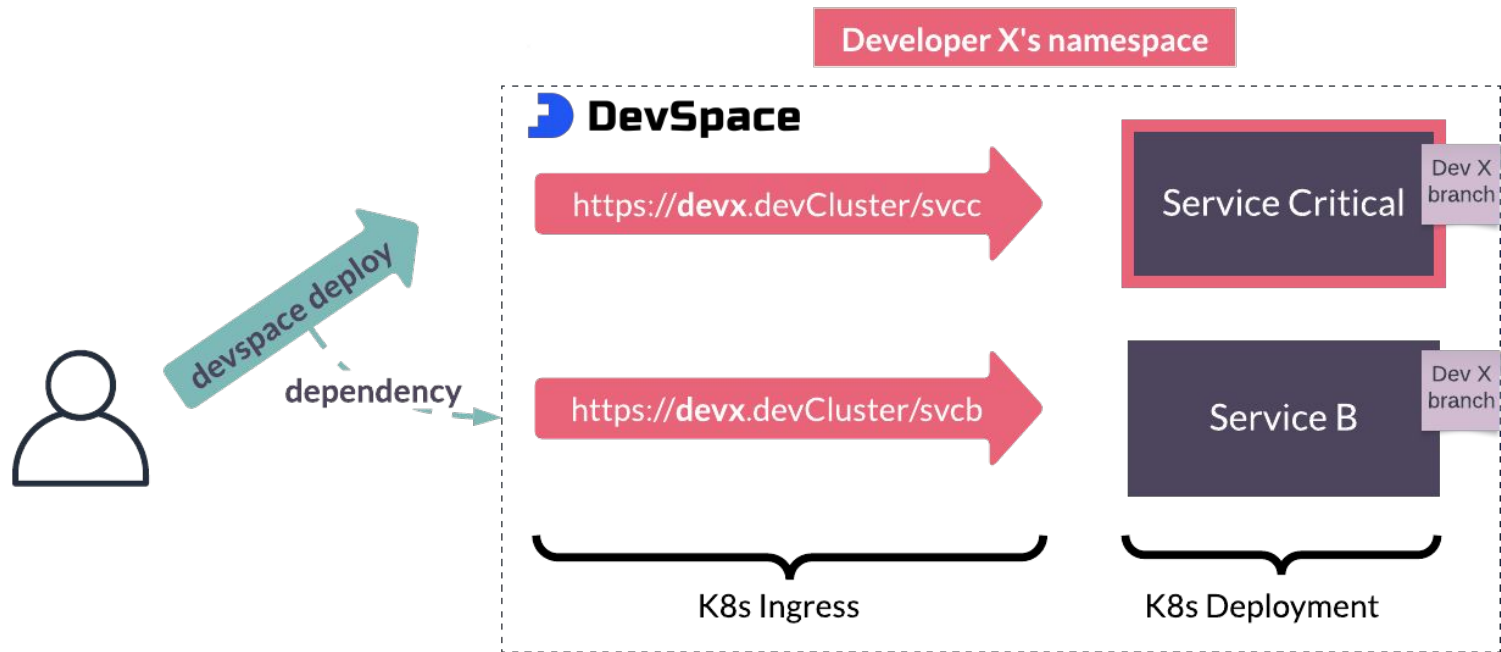
```
$ git clone <repo url>
```

```
$ devspace create space YOUR-UNIQUE-NAME
```

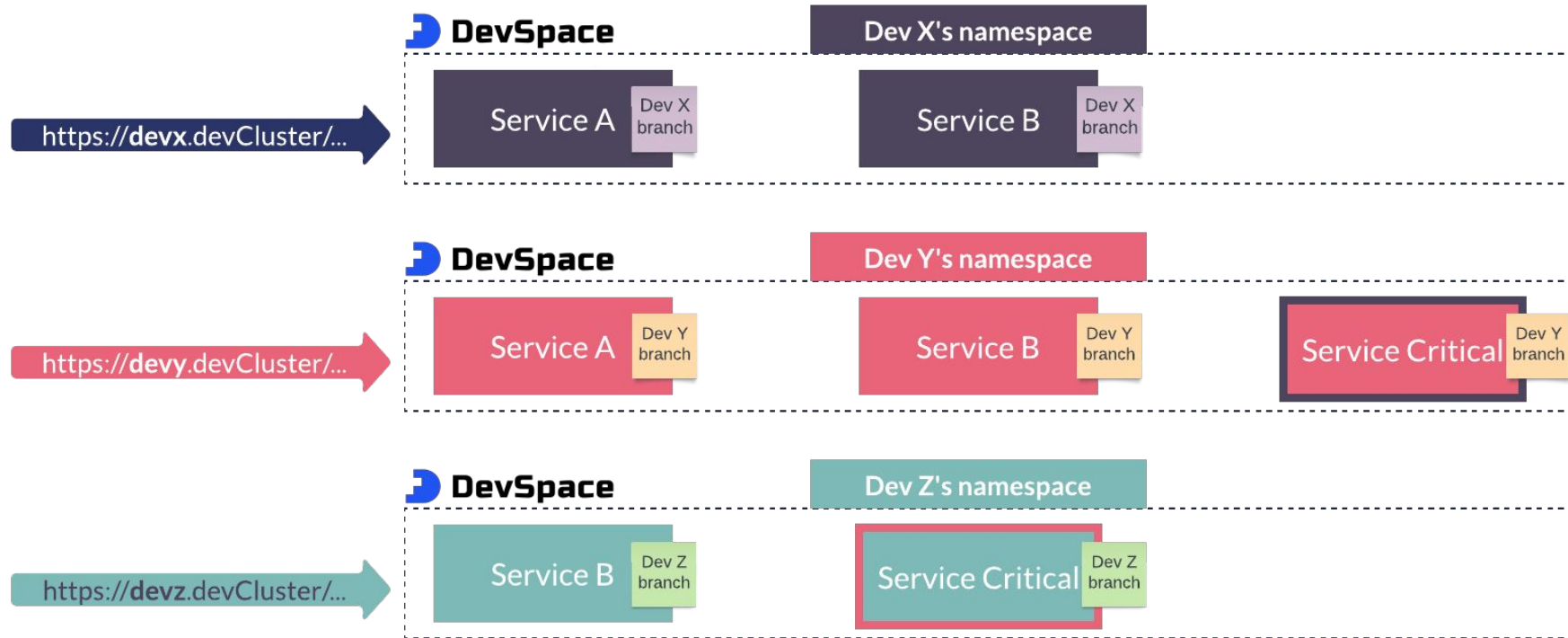
```
$ devspace deploy
```

DEDICATED EPHEMERAL TEST ENVIRONMENTS (CONTD.)

- ✓ Developer deploys Service Critical and Service B on unique namespace



DevSpace For Deployments



EPHEMERAL TEST ENVIRONMENT BENEFITS



**NO NEED FOR
CALENDAR**

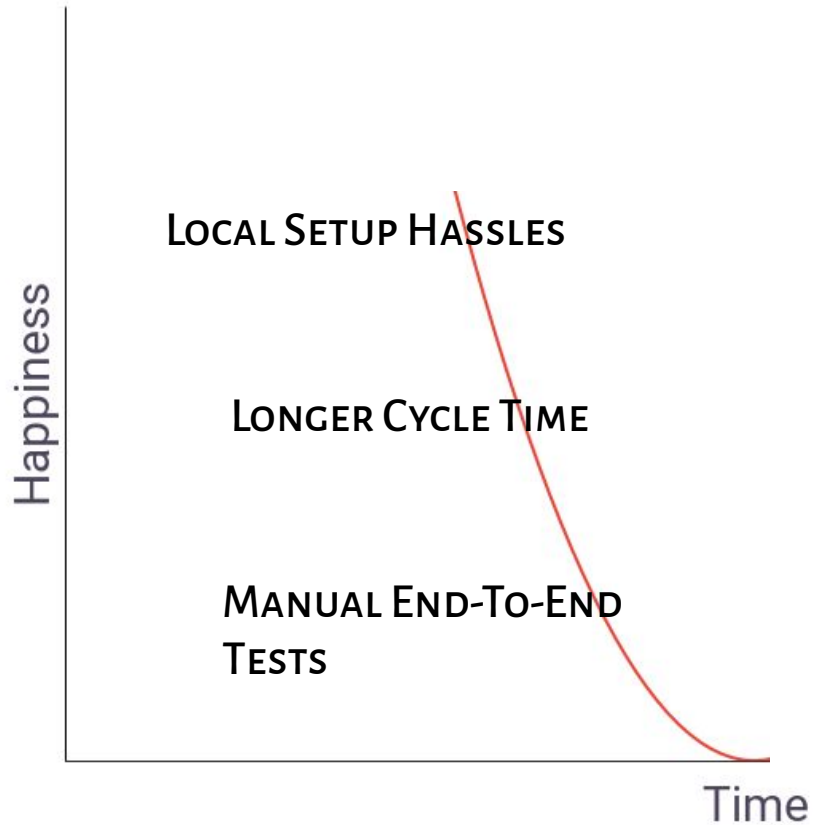


BETTER VISIBILITY

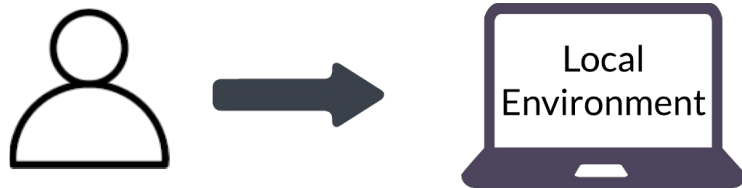


**HAPPY
ENVIRONMENT**

DEVELOPER EXPERIENCE JOURNEY



LOCAL ENVIRONMENT SETUP



LOCAL ENVIRONMENT SETUP CHALLENGES



**HIGH RESOURCE
USAGE**



**OUTDATED
DOCUMENTATION**



**WORKS-ON-MY-
-ENVIRONMENT
SYNDROME**



DEVSPACE DEVELOPMENT MODE

- Deploy remote development environment on K8s cluster via `devspace dev`
- Syncs local files to pod
- Hot reloads service
- Connect Integrated Development Environment (IDE) with remote debugger

```
$ git clone <repo url>
```

```
$ devspace create space ...
```

```
$ devspace dev
```


REMOTE DEVELOPMENT BENEFITS



**NO NEED FOR LOCAL
DEVELOPMENT**

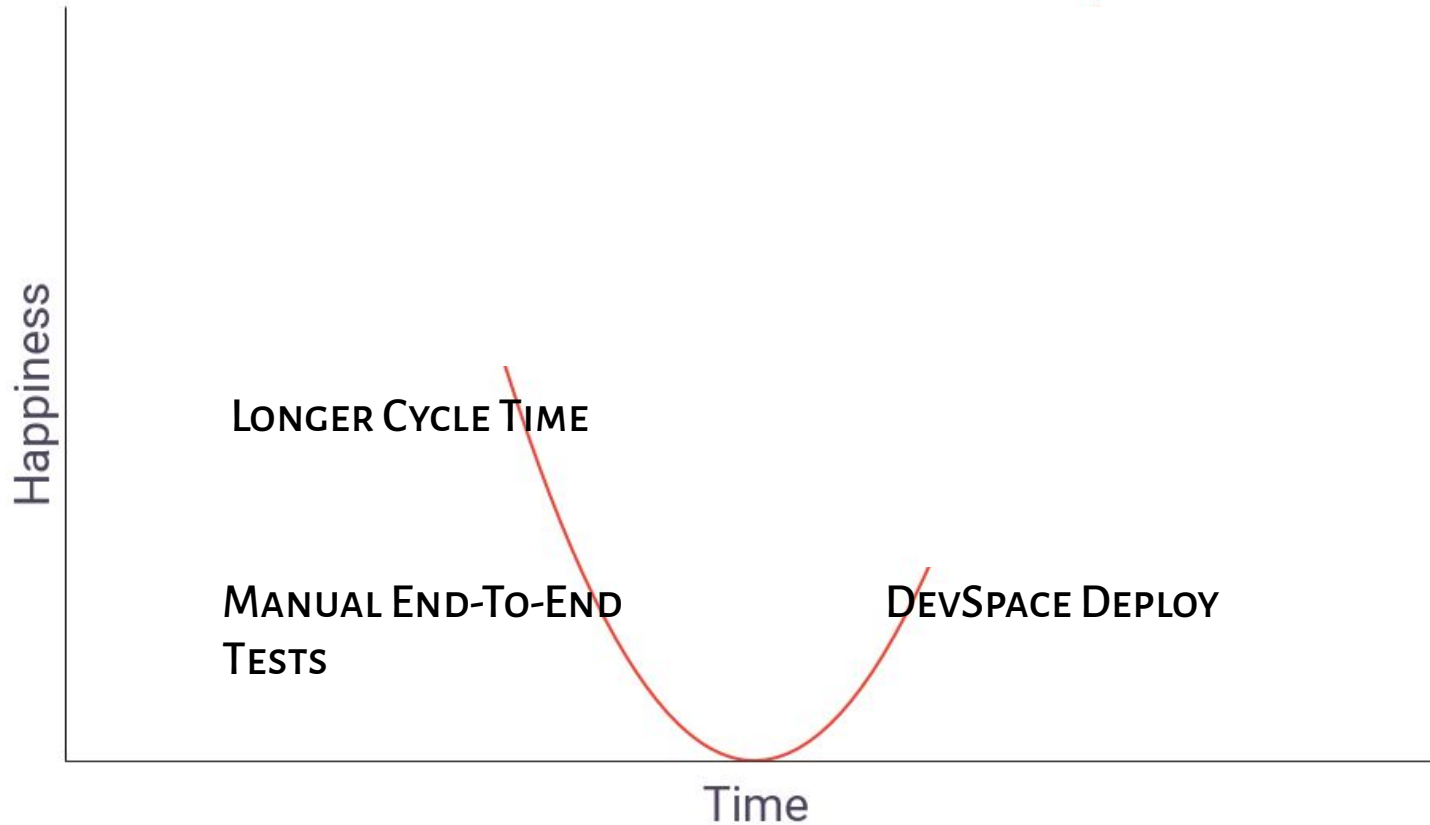


**LOW RESOURCE
USAGE**



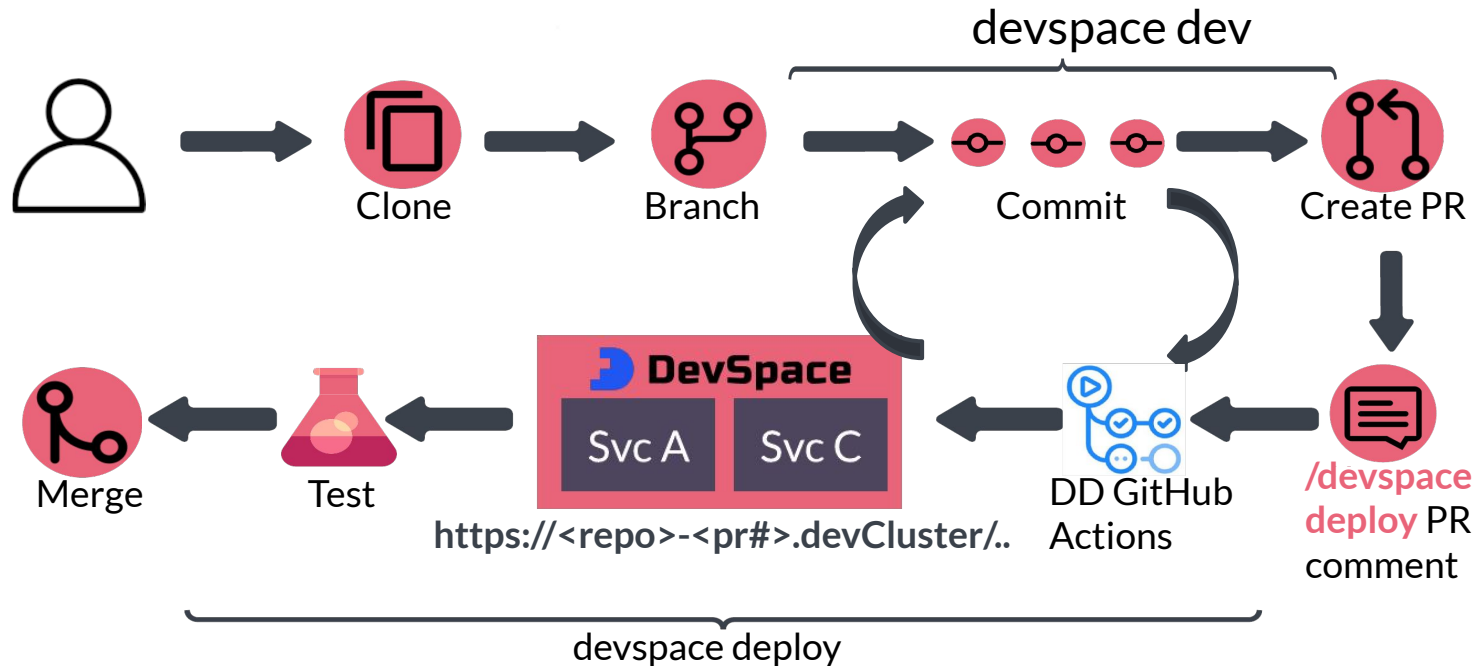
**EASIER
ON-BOARDING**

DEVELOPER EXPERIENCE JOURNEY



DEVSPACE DEPLOYMENTS FOR PULL REQUESTS (PRs)

➔ DevSpace deployments as part of continuous integration (CI) workflow



DEVSPACE DEPLOYMENTS FOR PRs BENEFITS

PART OF CI WORKFLOW



FASTER REVIEW CYCLE



FASTER DEVELOPMENT CYCLE

github-actions bot commented 2 hours ago

🔧 We created a unique DevSpace environment where your branch (commit) is deployed to make it easy for you to test your changes.

Here are some helpful links regarding your deployment:

[Link](#)

[Link](#)

🔧 DevSpace CLI commands:

```
devspace login https://devspace.  
  
# Select the Local / DevSpace Cluster  
devspace use space  
  
kubectl get pods
```

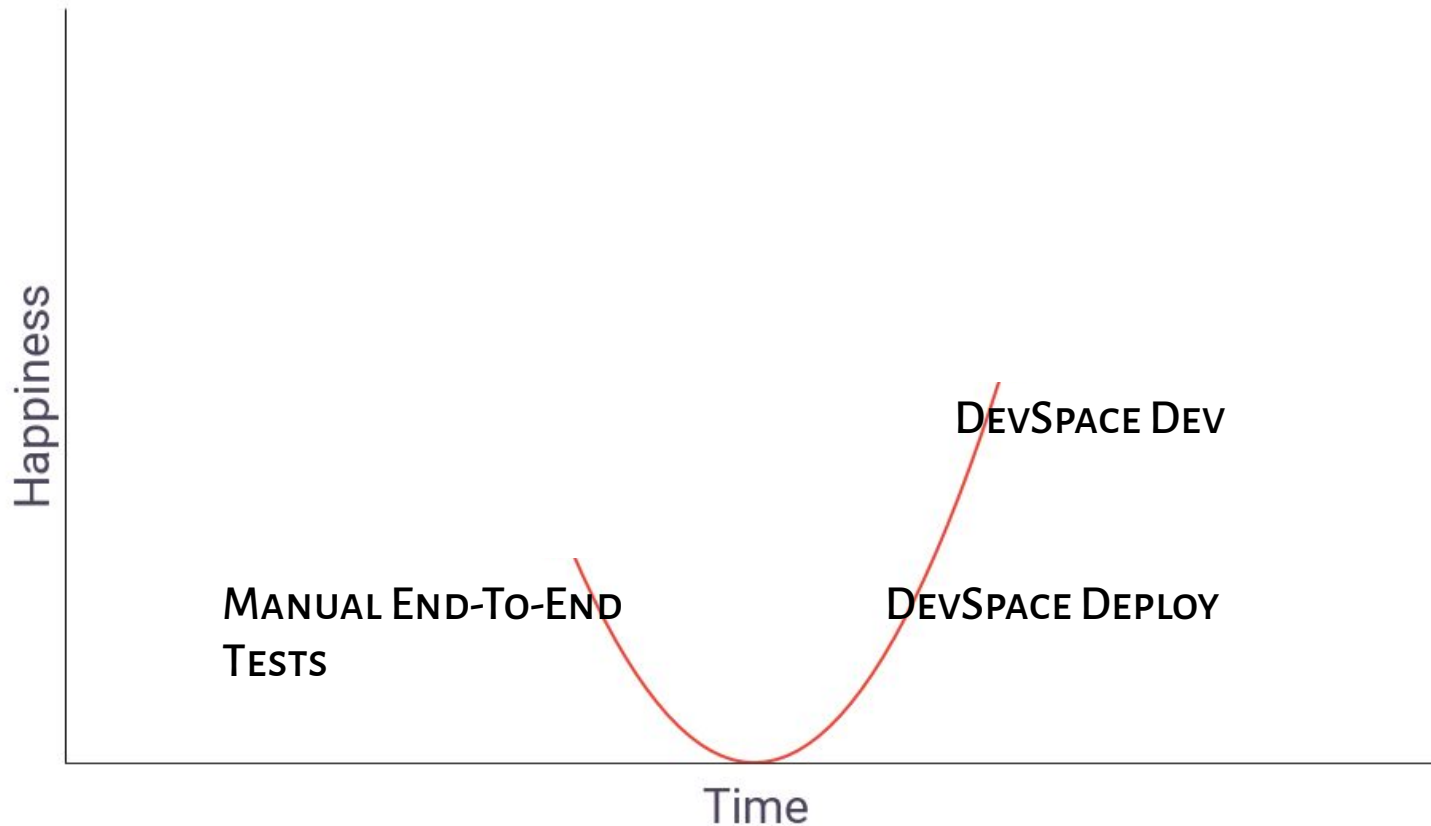
🙏 Please wait for the bot to be built for this PR (will be notified via PR comment soon!)

📄 To learn more about DevSpace, please see our [DevSpace Resource Centre](#).

🗨️ Please leave any feedback or questions you may have on our Slack Channel [#p-devspace](#).

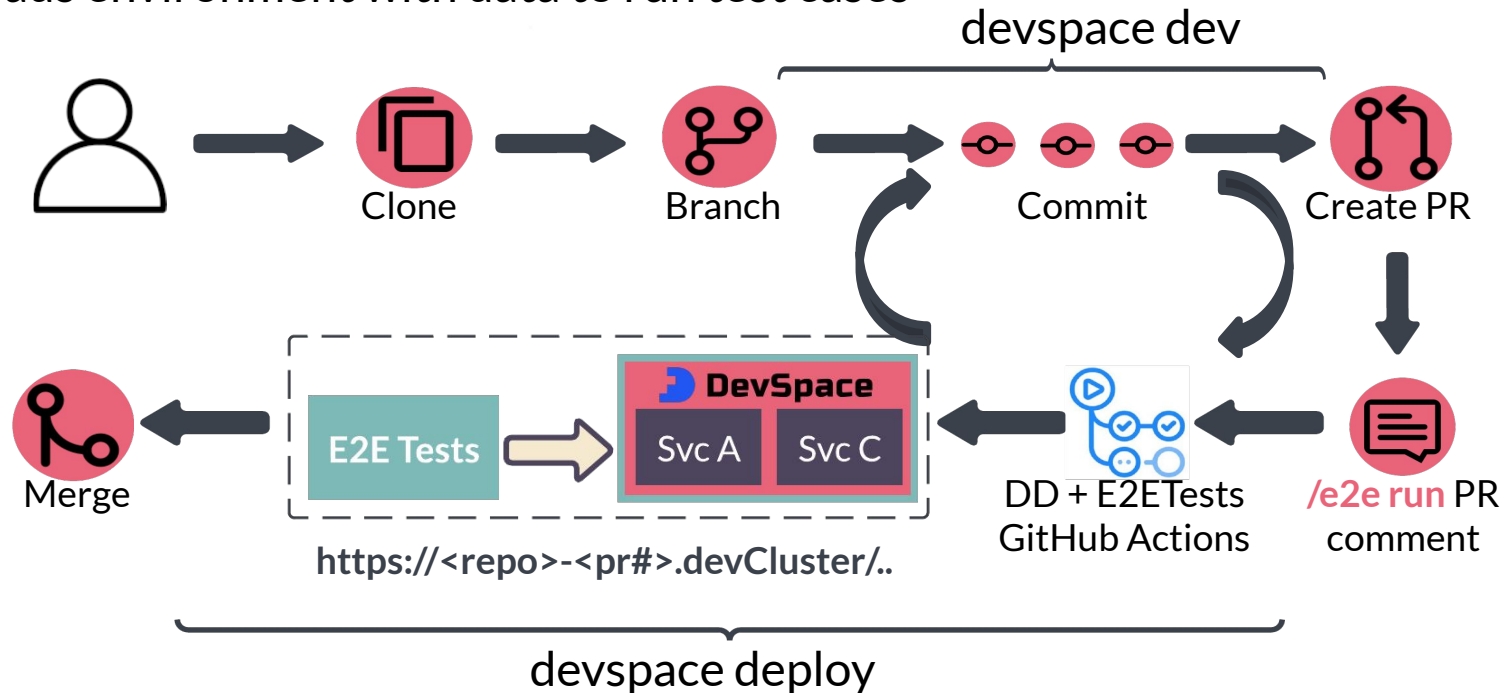
👍 1

DEVELOPER EXPERIENCE JOURNEY



END-TO-END TESTS + DEVSPACE DEPLOYS FOR PRs

- ➔ End-to-end (E2E) tests with DevSpace deployments on PRs
- ➔ Loads environment with data to run test cases

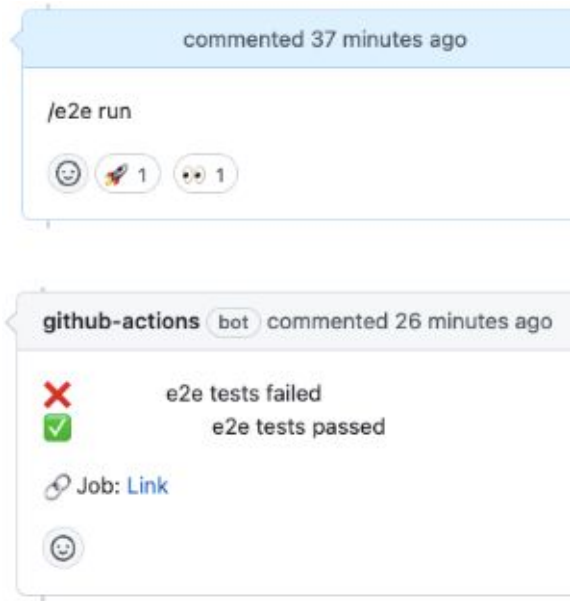


AUTOMATED E2E TESTS SETUP AND EXECUTION

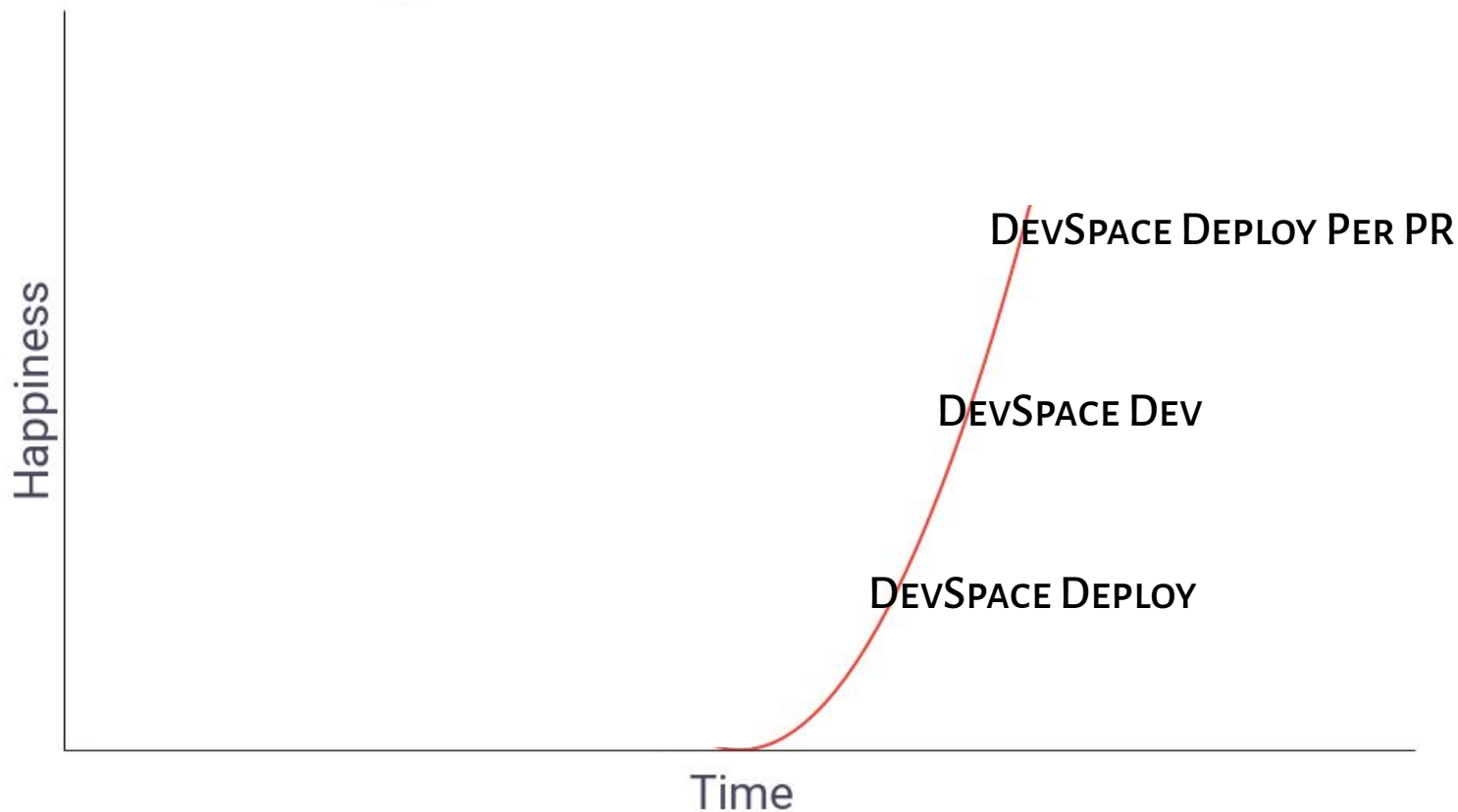
ON-DEMAND TESTING CAPABILITY



GATING MECHANISM TO MERGE



DEVELOPER EXPERIENCE JOURNEY





2 quarters with 2 engineers



DOCUMENTATION



**WALK-THROUGHS /
DISCUSSIONS**



PRESENTATIONS

ROLLOUT LESSONS



Knowledge siloed to our team



Not enough communication and feedback



Remediation



Better visibility of DevSpace deployments



Champions for teams



DevSpace experts on teams to take ownership



Dedicated support Slack channel



Support from Loft Labs (maintainers)



200+ ephemeral environments



DevSpace deployments via PRs > command-line



Improved developer experience

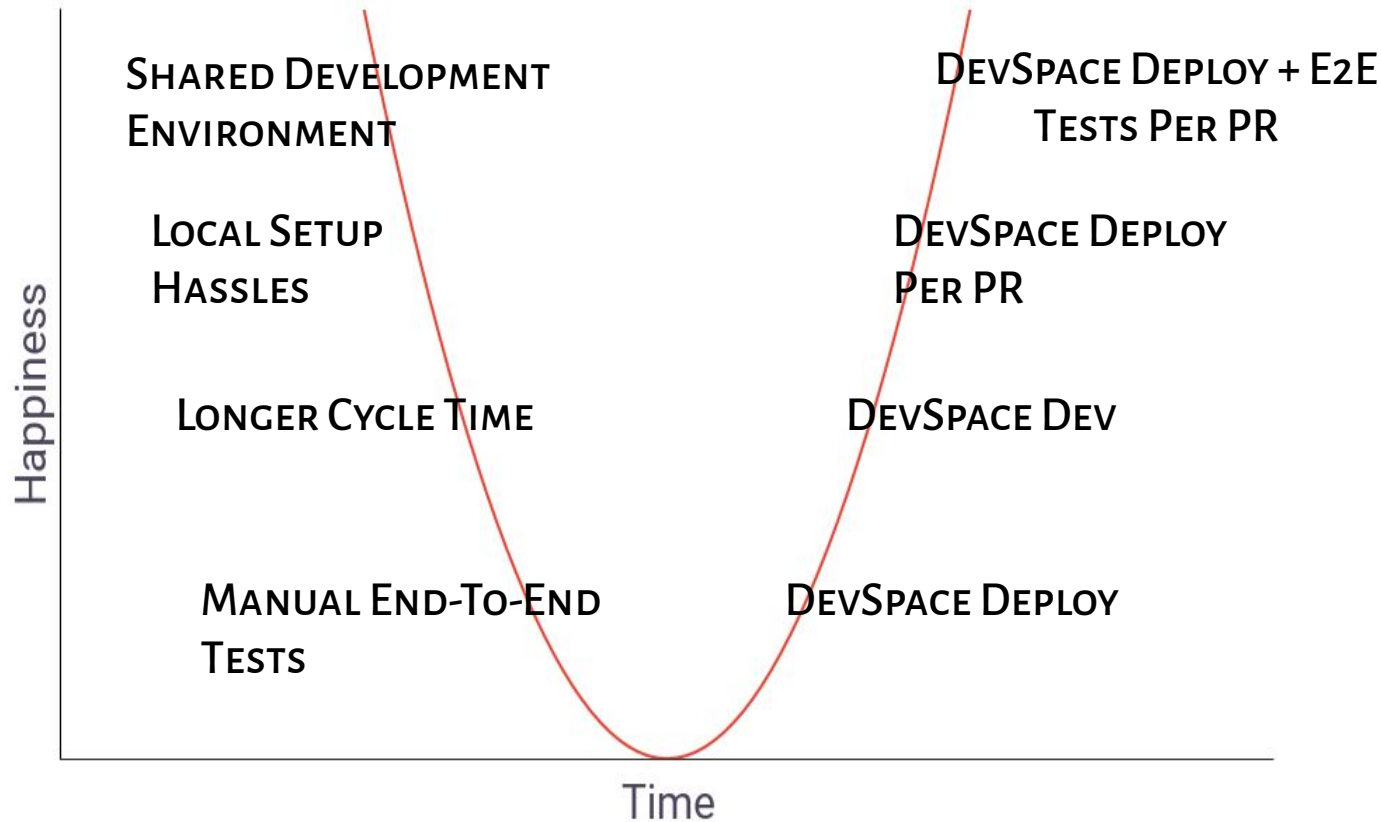


Next Steps



Standardize new developer workflows across other services

DEVELOPER EXPERIENCE JOURNEY



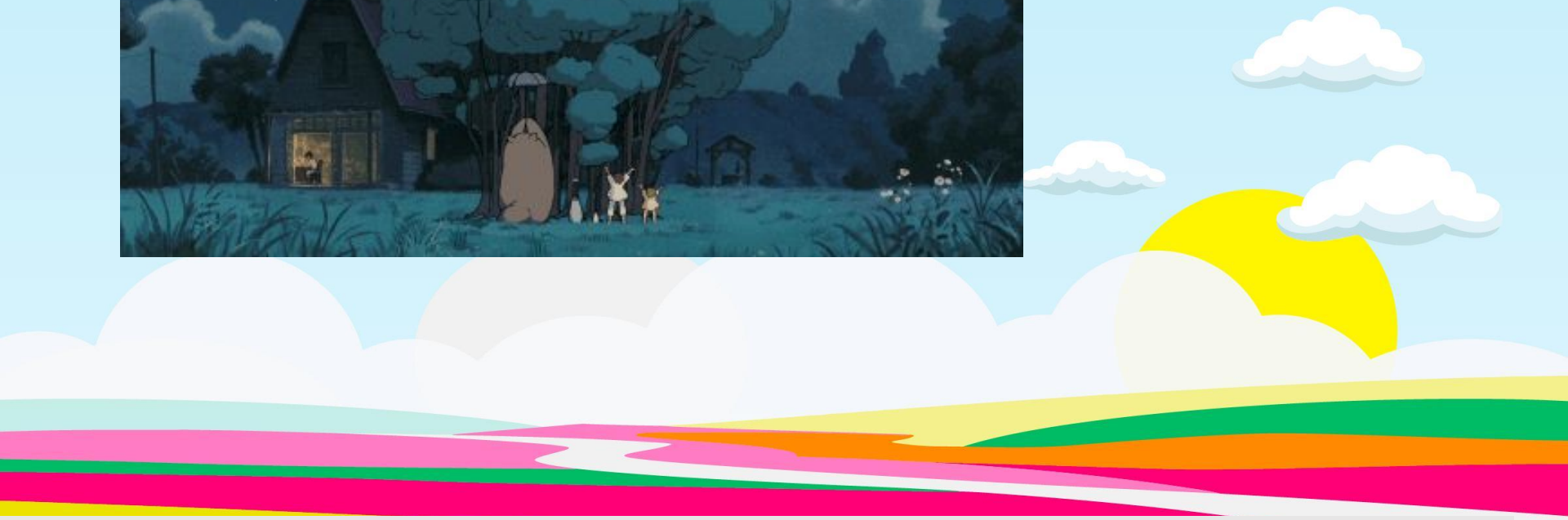


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