HARBOR
The Container Registry

FOSDEM '22
Orlin Vasilev

CLOUD NATIVE
COMPUTING FOUNDATION

whoami

- Orlin Vasilev aka Orlix

- Father of two

- CNCF Ambassador

- SysAdmin/Developer/DevOps/SRE

- DIY person

- Community Manager for Harbor (@VMware)

Agenda

Intro to Harbor 101
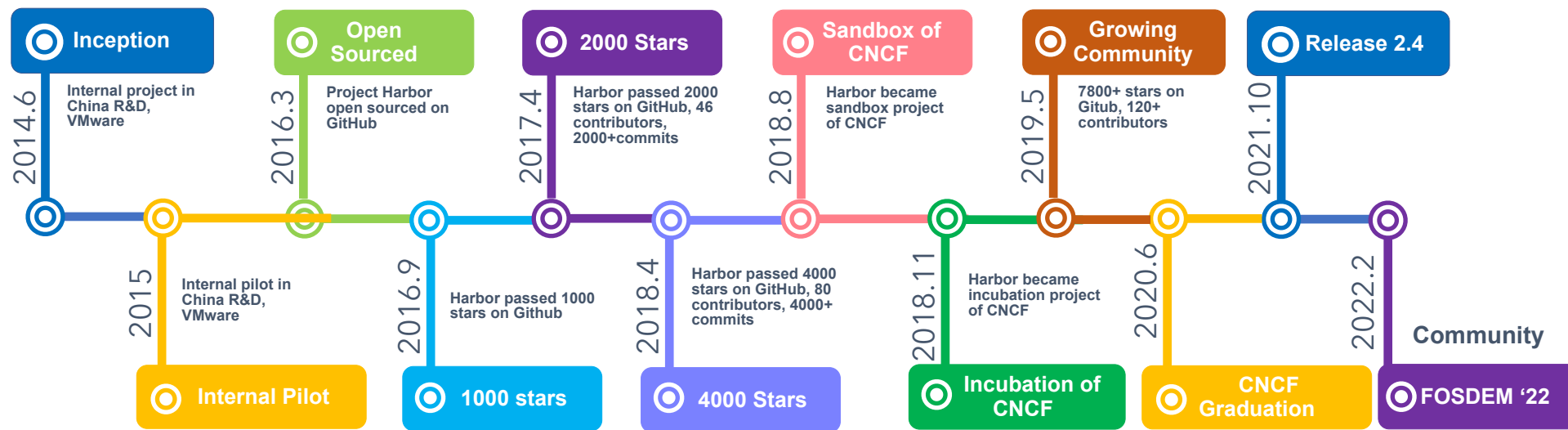Demo - install and configure
Community

Harbor 101

- Harbor is an open source registry, currently the only CNCF Graduated project in the Container Registry category!

- Mission: to be the trusted cloud native registry that stores, signs, and scans content. The mission is to provide cloud native environments the ability to confidently manage and serve container images and related artefacts.

- Started as VMware internal project back in 2014, open sourced in 2016, donated to CNCF in 2018, and Graduated in 2020

Harbor Timeline

Inception
2014.6
Internal project in China R&D, VMware

Open Sourced
2016.3
Project Harbor open sourced on GitHub

2000 Stars
2017.4
Harbor passed 2000 stars on GitHub, 46 contributors, 2000+commits

Sandbox of CNCF
2018.8
Harbor became sandbox project of CNCF

Growing Community
2019.5
7800+ stars on Gitub, 120+ contributors

Release 2.4
2021.10

2015
Internal pilot in China R&D, VMware

2016.9
Harbor passed 1000 stars on Github

2018.4
Harbor passed 4000 stars on GitHub, 80 contributors, 4000+ commits

2018.11
Harbor became incubation project of CNCF

2020.6

2022.2
Community

Internal Pilot

1000 stars

4000 Stars

Incubation of CNCF

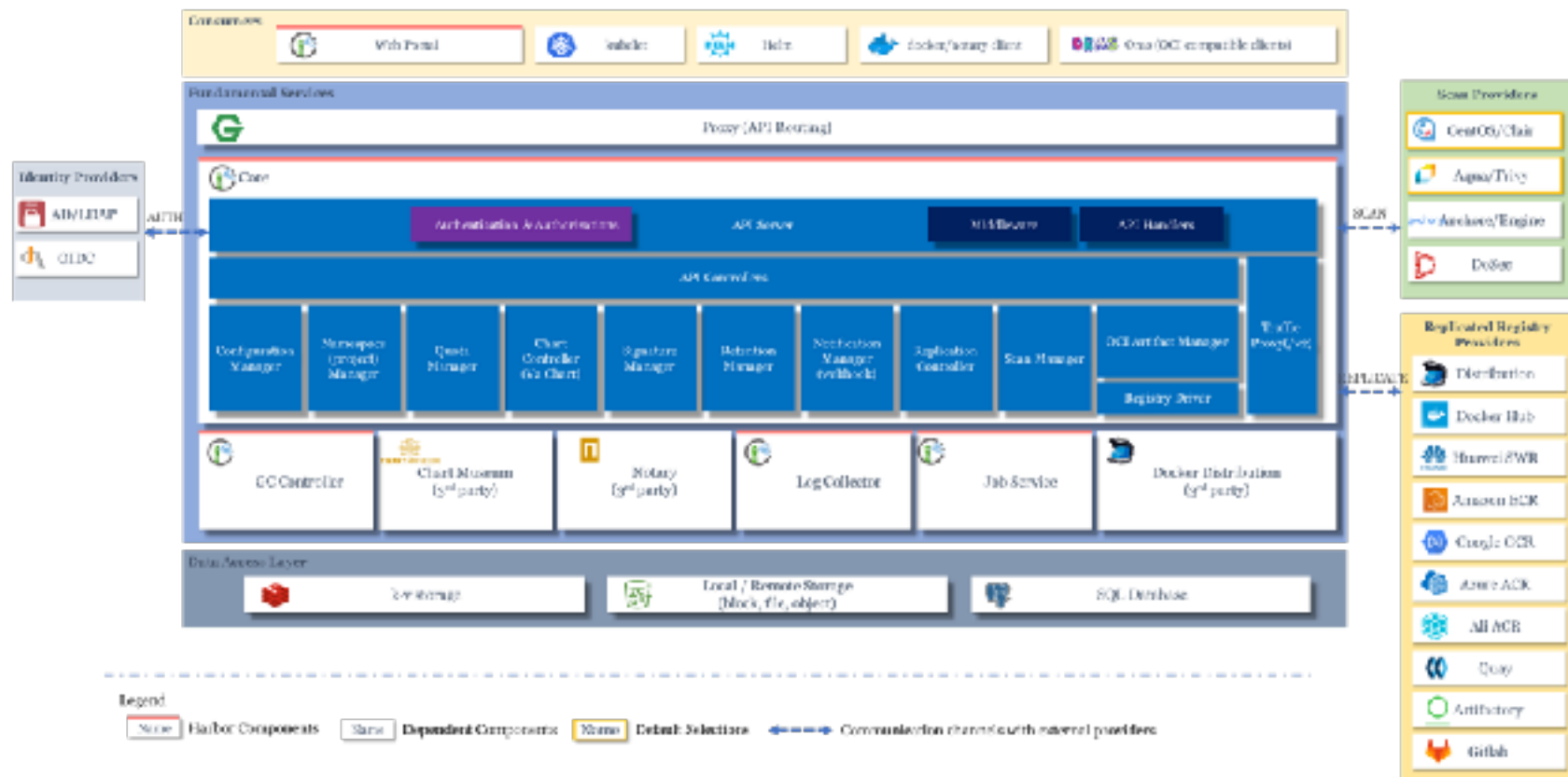**CNCF Graduation**

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So why Harbor?

- Community and community support

- Free and OpenSource - supported by CNCF

- CNCF Graduated - well adopted and great maturity level

- **Self Hosted!** (many are providing it as a Service)

- Self deployment can bring great benefits for corporations and compliance(SOC/SOC2/FedRamp etc...)

Architecture

Key features

Access Control

- RBAC
- AD/LDAP integration
- OIDC
- Robot account

Replication

- Multiple filters
- Flexible scheduling
- Heterogeneous registries
- Helm Chart replication

Vulnerability Scanning

- Flexible scanning policies
- Elaborated scanning

Content Trust

- Digital signature
- Provenance of images

Helm Chart Mgmt

- Helm Chart repository
- Same user experiences as image management

Web Portal

- Ease of use
- Batch operations

Restful API

- API for integration
- Nested Swagger UI

Multi Deployments

- Docker Compose
- Helm Chart
- BOSH

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DEMO

Local Install - create project and user

Push image

Scan image and inspect image

Setup Replication

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What's new in 2.4

- **Distributed tracing**
  Add tracing capabilities to Harbor for enhanced troubleshooting, identifying performance bottlenecks etc.

- **Additional Features**

- Support Harbor instances replication with Robot Account, more details see the guide.
- Support Stop All and single scan job.
- Support exclusions and rate limit to Replication Rules.
- Enable OIDC auth based user deletion
- Schedule synchronise from DB to Redis.
- Harbor is now built using Golang v1.17.2 as of this release.
- Bump up Trivy 0.20 which adds support for go.sum scanning.

COMMUNITY
JOIN US!

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Community

Stars	Forks	Commits	Contributors	Members	Maintainers
16K+	4000+	11K	200+	2500	14

Contributors & Maintainers

Canada

USA

Nicaragua

Brazil

Sweden

UK

Austria

Germany

France

Spain

Italy

Belarus

Ukraine

Russia

China

Korea

Japan

India

Vietnam

Singapore

South Africa

Australia

New Zealand

14 Maintainers

200+ Contributors

65+ Companies

36+ Countries

Users of Harbor

Partners of Harbor

JOIN US!

Web: goharbor.io

Github: github.com/goharbor

Slack: slack.cncf.io (#harbor and #harbor-dev)

Twitter: @project_harbor

By-weekly Community Meetings: https://zoom.us/j/734959521

Email groups:

lists.cncf.io/g/harbor-users
lists.cncf.io/g/harbor-dev

Really Join us! :) Tech Docs Working Group on it's way!

Harbor Technical Documentation Working Group

Great way to start your open source and CNCF Journey

Full support of the team to get you set up and ready to create your first PR

MAKE SHURE YOU SIGN UP: lists.cncf.io/g/harbor-users

Get in touch

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Slack(CNCF, Kubernetes): Orlix

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