

Automated continuous deployment of container-based applications

HPE GreenLake for Private Cloud Enterprise



Developer experience

Purpose and benefits

Respond in near-real time

Achieve higher levels of efficiency in development and delivery process

Gain **high returns** by re-Investment into more value-added features

Gain **competitive advantage** via accelerated time to market

Simplify innovation, build and delivery

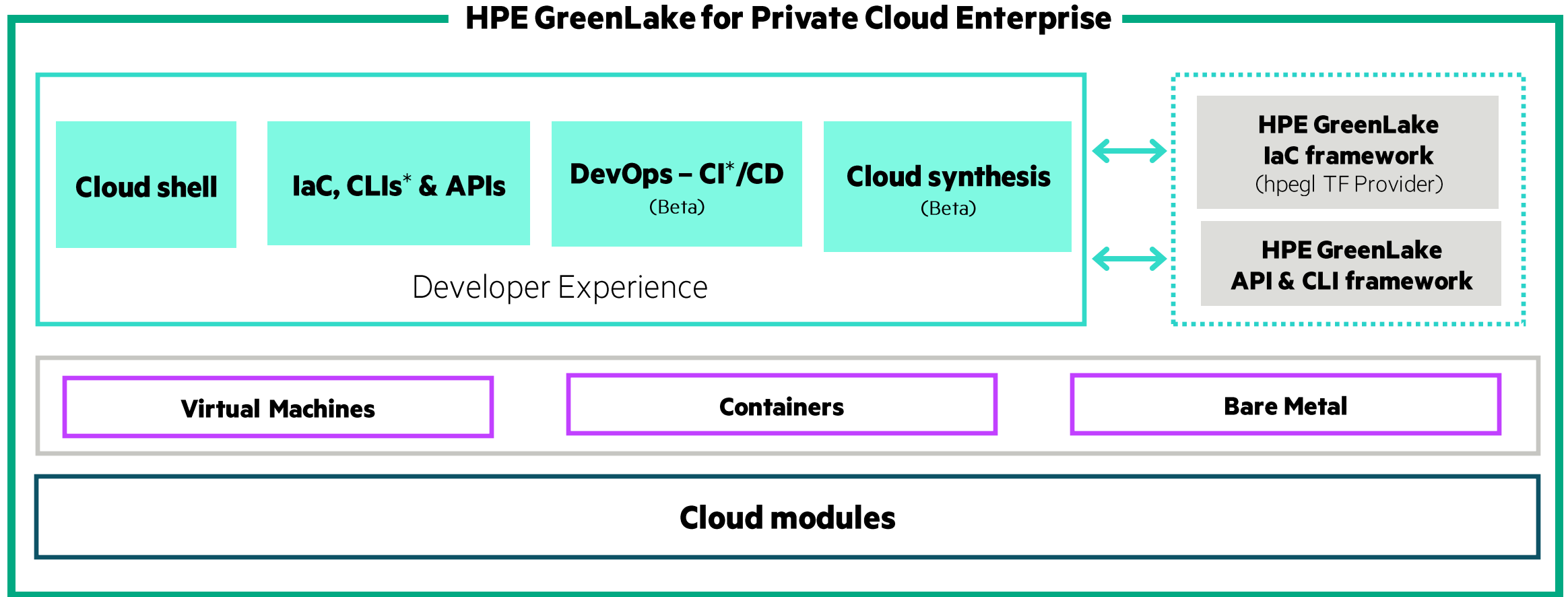
Provide developers the best experience with automated and repeatable developer centric workflows

Enable developers with simple, consistent, easy & quick adoption

Improve quality and stability with reduced failure rate



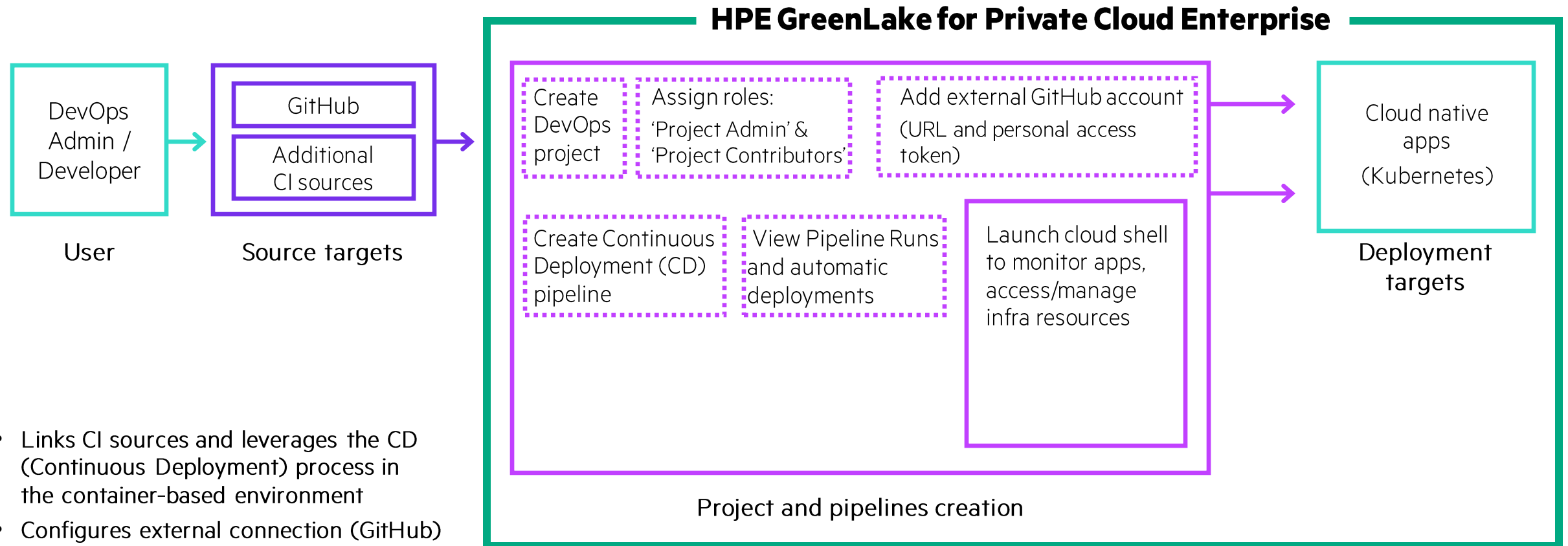
Developer experience with private cloud services



* Expected in future

Note: DevOps-CD and cloud shell are available for PCE customers as Beta features. Customer can request for setting up environment as part of the Day-1/Day-N activities to access the capabilities.

DevOps continuous deployment journey in container-based environment



- Links CI sources and leverages the CD (Continuous Deployment) process in the container-based environment
- Configures external connection (GitHub) as the CI source
- Creates CD pipelines for triggering automated deployments onto single or multi clusters

- Associates Kubernetes clusters where artifacts (HelmCharts) are deployed

- Leverage containerized deployments to drive DevOps practices with a microservices architecture

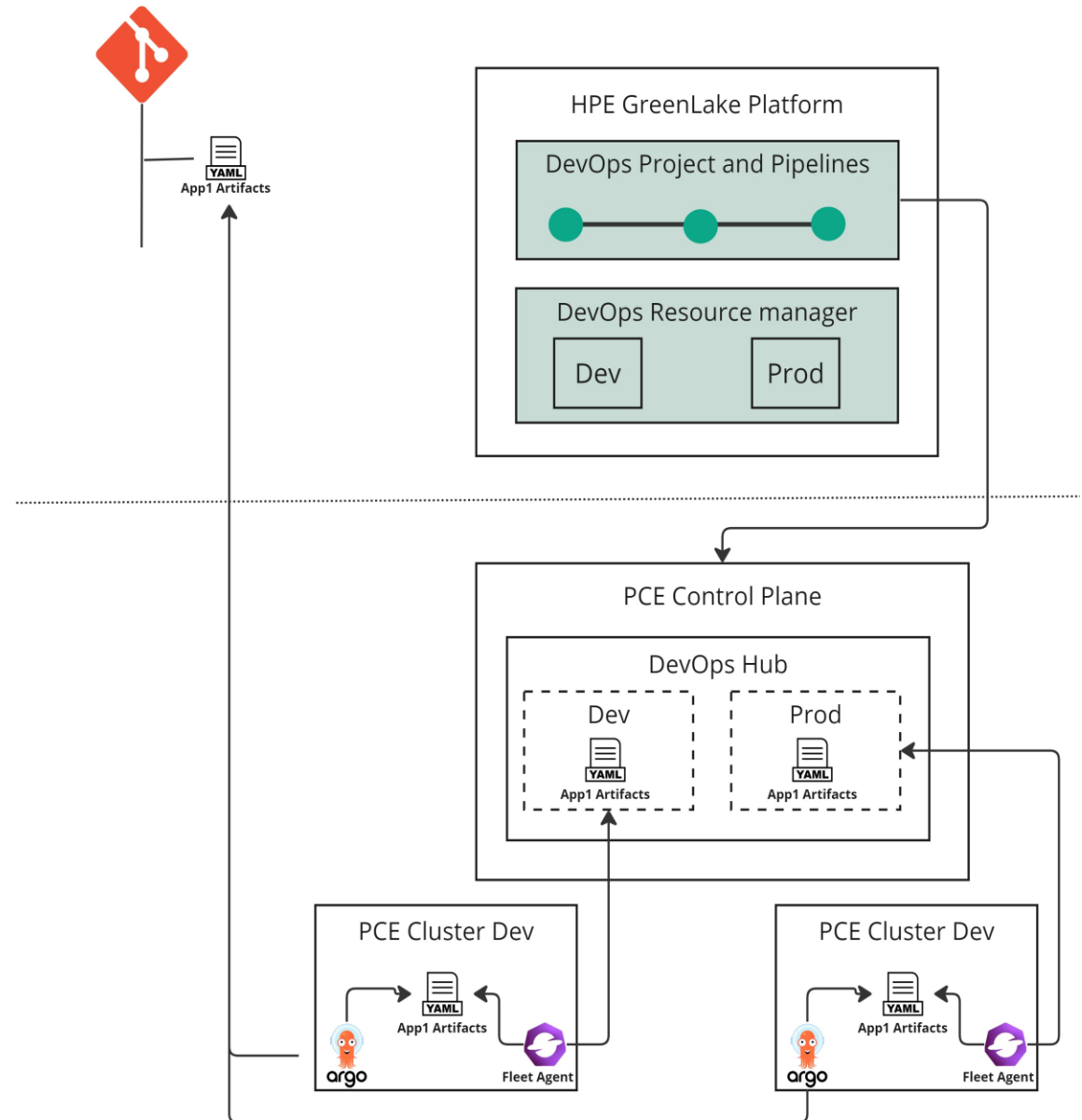


Why DevOps [Placeholder]



Technical overview

- DevOps service in Greenlake bundles curated list of OpenSource software to offer an HPE managed service. It bundles following popular tools,
 - Open Cluster Management
 - ArgoCD
- Attach multiple GitRepo(s) and configure watchers to detect any change (tag, release, push) to trigger deployment.
- Synchronize application images / charts to Private cloud
- Deploy apps across multiple clusters distributed across multiple GL private cloud sites.
- Let HPE manage the access to Kubernetes for you, while you focus on hassle free deployment of Apps to Kubernetes as and when they are released



Demo

1. Use case 1:]
 - Deploy application helm charts from GitHub via DevOps CD Pipelines
 - Deploy applications across multiple clusters
2. Use case 2:
 - Customize application parameters for various clusters
 - Override Helmchart values for every deployment
3. Use case 3:
 - Continuous deployment of application using Github webhooks and triggers
 - Automatically push the latest Helmcharts to target clusters based on PR Merge or on a new Release
4. Use case 4:
 - View deployments on target clusters from anywhere using browser-based Cloud shell
 - Interact with the PCE Managed kubernetes clusters using kubectl commands right from HPE GreenLake Central



Forward Looking

- Support advanced microservice deployment patterns,
 - Canary
 - A/B, Blue Green
- Progressive Delivery enhancements
 - Application release rollout across sites without affecting App availability.
 - Integration of Application specific metrics / insights into the deployment process.
- Application placement/affinity policies to support Hybrid cloud use cases.
- Support additional Kubernetes distros
 - RedHat OpenShift
 - AWS EKS-A &
 - Rancher RKE
 - Bring Your Own Kubernetes
- Integrations to other common CI tools and repositories,
 - Jenkins
 - JFrog
 - Docker Hub
- Release management improvements
 - Configure release pipelines that represent your environments from development to production
 - Track your releases as they're deployed to various environments

Thank you



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