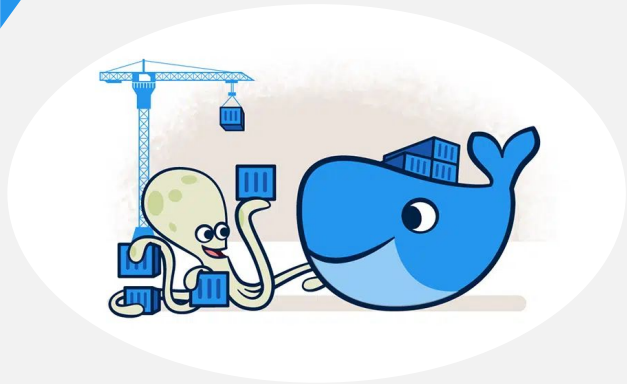
What's New in Docker Desktop 4.15

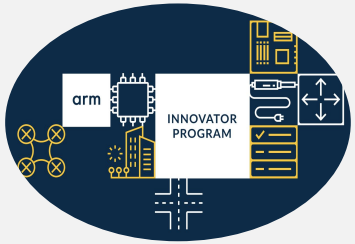
Dec 15 2022



docker

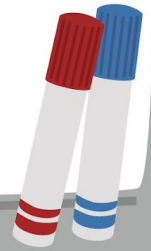
Speaker

- Working at Docker, Inc
- Author @ https://collabnix.com
- Docker Captain
- Docker Community Leader, Bangalore
- ARM Innovator
- Worked @ DellEMC, VMware, Redis & CGI



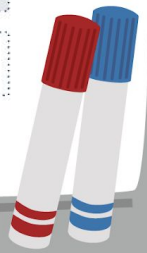
Agenda

- What's New in Dev Environments?
- New Dev Environments CLI
- New Chrome Extensions for Dev Environments
- Docker + WebAssembly Awesomeness
- New Hub Search Capabilities
- New Docker Extensions



Docker Overview

SaaS	On Desktop	On Server, IoT Edge or in the Cloud	Developer Tools
Docker Hub	Docker Desktop for Mac	Docker Engine	Docker Compose
	Docker Desktop for Windows	Docker Engine support for IoT	Docker Buildkit
	Docker Desktop for Linux		Docker CLI
			Docker Content
			Kubernetes
			Docker Extensions



Features of Docker Desktop

Dev Environments

Docker Extensions

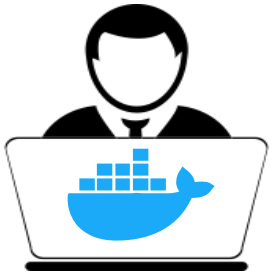
Support for Containerd

Vulnerability Scanning

Support for Wasm Containers

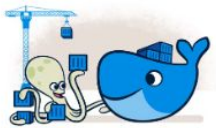
Support for Kubernetes

Dev Environments



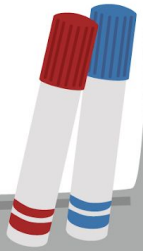
A Traditional Docker Workflow

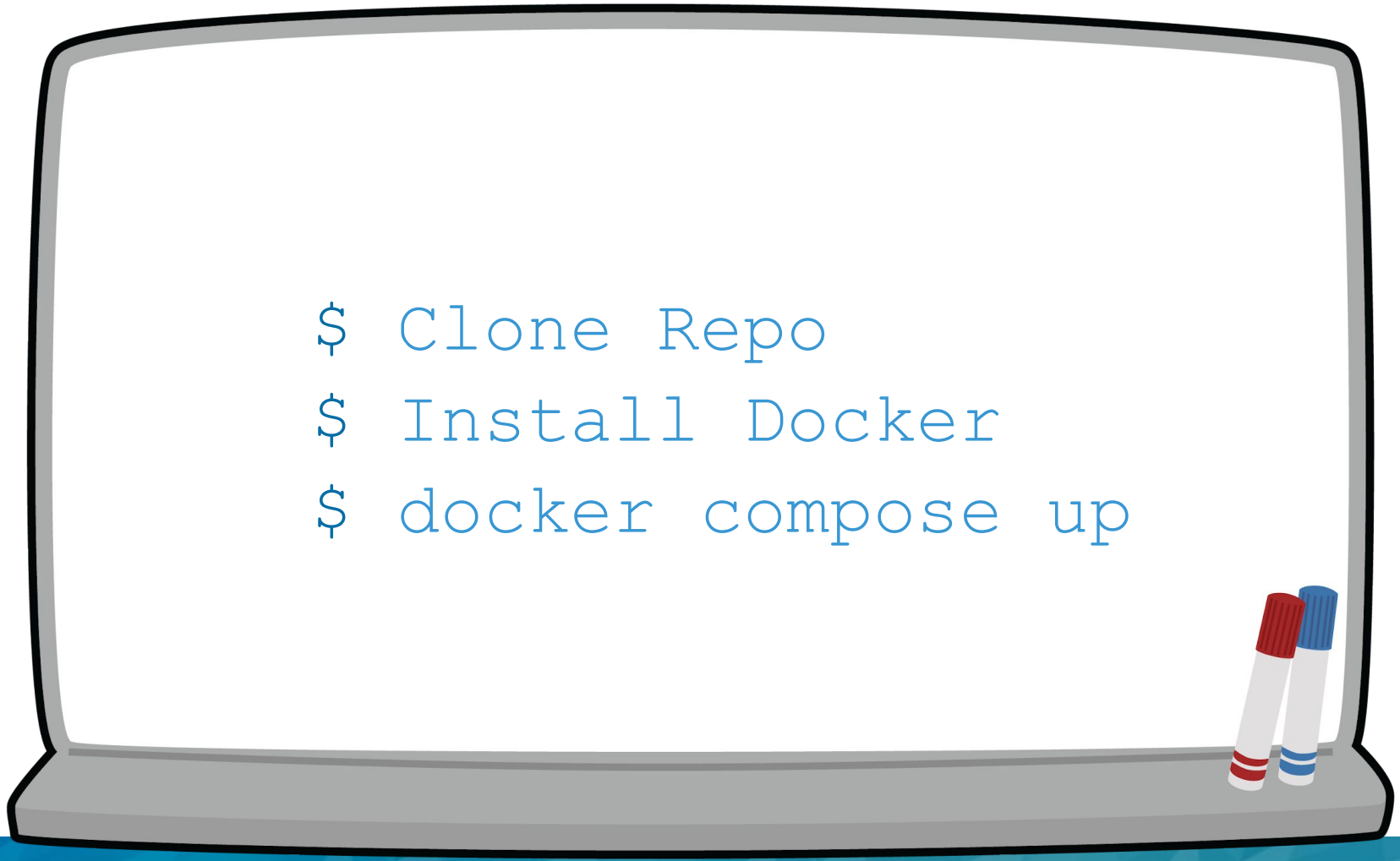
BUILD	SHARE	RUN



Docker Desktop for Mac
Docker Desktop for Windows

DockerHub

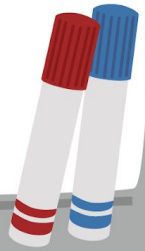


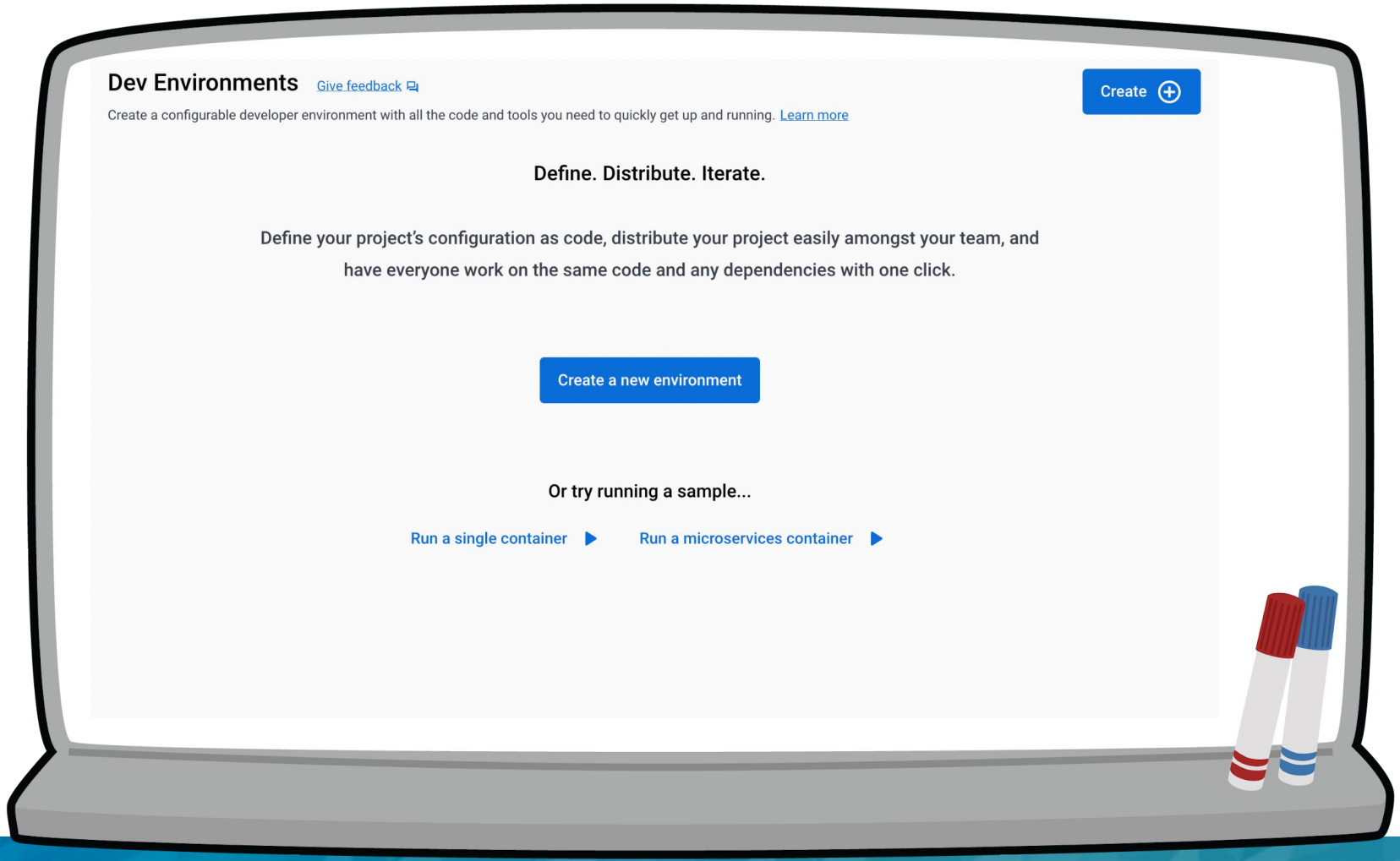

$ Clone Repo
$ Install Docker
$ docker compose up

Challenges in the traditional approach

- Developers need to manually download all the tools to setup their development environments.

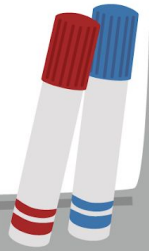
For Ex:
- VS Studio software/IntelliJ
- GitHub/Plugins



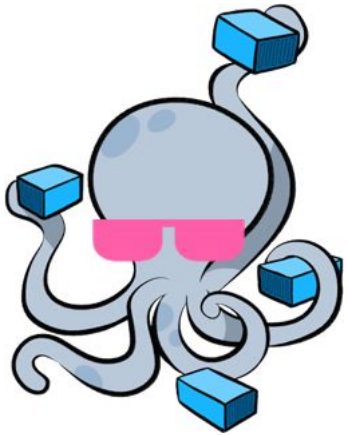

Dev Environments
Give feedback
Create a configurable developer environment with all the code and tools you need to quickly get up and running. Learn more
Create
Define. Distribute. Iterate.
Define your project's configuration as code, distribute your project easily amongst your team, and have everyone work on the same code and any dependencies with one click.
Create a new environment
Or try running a sample...
Run a single container
Run a microservices container

New Features & Enhancements:

- New Dev Environments CLI
- Dev Environments allow cloning a Git repository to a local bind mount, so you can use any local editor or IDE.(and not just Visual Studio Code)
- New Chrome Extension
- Deploy app directly from Awesome Compose Repository
- Improvements: Custom names, Better private repo support

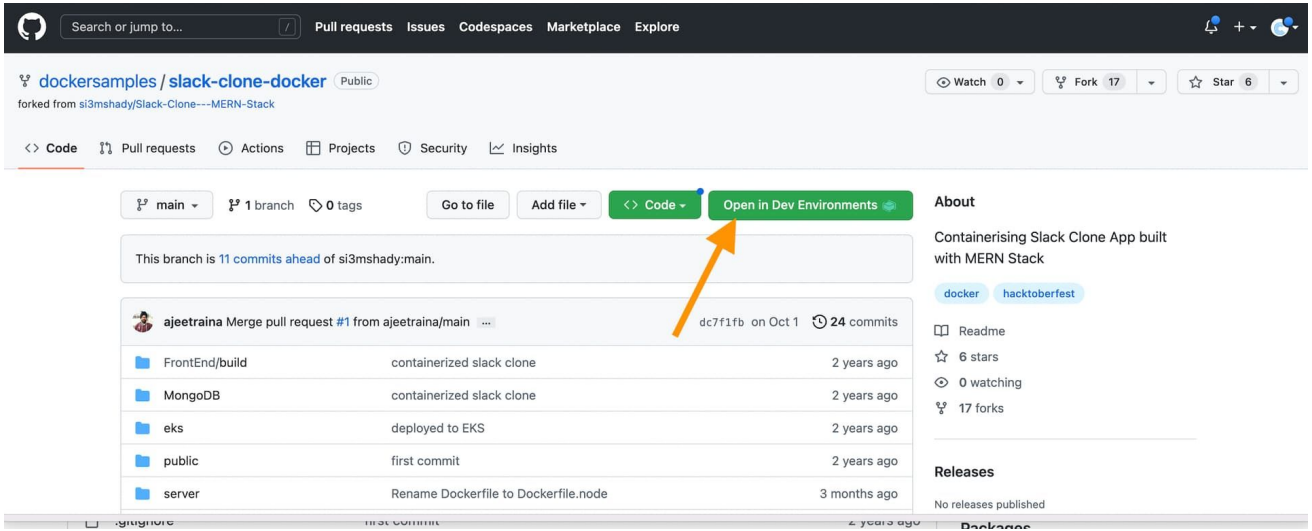


A Quick Demo



https://github.com/docker/awesome-compose

New Chrome Extension for Dev Environments

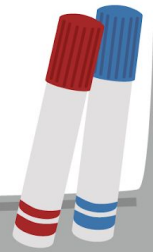


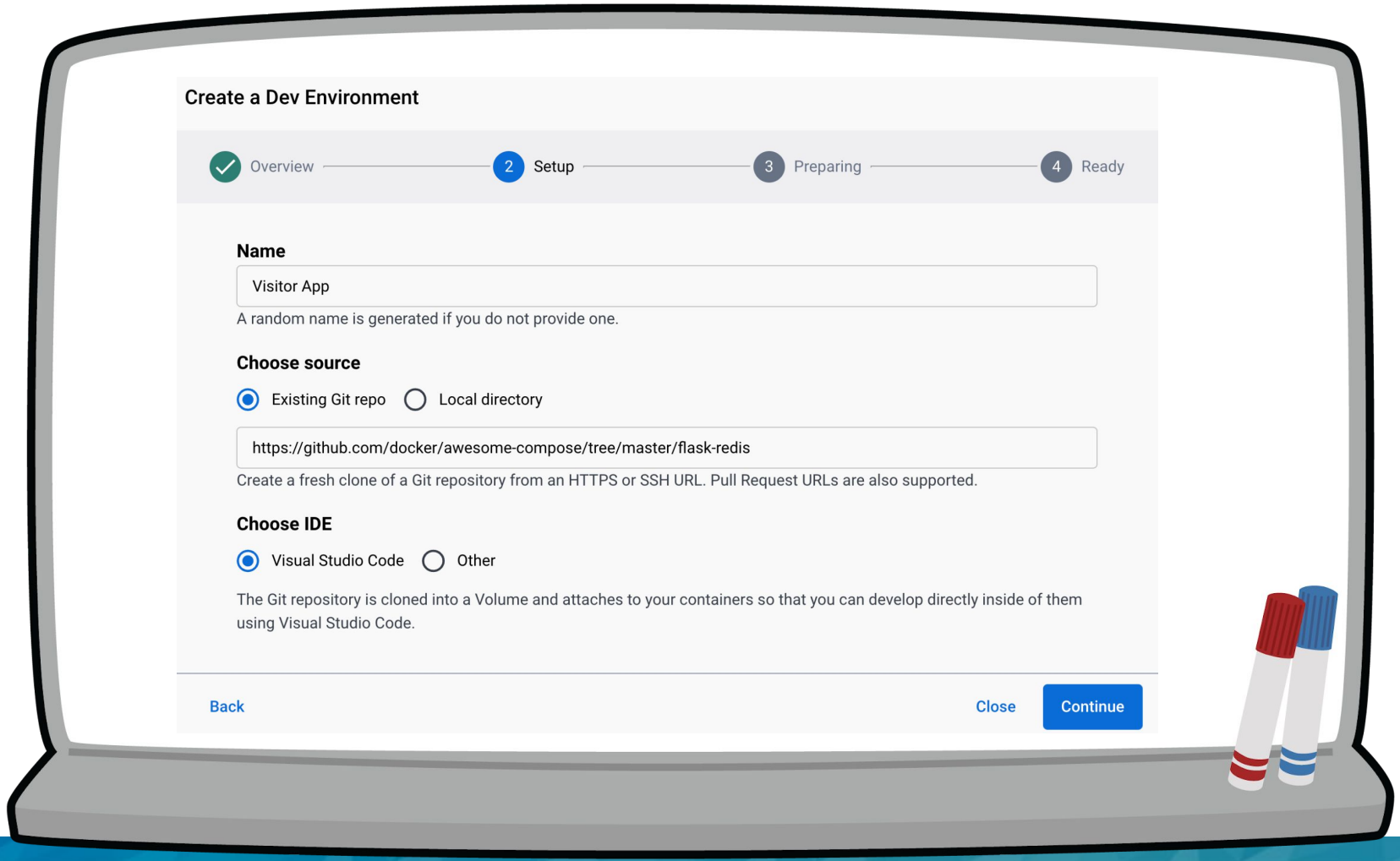
https://github.com/docker/dev-envs-extension

New Dev Environments CLI

```
% docker dev

Usage:  docker dev [OPTIONS] COMMAND

Docker Dev Environments CLI interface

Options:
  -s, --socket string   Sets the path to the unix socket or pipe to be
                        targeted. Can also be set through the environment
                        variable DOCKER_DEV_ENVS_SOCKET_PATH
  -v, --version         Display version of the dev plugin

Management Commands:
  service     Service management on a dev environment

Commands:
  check       Check Dev Environments
  create      Create a new dev environment
  list        Lists all Dev Environments
  logs        Traces logs from a dev environment
  open        Open Dev Environment with the IDE
  rm          Removes a dev environment
  start       Starts a dev environment
  stop        Stops a dev environment
  version     Show the Docker Dev version information

Run 'docker dev COMMAND --help' for more information on a command.
unknown docker command: dev []
```

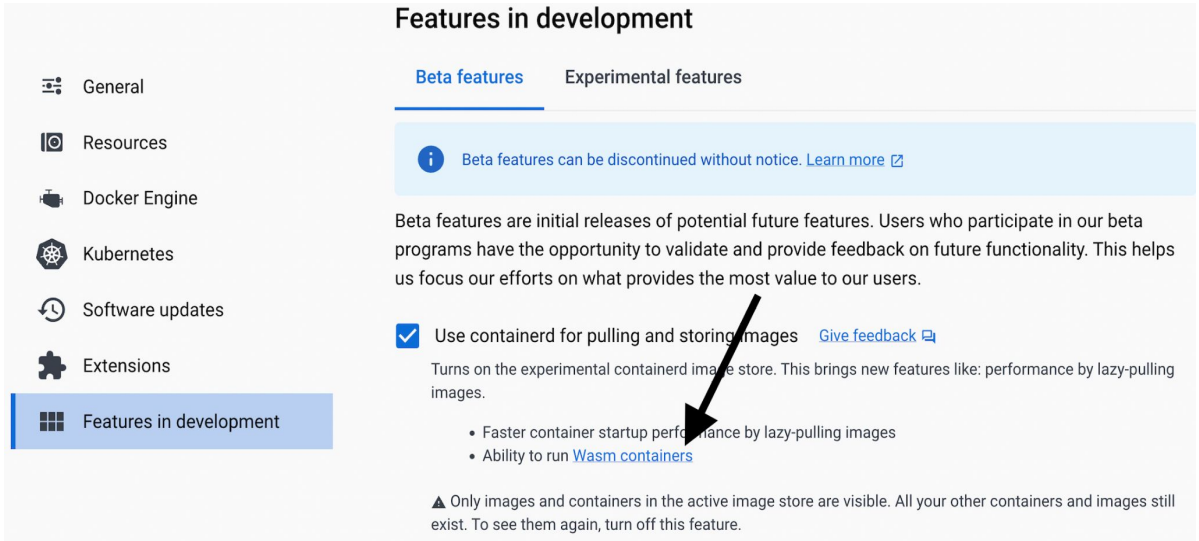
https://github.com/docker/dev-envs-extension

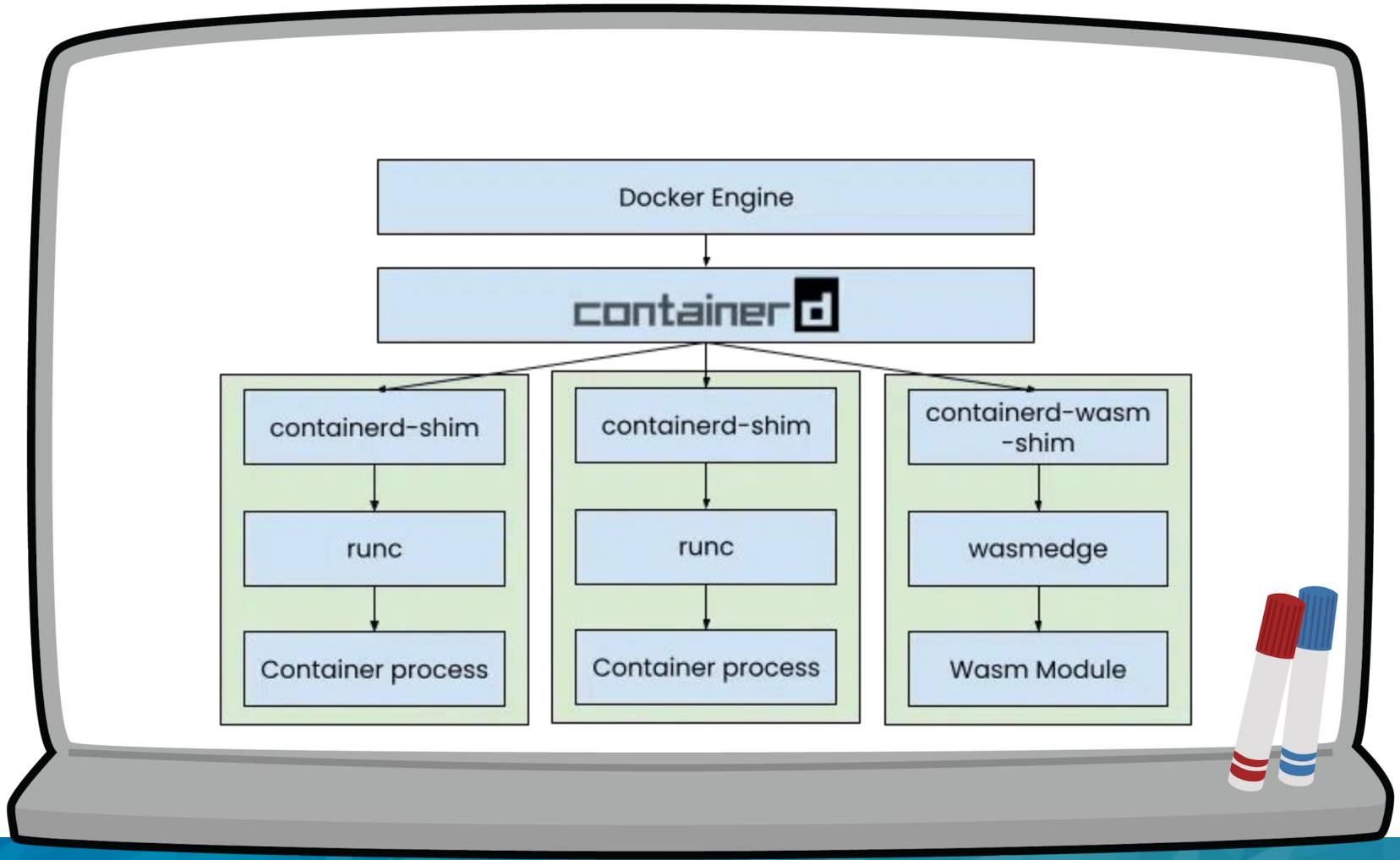



Create a Dev Environment
Overview
2
Setup
3
Preparing
4
Ready
Name
Visitor App
A random name is generated if you do not provide one.
Choose source
Existing Git repo
Local directory
https://github.com/docker/awesome-compose/tree/master/flask-redis
Create a fresh clone of a Git repository from an HTTPS or SSH URL. Pull Request URLs are also supported.
Choose IDE
Visual Studio Code
Other
The Git repository is cloned into a Volume and attaches to your containers so that you can develop directly inside of them using Visual Studio Code.
Back
Close
Continue

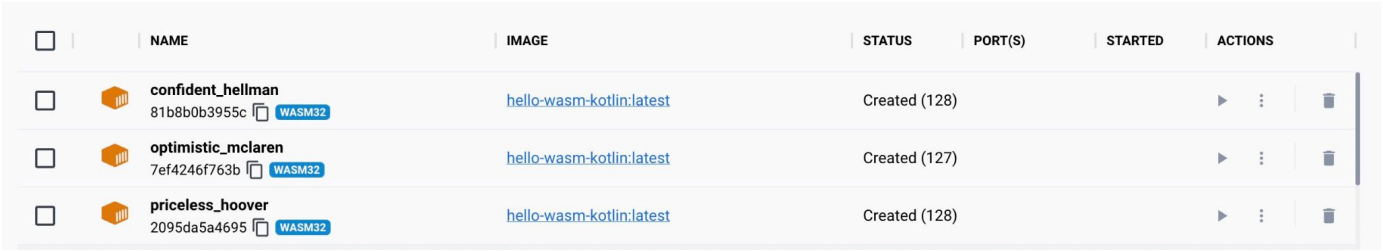
Docker + Wasm

- Docker Desktop 4.15 added WebAssembly capabilities.
- Use with the containerd integration.




Docker Engine
containerd
containerd-shim
runc
Container process
containerd-shim
runc
Container process
containerd-wasm
-shim
wasmedge
Wasm Module

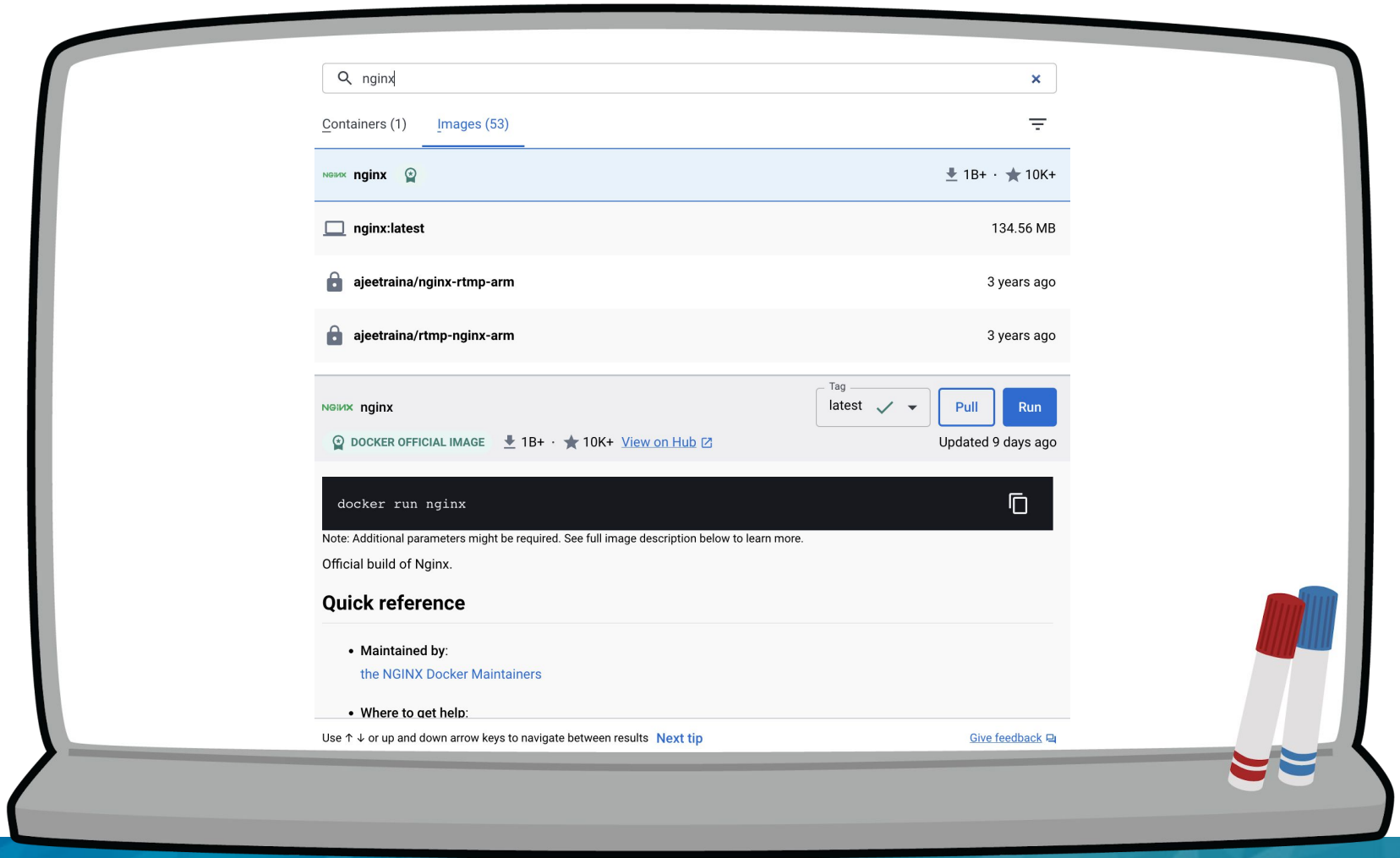
- Docker Desktop 4.15 added WebAssembly capabilities.
- Use with the containerd integration.



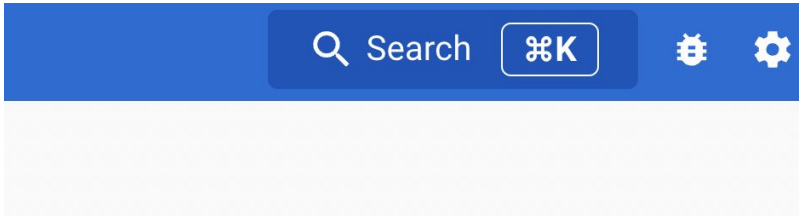
Docker + Wasm Resources

https://github.com/collabnix/wasm-docker-better-together

New Hub Search Capabilities

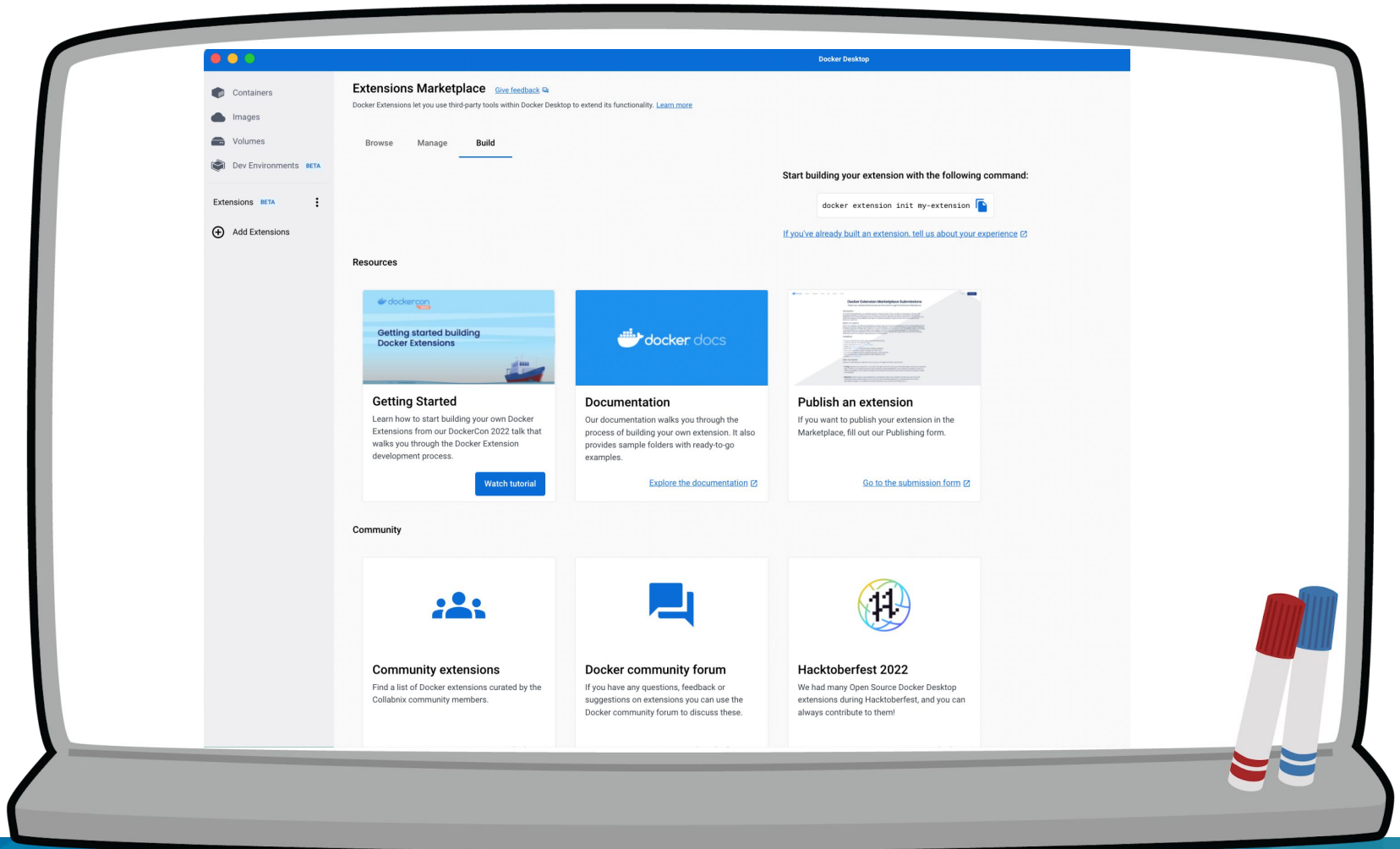

nginx
Containers (1)
Images (53)
nginx
1B+ · 10K+
nginx:latest
134.56 MB
ajeetraina/nginx-rtmp-arm
3 years ago
ajeetraina/rtmp-nginx-arm
3 years ago
nginx
Tag
latest
Pull
Run
DOCKER OFFICIAL IMAGE
1B+ · 10K+ View on Hub
Updated 9 days ago
docker run nginx
Note: Additional parameters might be required. See full image description below to learn more.
Official build of Nginx.
Quick reference
Maintained by:
the NGINX Docker Maintainers
Where to get help:
Use ↑ ↓ or up and down arrow keys to navigate between results
Next tip
Give feedback

Search Capabilities Demo



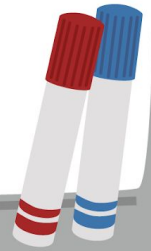
https://collabnix.com/integrated-search-capability-in-docker-desktop-to-accelerate-the-modern-application-development/

What's New in Docker Extensions?


Docker Desktop
Containers
Images
Volumes
Dev Environments BETA
Extensions BETA
Add Extensions
Extensions Marketplace
Give feedback
Docker Extensions let you use third-party tools within Docker Desktop to extend its functionality. Learn more
Browse
Manage
Build
Start building your extension with the following command:
docker extension init my-extension
If you've already built an extension, tell us about your experience
Resources
dockercon
Getting started building Docker Extensions
Getting Started
Learn how to start building your own Docker Extensions from our DockerCon 2022 talk that walks you through the Docker Extension development process.
Watch tutorial
docker docs
Documentation
Our documentation walks you through the process of building your own extension. It also provides sample folders with ready-to-go examples.
Explore the documentation
Publish an extension
If you want to publish your extension in the Marketplace, fill out our Publishing form.
Go to the submission form
Community
Community extensions
Find a list of Docker extensions curated by the Collabnix community members.
Docker community forum
If you have any questions, feedback or suggestions on extensions you can use the Docker community forum to discuss these.
Hacktoberfest 2022
We had many Open Source Docker Desktop extensions during Hacktoberfest, and you can always contribute to them!

Extensions Demo

https://github.com/collabnix/docker-community-extensions



Have Queries?

https://forums.docker.com

simplicity choice