OneOps – Work with @walmartlabs hybrid, multicloud environment

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About the Presenters

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- Software Delivery @ Walmart
- Founder of Apache Maven
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About the Presenters

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- 21+ years in IT
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- Retail, insurance and auto
# About Nisum

## Consulting [Business]
- Digital Transformation
- Technology Strategy
- Product Management
- Agile Enablement
- Change Management

## Digital [Technology]
- Technology Enablement
- Enterprise Architecture
- Development & Automation
- DevOps
- Full Stack UI
- PaaS Enablement

## Innovation [Labs / ATS]
- SWAT Team
- Studio
- Catalog Hub
- Inventory Hub
- OMS/WMS Solutions

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**Agile Next Door™ [Delivery Model]**
What is OneOps?

- Services
- Applications
- Databases
- Cloud
  - Public
  - Private

Logos:
- docker
- openstack
- Microsoft Azure
- Amazon Web Services
- Rackspace
- php
- Java
- RAILS
- Apache
- ActiveMQ
- elastic
- Cassandra
- MySQL
What is OneOps?

- Open Source, Application Lifecycle Management Solution
- Enable self service for Developers
- Deliver true business agility at scale
- Seamless DevOps enablement
- Prevent from locking into a single cloud provider
- Hybrid cloud provisioning
- Built in IT Governance and Regulation, not an afterthought
- Supports Green Field and Legacy applications
Transformation of Walmart

OpenStack
- 280,000+ cores
- 30+ cloud regions

OneOps
- 5k+ users
- 5k+ applications/services
- 60+ open source products
- 65k+ monthly deployments
OneOps at Walmart

- Over 5,000 applications hosted on OneOps internally
- Over 5,000 Associates using OneOps internally
- Over 65,000 Deployments in 30 days
- 7 Physical Clouds
- 31 Virtual Clouds
- Over 280k cores
- Over 50 Platforms Automated

Powered by OpenStack

Other technologies and tools are also used, such as:
- Docker
- RabbitMQ
- Haproxy
- OpenID
- Nexus
- Couchbase
- Cassandra
- Nagios
- Elasticsearch
- GlusterFS
Who Benefits from OneOps?

- **Business Executive**
  - Cloud Shopping
  - Vendor Lock-In Avoidance
  - Time to Market

- **Developers**
  - Self-Service On-Demand IT Access
  - Application Lifecycle Management
  - DevOps

- **IT Operations**
  - Cost Management
  - Governance
  - Control and Secure Cloud Usage
OneOps Features

- One Design Any Cloud
- One Design All Environments
- High Availability
- Manage Deployment
- Design Catalog

- Auto-Healing
- Auto-Replace
- Many S/W Supported
- Auto-Scaling
- Monitoring

- Best Practices Are the Default
- Built to Scale
- Continuous Delivery
- Environment Profiles
- API
How it works
Overview

**Design**
Define an architecture based upon your application requirements, team skills, project timelines, etc.
- Visually assemble your application
- Select from a library of platform packs
- Fine-tune components inside each platform
- Modify your design with version control

**Transition**
Provision environments by mapping the design output against your operational requirements.
- Create and customize multiple environments
- Specify availability requirements
- Bind to your cloud provider of choice
- Deploy with effortless automation

**Operations**
Monitor and control your environments to maintain the required service levels.
- Monitor the health of your application
- View configuration, metrics and logs
- Enable autorepair and autoscale
- Perform manual control actions

**Account**
- Setup cloud providers
- Create assembly
OneOps @ Separation of Concerns

Design

Application Architecture/Configuration

Transition

Dev Environment Config
QA Environment Config
Prod Environment Config

Operations

Cloud A
Cloud B
Cloud C
Cloud D

Compute, LB, DNS, Storage...

Notifies

Bootstraps Stores Generates Stores Deploys Monitors Repairs Scales

OneOps

Customizes Adjusts Controls

Generates Stores Notifies

Compute, LB, DNS, Storage…
Thank you!

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