

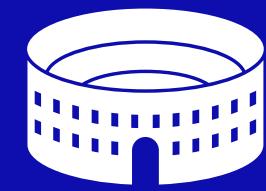
Amphitheatre for Solana

For Solana, Amphitheatre offers robust support with smart contracts in various programming languages (Native, Anchor, Seahorse, C and C++, Solang), along with the option for a local Testnet.

SOLANA HYPERDRIVE GLOBAL ONLINE HACKATHON

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Amphitheatre

Instantly spin up fresh, automated dev environments in the cloud and start developing within seconds.

Bring Your Code



Supports many of the many popular languages, frameworks, SDKs and runtimes.

amp init

Streamline Software Integration



Works with developer tools & any dev resource, Adds internal & external dependencies.

amp build

amp deploy

Deploy & Run



Kubernetes Cluster with Containers

Amphitheatre Cloud

amp cloud deploy

<http://localhost:3000>

Why we built this project?

Challenges in software development faced by developers

• Diverse Technology Stack

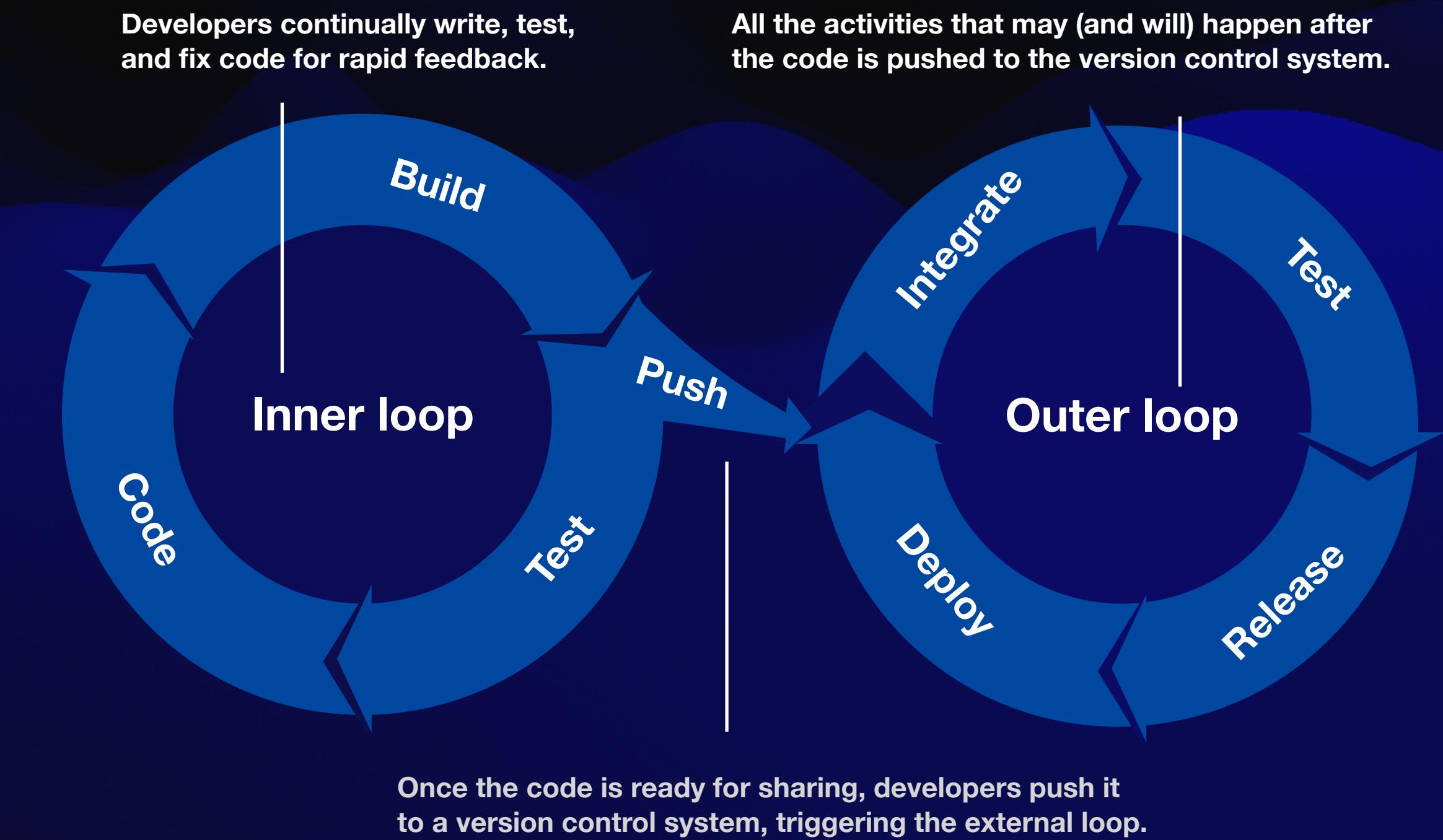
Developers need to install runtimes for various programming languages, along with their associated frameworks and libraries on their local machines. As the business scales up, the maintenance and management of multiple languages and versions become increasingly complex.

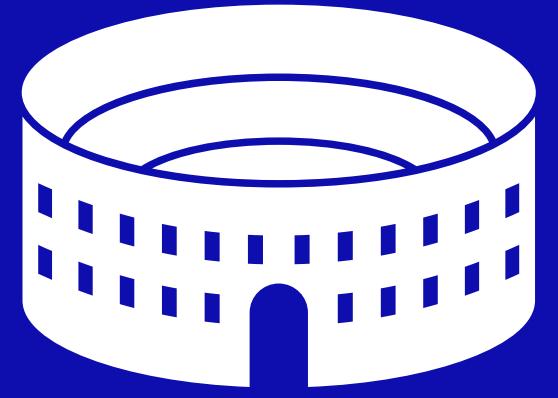
• Lengthy Development Process

The development process spans over a dozen steps, including software installation, environment configuration, code cloning, development, local debugging, code submission, compilation, automated testing, deployment to the testing environment, acceptance testing, code merging into the main branch, and production environment deployment.

• Complex Infrastructure

To deploy for testing, one must not only grasp containerization and Kubernetes but also go through the process of resource allocation, middleware installation, and configuration. This results in high learning costs and substantial efforts.





Amphitheatre

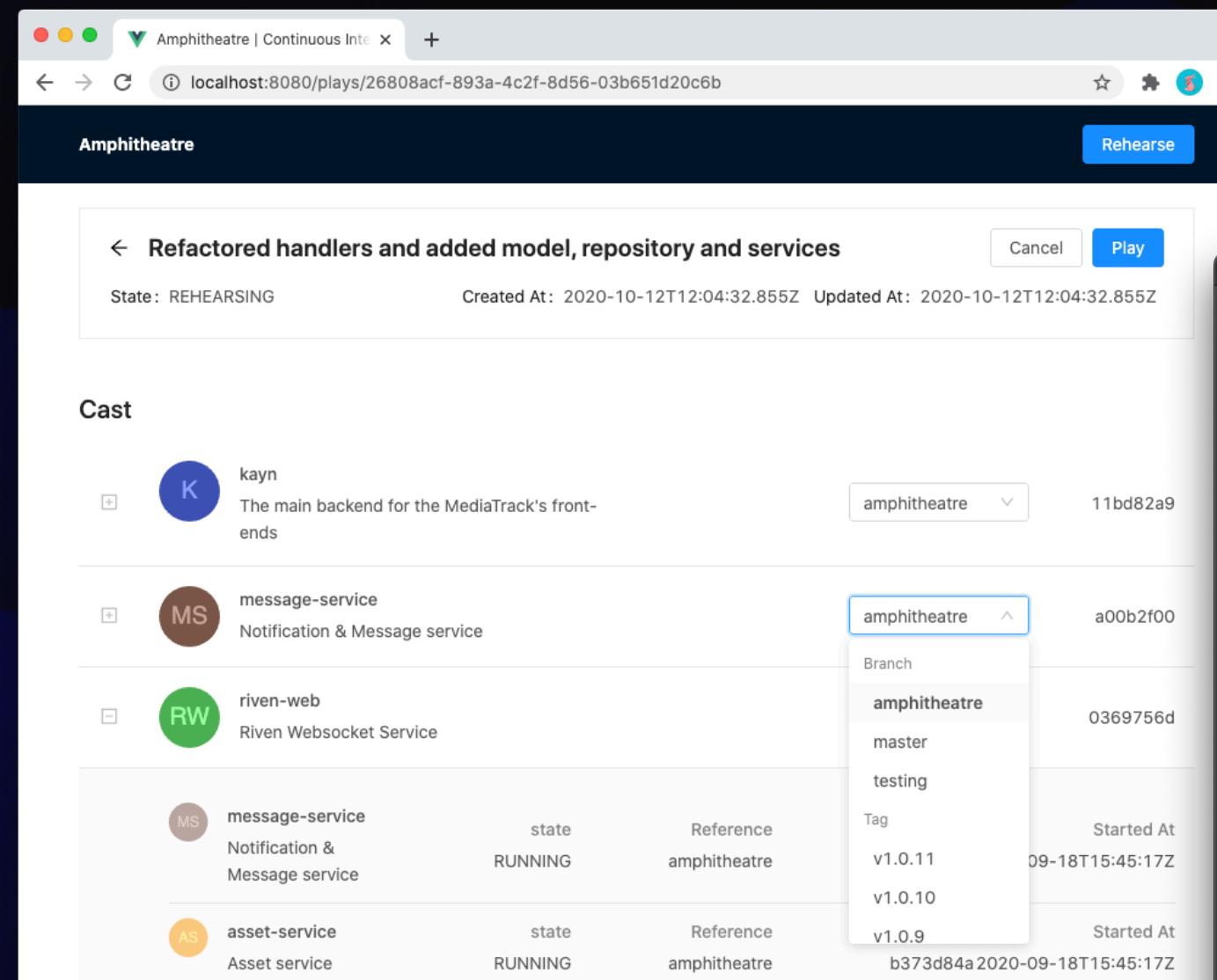
Instantly spin up fresh, automated dev environments in the cloud. It provides on-demand, pre-configured tools, libraries, and dependencies, ensuring you can start coding immediately.

<https://amphitheatre.app>

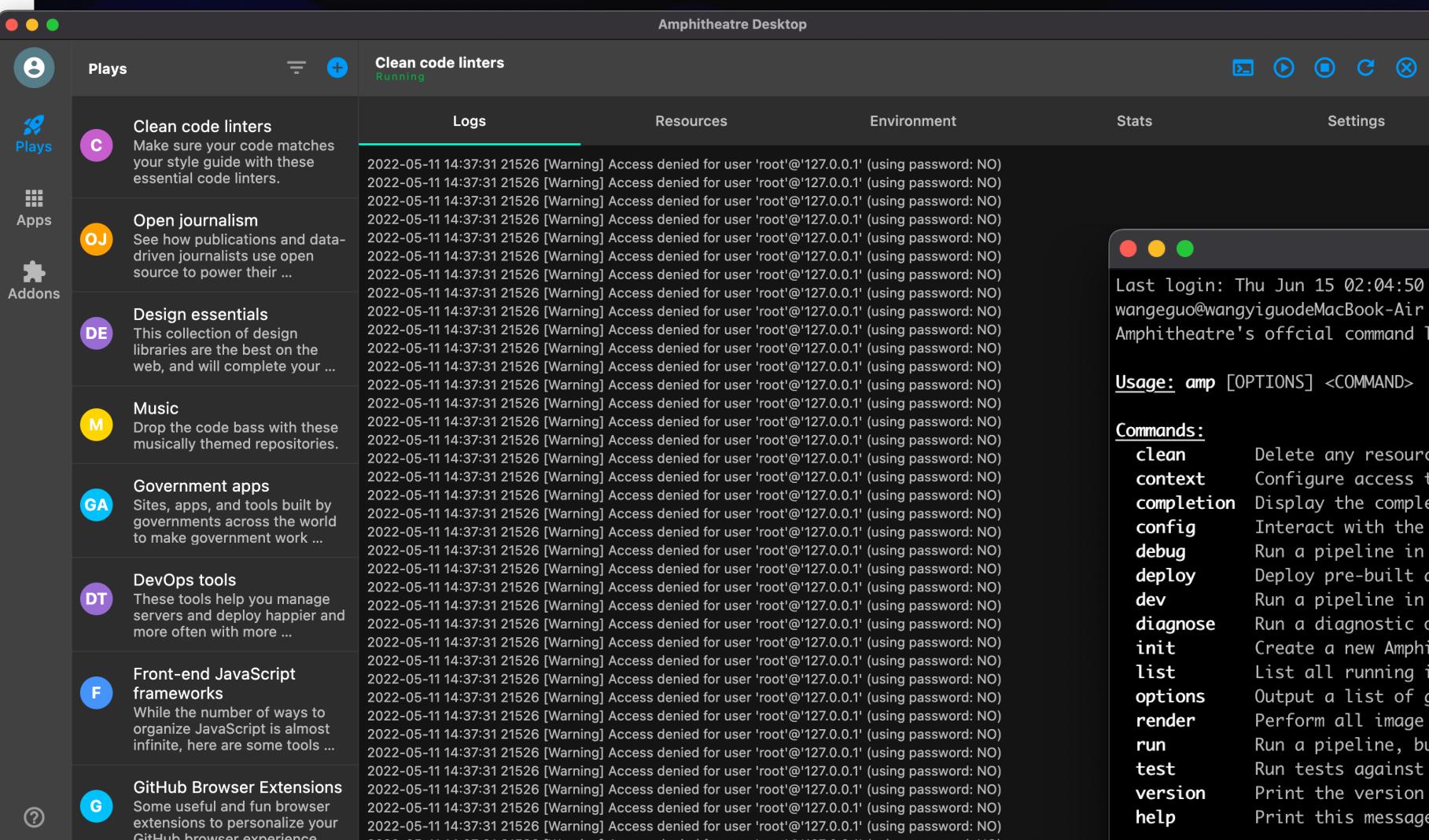
- ✨ Zero local setup required.
- 🚀 Unlimited isolation environments.
- 📦 Supports apps with multiple components.
- ⚡ Instant code updates, no builds.
- 📸 Collaborate quickly, shared dev environment.
- ☁️ On-demand Amphitheatre Cloud, ready-to-use.
- 🧩 Automate end-to-end software integration.

Screenshots

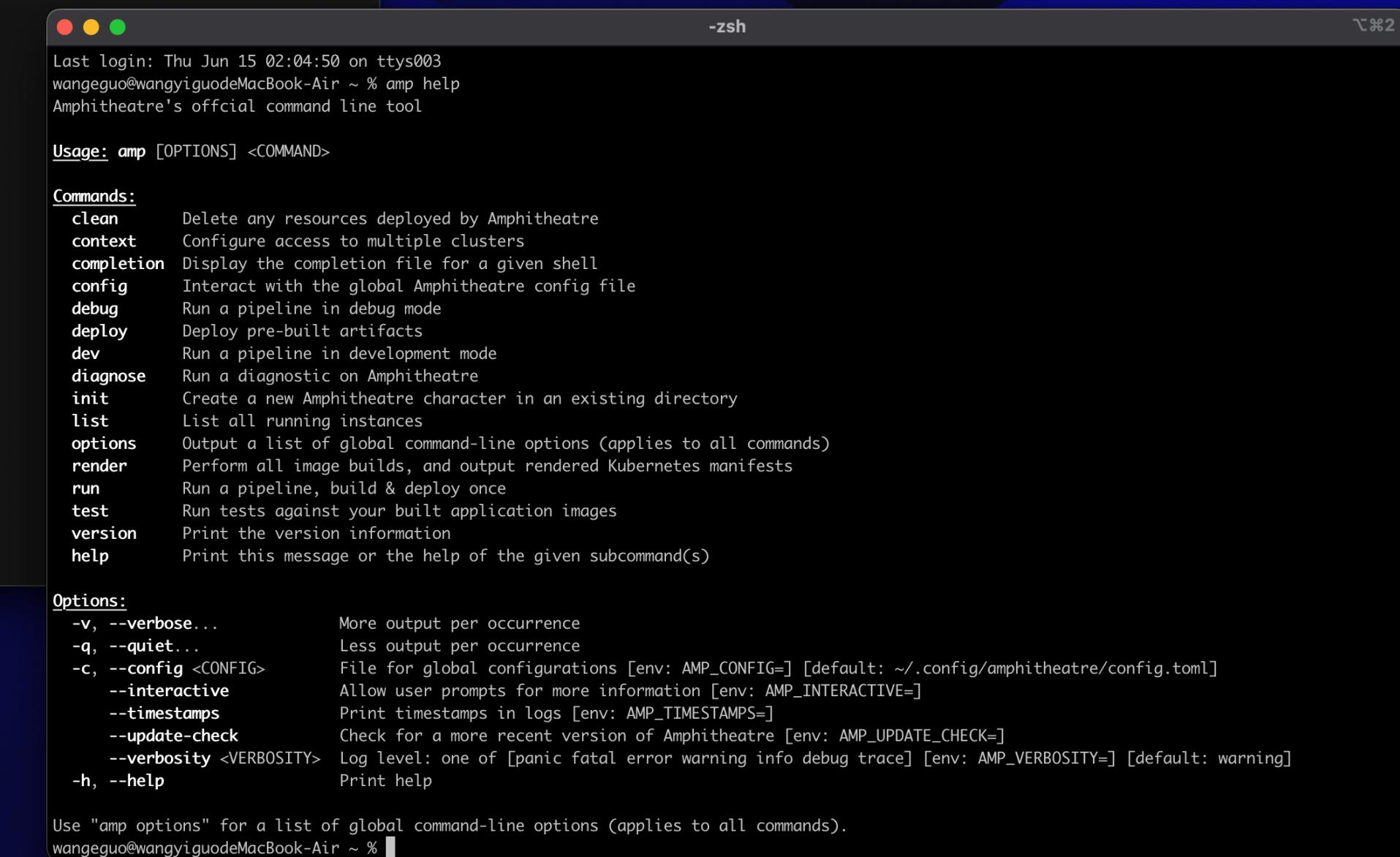
Compatible with various operating systems such as Windows, macOS, and Linux.



Web



Desktop



CLI

Run a simple application

(CLI)

1. It's a Rust application that loop print the 'Hello world'

```
fn main() {  
    loop {  
        println!("Hello, world!");  
    }  
}
```

2. Initialize the Character

```
$ amp init  
  
Scanning source code  
Detected Rust app  
Using the following build configuration  
    Builder: paketobuildpacks/builder:base  
    Buildpacks: docker.io/paketocommunity/rust  
Wrote config file .amp.toml  
Your Character is ready. run with `amp run`  
...
```

```
name = "amp-example-rust"  
version = "0.0.1"  
authors = ["Eguo Wang <wangeguo@gmail.com>"]  
edition = "v1"  
description = "A simple Rust example app"  
readme = "README.md"  
homepage = "https://github.com/amphitheatre-app/amp-example-rust"  
repository = "https://github.com/amphitheatre-app/amp-example-rust"  
license = "Apache-2.0"  
license-file = "LICENSE"  
keywords = ["example", "rust", "getting-started"]  
categories = ["example"]
```

Inside .amp.toml

3. Deploying to Amphitheatre

```
amp run
```

Run a multiple components application (Web)

1

Apply

Job Description	Status	Last Run
Fixed model's bug and retest	PASS	2020-10-12T12:02:46.407Z
MySQL configurations and tests	PASS	2020-10-12T12:03:06.294Z
Refactored handlers and added model, repository and services	PASS	2020-10-12T12:04:32.855Z
The URL of the Leading Player	PASS	2020-10-12T12:04:17.463Z
Updated README.md and token	PASS	2020-10-12T12:03:26.634Z
Exit while env is empty	PASS	2020-10-12T12:01:52.449Z
Renamed role with character	PASS	2020-10-12T12:03:55.129Z
Updated README.md endpoint and token	PASS	2020-10-12T12:01:36.113Z
Refactored play k8s resources deploy handler	PASS	2020-10-12T12:01:14.776Z
Deploy containers and services into k8s	PASS	

Running instances

3

Run

← Refactored handlers and added model, repository and services

State: REHEARSING Created At: 2020-10-12T12:04:32.855Z Updated At: 2020-10-12T12:04:32.855Z

Cast

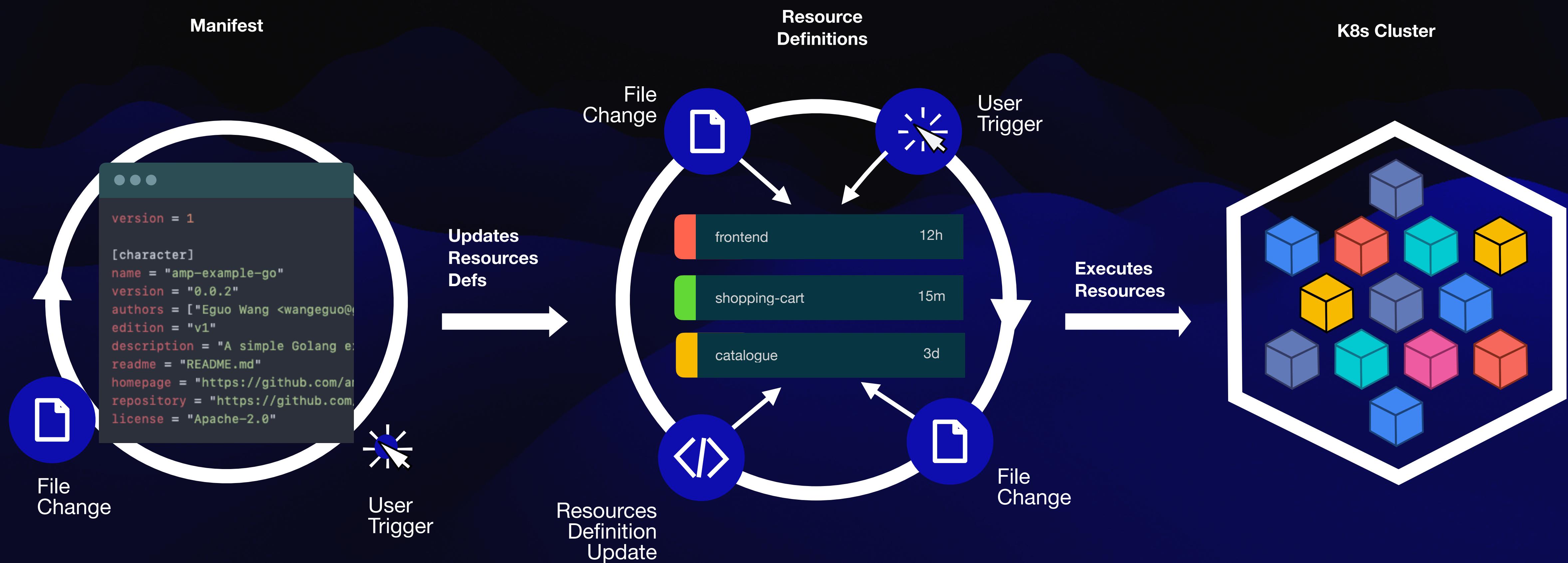
Component	Description	Branch	Tag	Started At
kayn	The main backend for the MediaTrack's front-ends	amphitheatre	11bd82a9	2020-10-12T12:04:32.855Z
message-service	Notification & Message service	amphitheatre	a00b2f00	2020-10-12T12:04:32.855Z
riven-web	Riven Websocket Service	amphitheatre	0369756d	2020-10-12T12:04:32.855Z
message-service	Notification & Message service	amphitheatre	v1.0.11	2020-10-12T12:04:32.855Z
asset-service	Asset service	amphitheatre	v1.0.10	2020-10-12T12:04:32.855Z
asset-service	Asset service	amphitheatre	v1.0.9	2020-10-12T12:04:32.855Z

dependencies

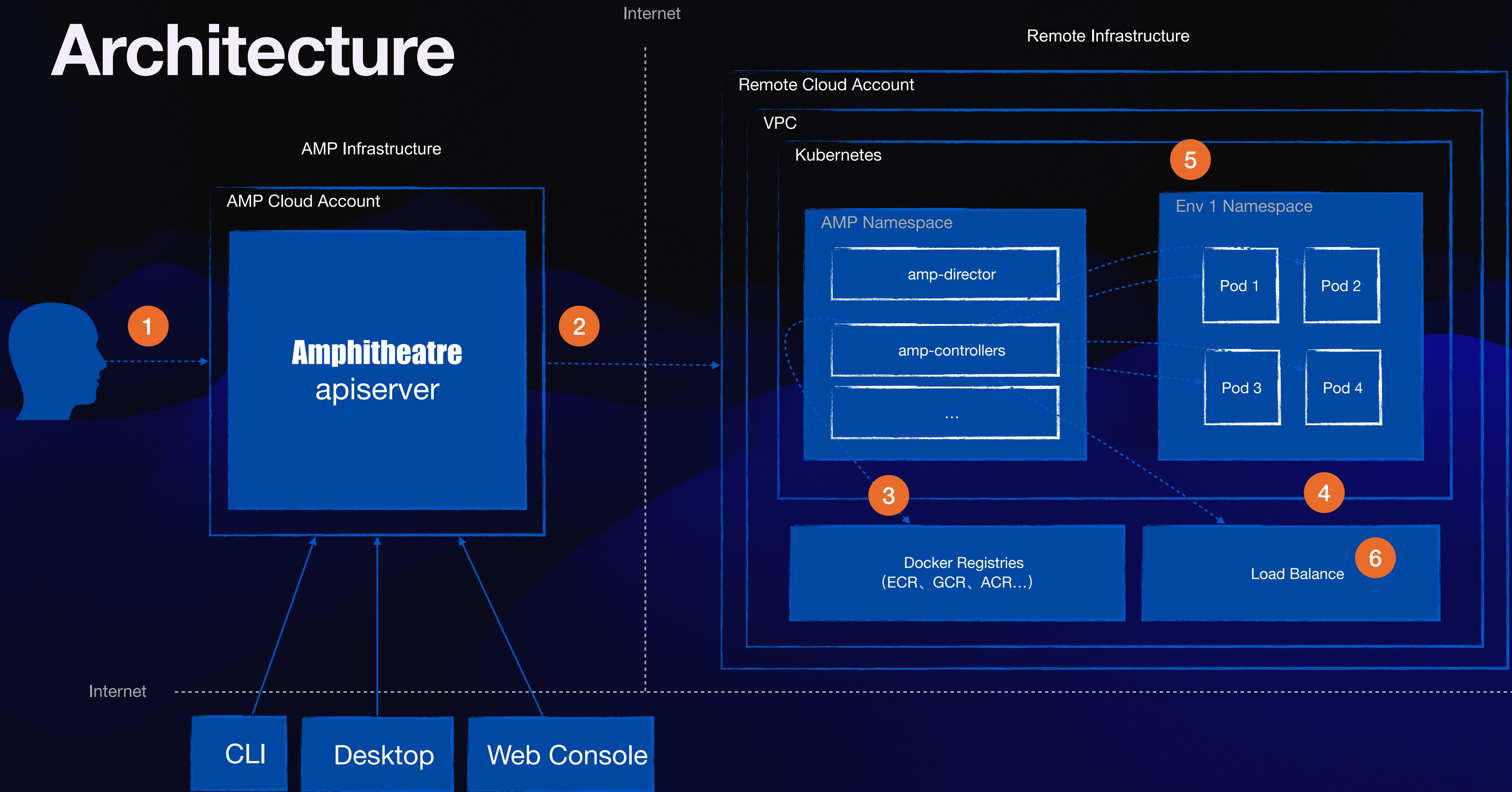
Select version

2

How it works



Architecture



Special support for Solana



Native

Written using Solana's
native Rust crates



Anchor

Written using the Rust
framework Anchor



Seahorse

Written using the Python
framework Seahorse



C / C++

Written using C and C++
programming languages



Solang

Written using Solang
programming languages

In addition, a Testnet is automatically deployed locally (optional). For additional information, please visit the "Amphitheatre for Solana" GitHub repository:
<https://github.com/amphitheatre-app/solana-examples>

Thanks