Harbor

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Who we are?

Steven (Jia) Zou
- Core maintainer of open source project Harbor
- Staff engineer @ VMware R&D center
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- DEV & Community

Wenkai Yin
- Maintainer of open source project Harbor
- Senior engineer @ VMware R&D center
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Overview
Typical Serving Scenario

- Code Commits
- On-premise Node
- REPLICATION
- Registry Node 1
- Registry Node 2
- Registry Node 3
- Runtime
  - Kubernetes Cluster
  - VM
  - VM
  - VM

- Code Repository
- Build Engine
- TUNNEL
  - K8S API
- CI
- Dev
- QE
- Staging
- Publish
- Pull Images
- Rep
- Rep
- Rep

- Code
- Commits
- Repository
Overall Architecture

Consumers
- Web Portal
- kubelet
- Helm
- docker/notary client

Identity Providers
- AD/LDAP
- OIDC

Fundamental Services
- API Routing
- REST API
  - Authentication & Authorization
  - Config Management
  - Namespace Management
  - Replication
  - Chart Service
  - Scanner
  - Trust Handler
- Job Service
- GC Controller
- Logs

3rd Party Services
- Docker Registry
- Chart Museum
- Clair
- Notary
- Helm Chart

Data Access Layer
- k-v storage
- Local / Remote Storage (block, file, object)
- SQL Database

Packaging
- Docker Offline Installer
- Docker Online Installer
- K8s
- Helm Chart

Till V1.8.0
Highlights in V1.8
Harbor V1.8.0 is GAed on May 21st
Announced at KubeCon Barcelona
Replication NG

Feature Enhancements
- Design Refactor
- Triggers
- Filters
- Policy Based
- Image + Chart
- Harbor<->Non-Harbor
- Pull/Push Mode

Drivers Supported
- Docker Hub
- Docker Distribution
- Huawei Container Registry (SWR)

Drivers Supporting
- ECR
- GCR
- ACR
- Ali-ACR

>85% code rewrite
OIDC

Verified Providers
- Google Identity
- Dexidp/dex
- Ping Fedrate

More Providers In Future
- Keycloak
- Other OpenID Compatible Providers
More New Features

Robot Account
- Pull/Push perms
- Benefit for CI/CD

Health Check
- Health API provided
- Benefit for monitoring

Deployment
- Refactor scripts
- Refactor config management

API Explorer
- Check API via portal
- Easy for debugging
Next: V1.9
V1.9 Release Plan

Quota Per Project

Webhook

Retention Policy (TTL)

CVE Whitelist

V1.9 | FC: August 5th  | GA: August 28th | https://github.com/orgs/goharbor/projects/1#column-5411972
Roadmap

Management
- Kubernetes Operator
- Quotas
- Advanced Access Control
- Logging Endpoint
- Perf & Scale

Extensibility
- High Availability
- Interrogation Service
- Proxy Cache
- P2P Distribution
- Repository Beyond image/Helm
Community
We’re trying to build an open, fair, transparent and self-government community.
Global Contributions

Source: https://harbor.devstats.cncf.io
Levels of Participation

- **End User**
  - GitHub Issues
  - Experiences Sharing
  - Community Meetings

- **Contributor**
  - Proposal
  - 1st Commit
  - Fix Bugs
  - Community Meetings

- **Maintainer**
  - Commits
  - Reviews
  - Release Plans
  - Presentations
  - Host Meetings
Workgroups

- Replication
- Notification
- LCM
- P2P
- Scanning
More ways to get involved

- harbor-users@lists.cncf.io
- harbor-dev@lists.cncf.io
- slack.cncf.io
- #harbor
- #harbor-dev
- @project_harbor

https://demo.goharbor.io

https://github.com/goharbor/community/blob/master/MEETING_SCHEDULE.md
- Bi-weekly
- APAC+EU zone: 9pm UTC+8 time zone
- America+EU zone: 1pm Pacific time zone
Thank you very much!