ContainerOps - DevOps Orchestration

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Who Am I?



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Agenda

- 1. The story of DevOps
- 2. Why developed the DevOps concept in the IT process
- 3. What's Cloud Native Application and ContainerOps
- 4. Architecture of ContainerOps
- 5. The ContainerOps core DevOps Workflow Engine
- 6. The ContainerOps Component

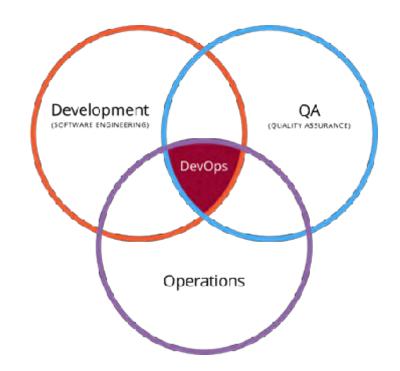
DevOps Story

- •2007 While consulting on a data center migration for the Belgium government, system administrator Patrick Debois becomes frustrated by conflicts between developers and system admins. He ponders solutions.
- •Agile Conference 2008 in Toronto Andrew Clay Shafer's "birds of a feather" ad hoc session called Agile Infrastructure. The only person who showed up was Patrick Debois. Shafer and Debois started a Google group called "Agile System Administration"
- •O'Reilly Velocity 2009 Conference Presentation at Velocity of 10+ Deploys per Day: Dev and Ops Cooperation at Flickr by John Allspaw and Paul Hammond Debois watched by streaming video, tweeted.
- •October 2009 Organized through Twitter. Conversation continued on Twitter and the #DevOps hashtag was born, dropping "Days" for brevity.
- •2010 Mountain View, CA DevOpsDays
- •Mar. 2011 Gartner's first notes about DevOps
- •April 2012 In an InfoQ video interview, Debois admitted that naming the movement was not as intentional as it might seem: "I picked 'DevOpsDays' as Dev and Ops working together because 'Agile System Administration' was too long," he said. "There never was a grand plan for DevOps as a word."

What's the DevOps?

DevOps is "a portmanteau of 'development' and 'operations'" and is "a software development method that stresses communications, collaboration, integration, automation and measurement of cooperation between software developers and other IT professionals".

-From Wikipedia



DevOps is an operational philosophy that promotes better communication between development and operations as more elements of operations become programmable.

What's the DevOps ultimate AIM?

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Goal ->

The ultimate is break down barriers between developer, QAs and operators.

How ->

Define the operation environment at development stage.

Define the process from development to the production.

Automate everything.
```

What's The Cloud Native?

Cloud Native is structuring teams, culture and technology to utilize automation and architectures to manage complexity and unlock velocity.

-Joe Beda "Understanding and Applying Cloud Native"

- ➤ DevOps
- ➤ Compute Clusters
- ➤ Micro Service
- ➤ Security

ContainerOps - DevOps Orchestration

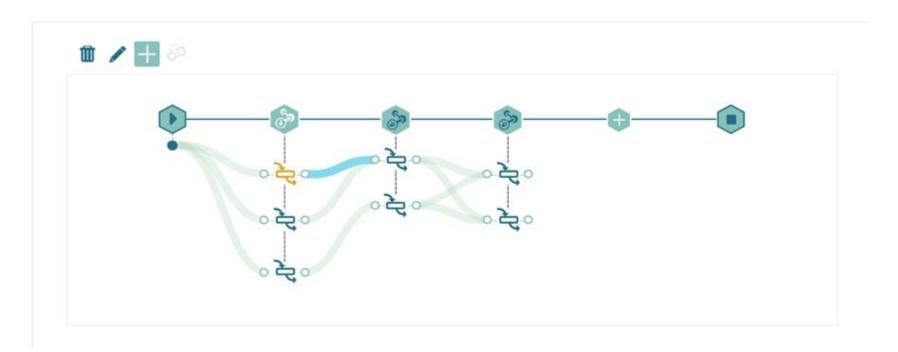
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Defining -> Component
Drawing -> Workflow
Running -> Actions
```

https://github.com/Huawei/containerops

Defining Component - Container Image For DevOps

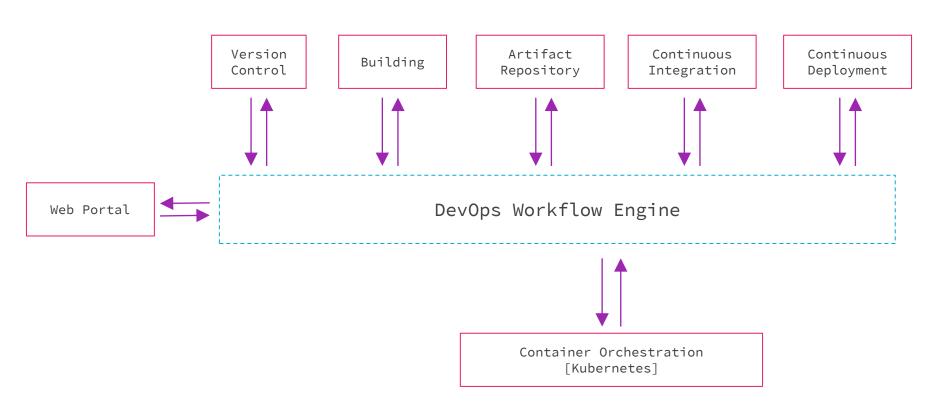
```
Encapsulate your DevOps work in a container image. Share your component at <a href="https://opshub.sh">https://opshub.sh</a>
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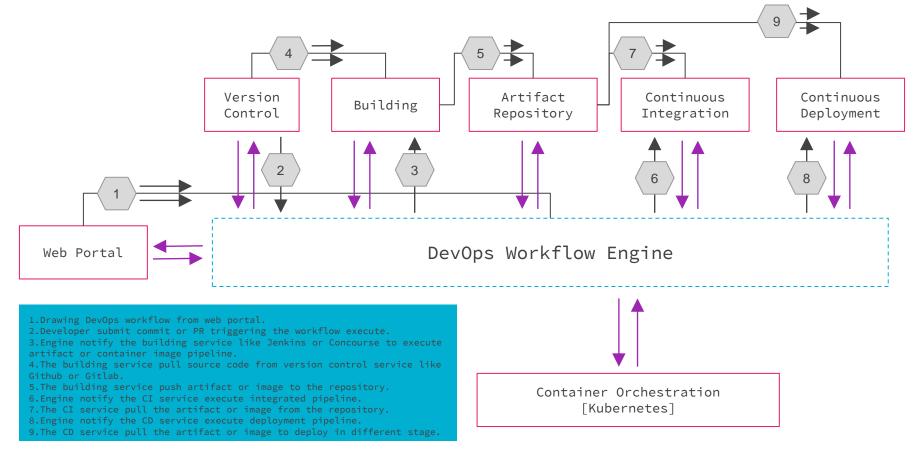
Drawing Workflow - Orchestrate DevOps

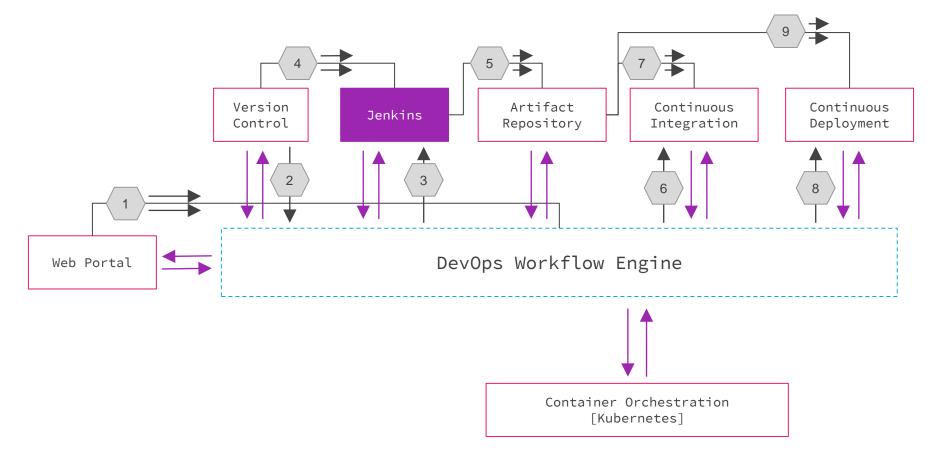


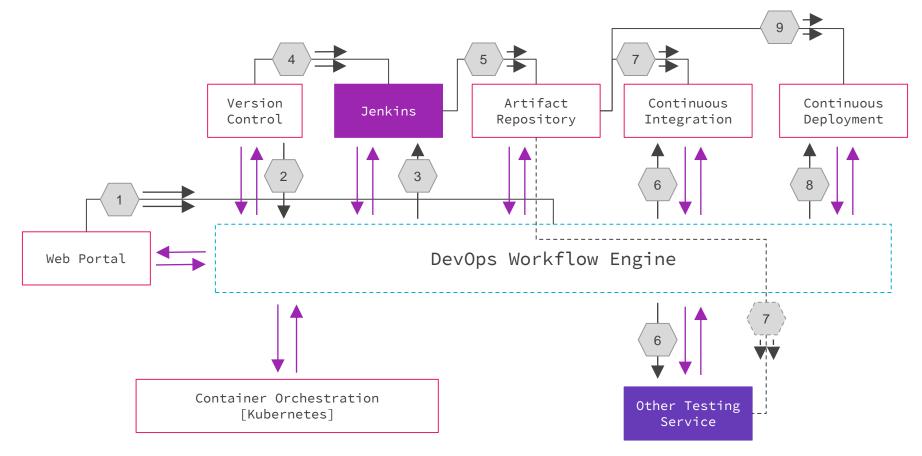
Running Action - With Container For Container

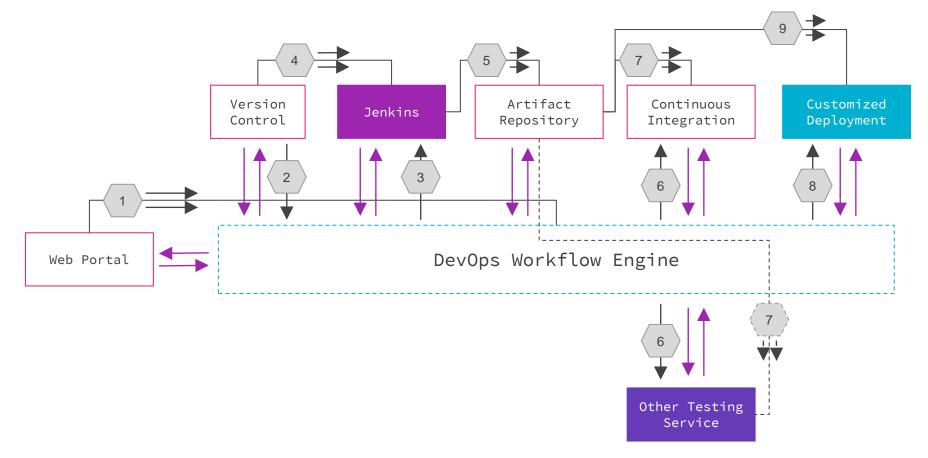
All components is container, execute with Kubernetes. For cloud native development scenarios.



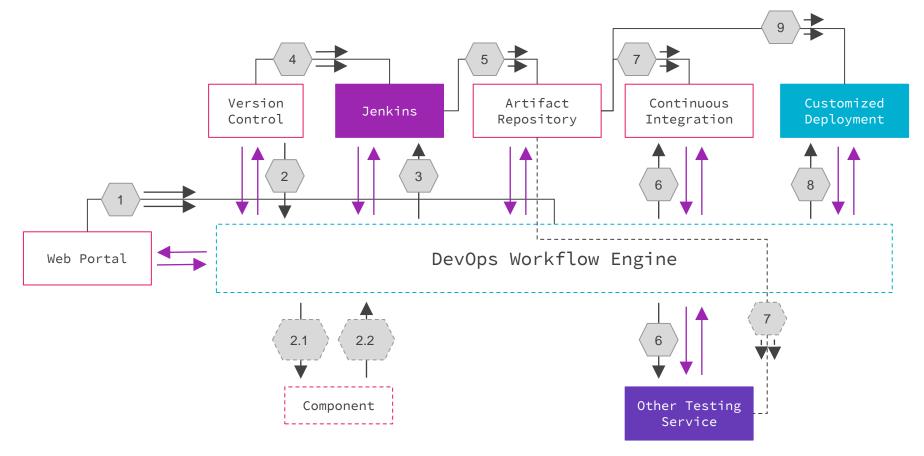








ContainerOps Workflow Engine Container Orchestration [Kubernetes] Host Host Host COMPONENT Daemon CO_COMPONENT_START Daemon Daemon CO_TASK_START CO_TASK_STATUS CO_TASK_RESULT Runtimes [JVM, Python ...] CO_COMPONENT_STOP Guest OS



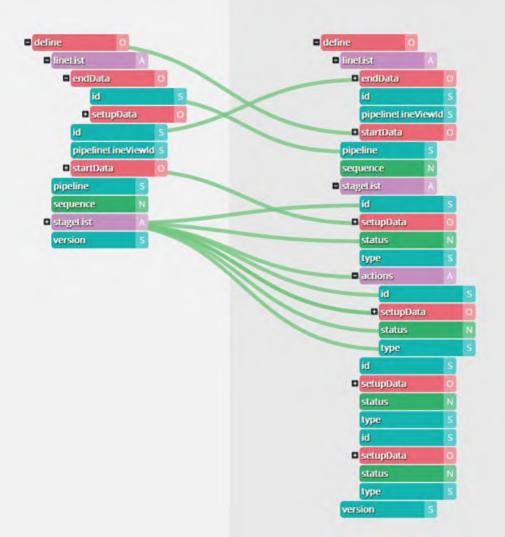
ContainerOps Workflow Engine

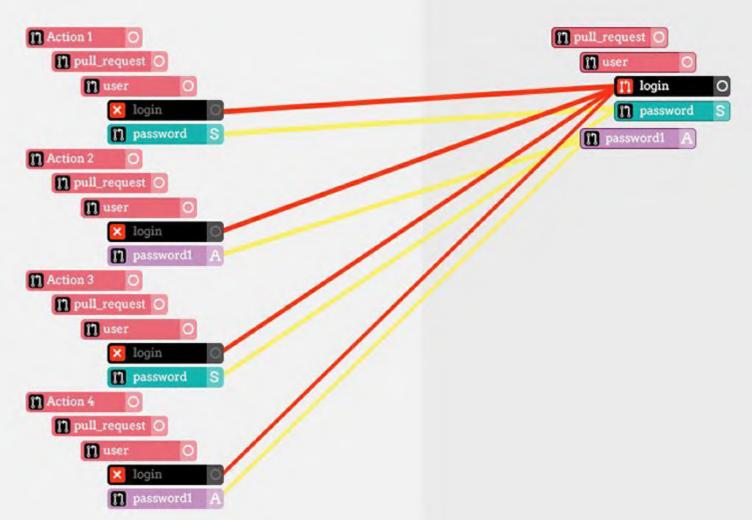


Drawing DevOps Workflow And Event Data Workflow

Event Data Link

- 1.Components and components
- 2. Services and services
- 3.Components and Services





Event Conflict

ContainerOps - DevOps Orchestration

With Container, For Container

containerops.sh & opshub.sh

End & Thanks