



# Cloud Broker

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# CI/CD

Deploy Everything All The Time



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# Agenda



- Amanox Solutions Introduction
- From “DevOps” and “LEAN IT” to “CI/CD”
- CICD Pipeline
- Demo
- Questions

# Amanox cloud journey competencies

We move you to the cloud



amanox solutions

## UNTERSTÜTZUNG CLOUD JOURNEY



## SPEZIALDISZIPLINEN VON EXPERTENWISSEN PROFITIEREN

### Analysis & Strategy

- Cloud Enablement
  - Trainings
  - Proof of Concept
  - Engineering & Consulting
- Kostenanalysen und Forecasts
- Business Case und Strategie
- Cloud Strategie gemäss Cloud Adoption Framework
  - Perspektiven nach: Business, Plattform
  - Maturität, Personen, Prozess, Betrieb
- Projektleitung
  - Plan, Build, Run

### DevOps

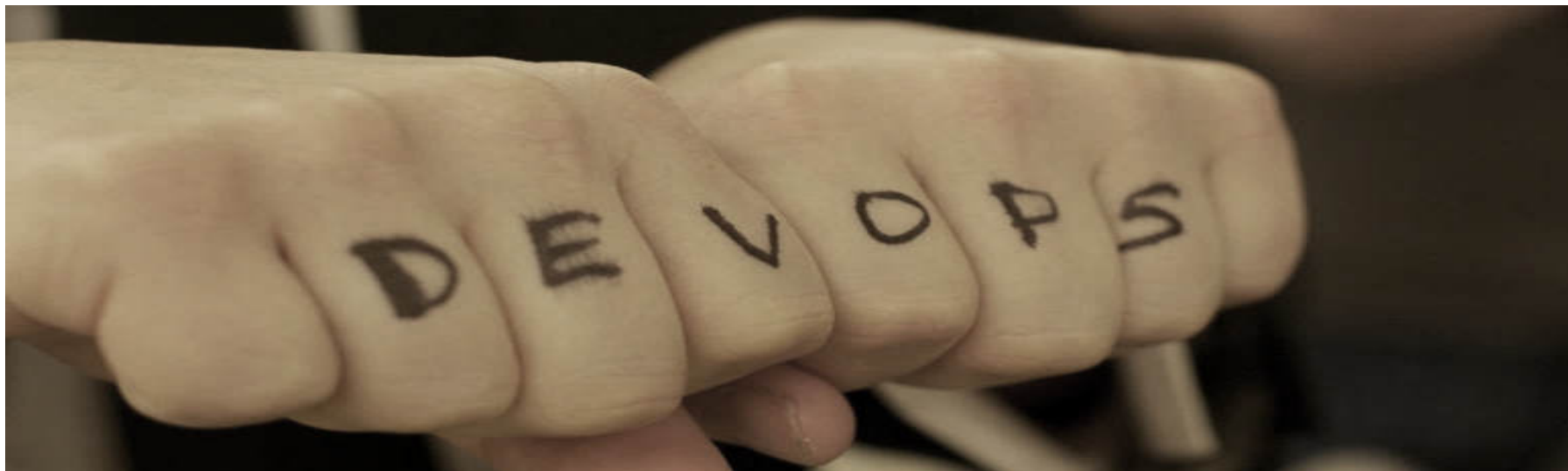
- Infrastructure as Code
- Continuous
  - Development
  - Integration
  - Deployment
- Autoscaling
- Automation
- Monitoring und Auditing

### Billing

- Cloudübergreifende Kostentransparenz
  - Kundenbasis
  - Projektbasis
  - Tags / Ressourcen
- Schnittstellen zu CRM & ERP
- Kostenanalyse
- Kostenoptimierung
  - Architektur
  - Preismodell
  - Automatisierung
- Consolidated Billing
  - Account managed by Amanox
  - Kostentransparenz
  - Supportplan

### SysOps

- Disaster Recovery
- Backup / Restore
- Monitoring
- Identity und Access
  - Management
- Automatisierung
  - Opensource [Puppet/Ansible]
  - VMware vRealize
  - Cisco Cligr
- Betrieb
  - Managed by Amanox
  - Supported by Amanox
    - Basic
    - Silver
    - Gold



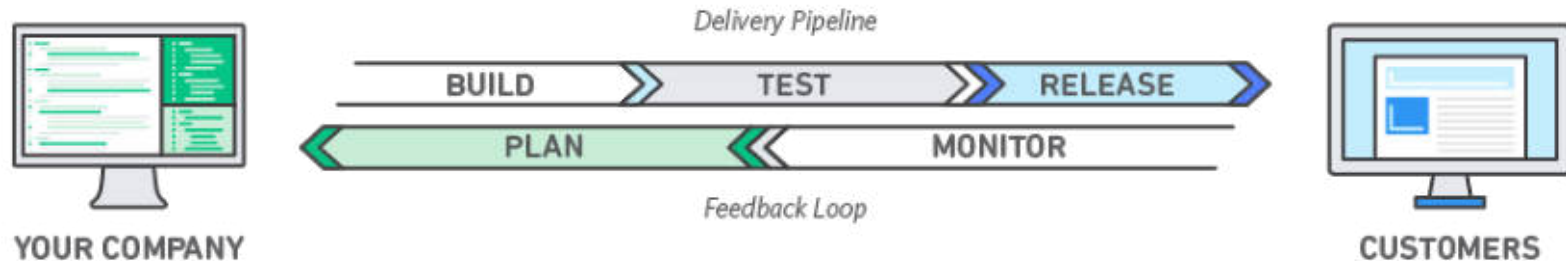
# Agile Development & Operation



# DevOps Definition



*“DevOps is the combination of cultural philosophies, practices, and tools that increases an organization’s ability to deliver applications and services at high velocity.”*



# DevOps and LEAN IT



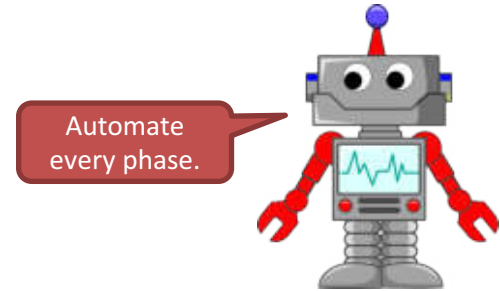
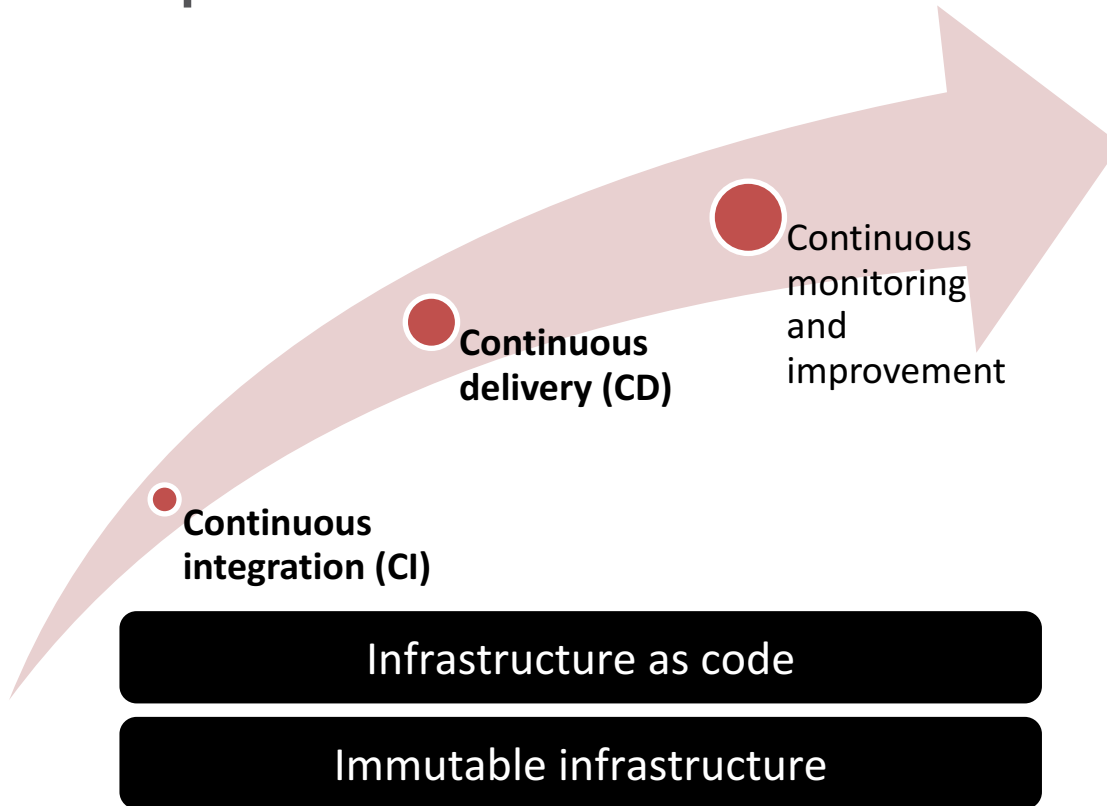
## DevOps:

- Enables adaptive IT and business agility
- Way for business to regain trust in the IT department
- **Should reduce waste and streamline processes**

## LEAN IT:

- Extension of Lean Principles, applied in an IT environment
- Way of thinking and acting, focusing heavily on organizational culture. It is about:
  - **Increasing customer value**
  - **Eliminating waste (work that does not add value)**
  - **Management as a facilitator (Supporting IT)**
  - **The involvement of all employees**
  - **Continual improvement**
  - **Focusing on long-term goals**

# Components of DevOps and LEAN IT Practice





# Continuous Integration and Delivery

What is it all about



## Continuous Integration

- Changes to code automatically deployed to mainline branch
  - Merge code frequently
- After passing unit and mock tests
  - Build and test code frequently

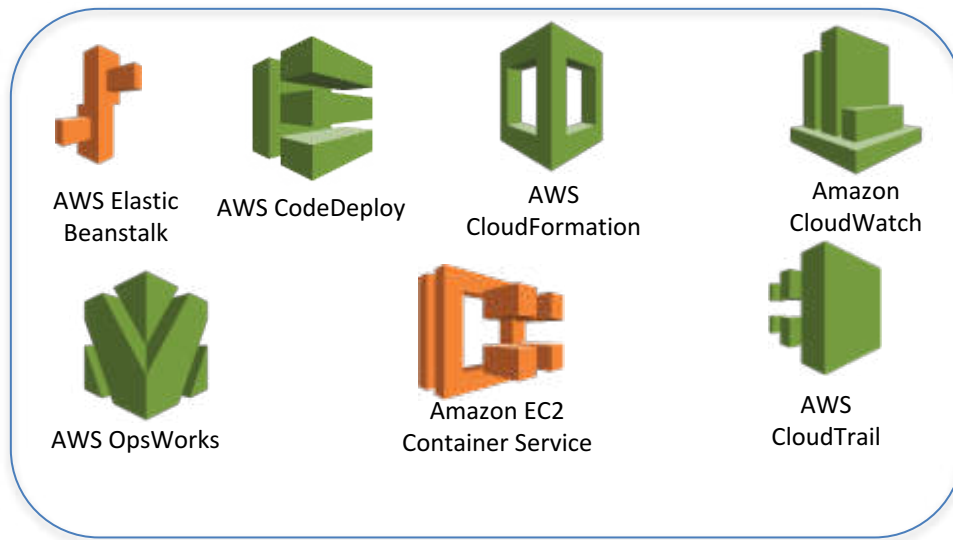
## Continuous Delivery / Deployment

- Makes changes to code and deployments iterative, not monolithic
- Bugs are detected quickly
- Allows rapid development and deployment
  - Creating production-ready versions of your software as quickly as possible, on a continual basis
  - Automation of as much of the delivery system as possible, from commit to release

# AWS CI/CD Services Overview



Delivery: Integration, deployment, and management





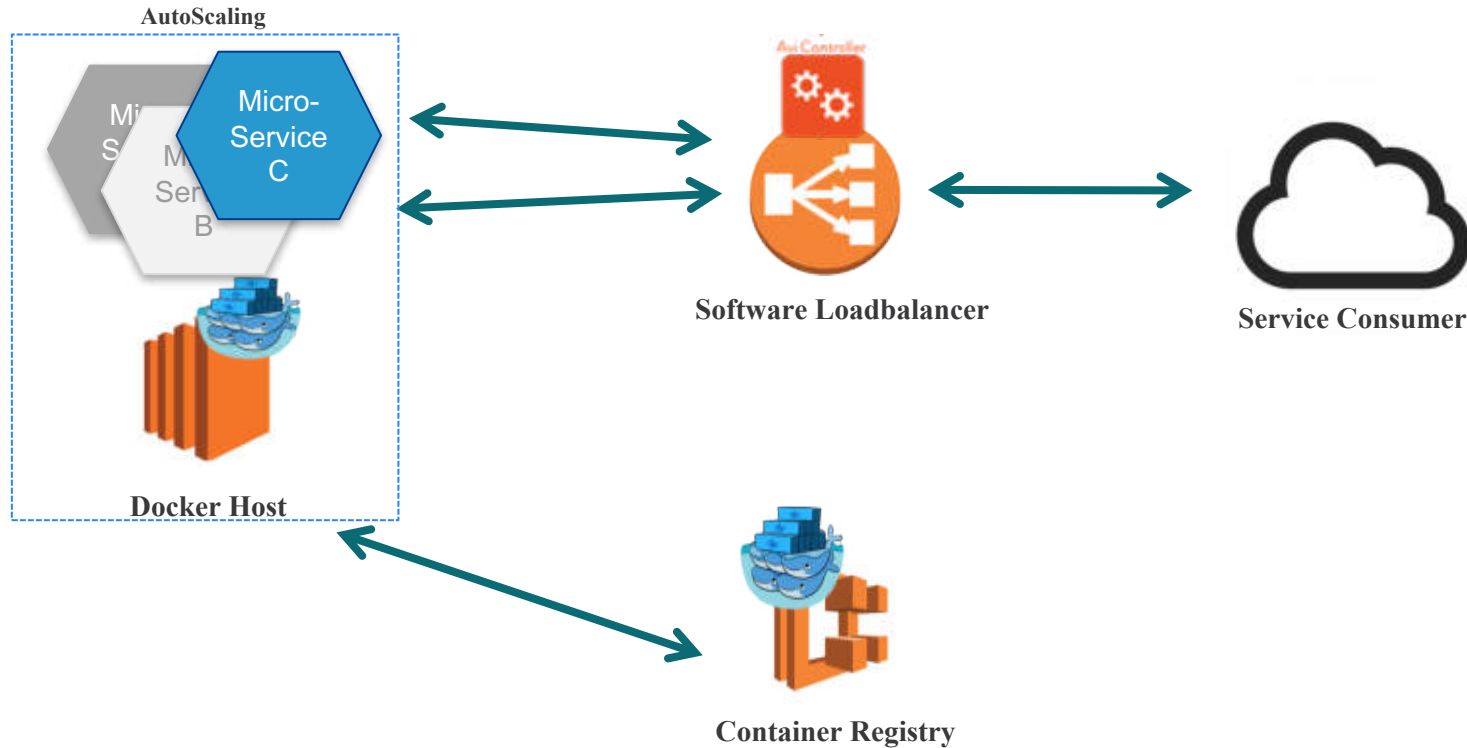
## CI/CD-Demo

- Code
- Build
- Deploy



# Example Use case

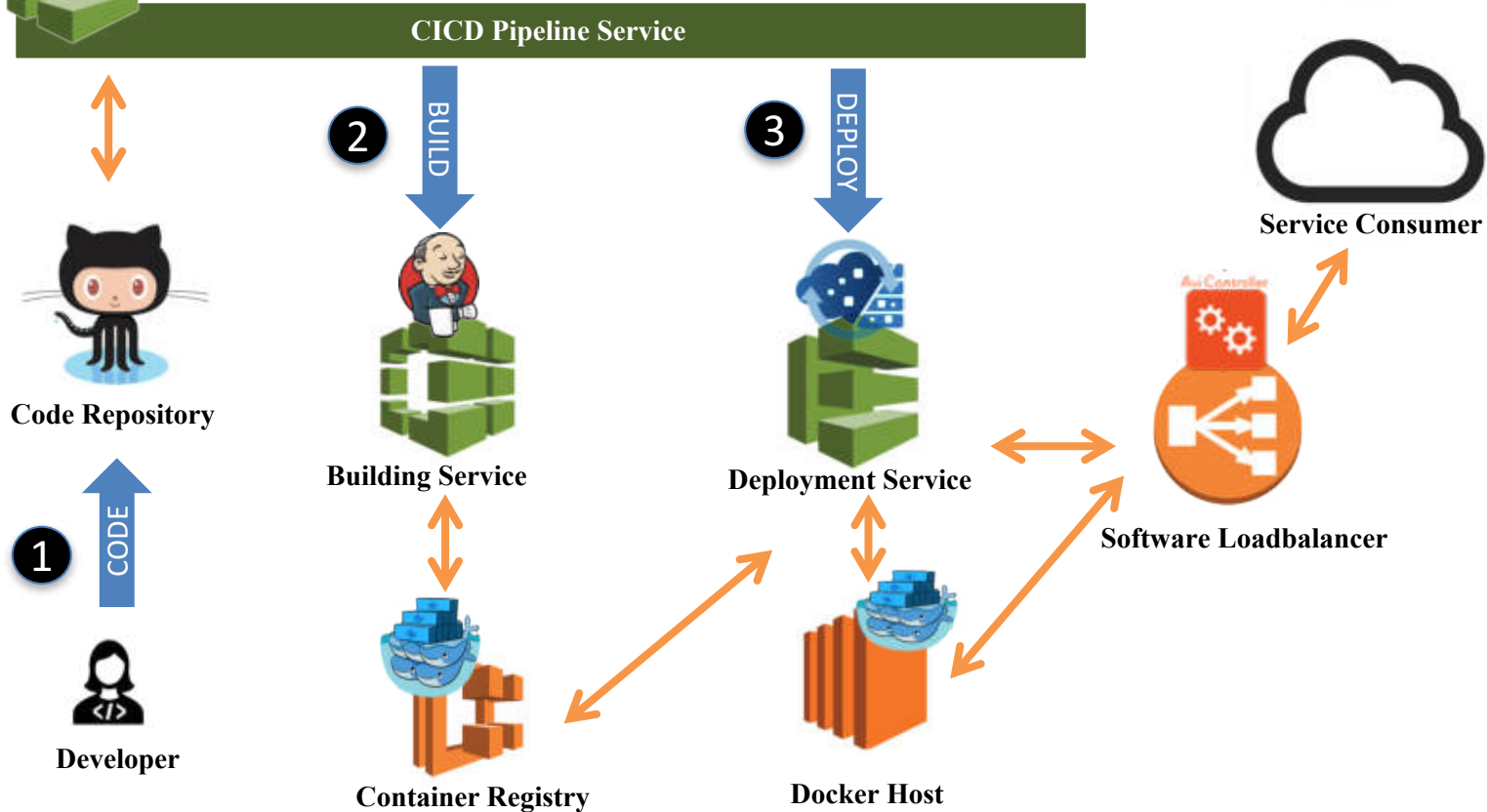
## Architecture





# Example Use case

Automate everything...





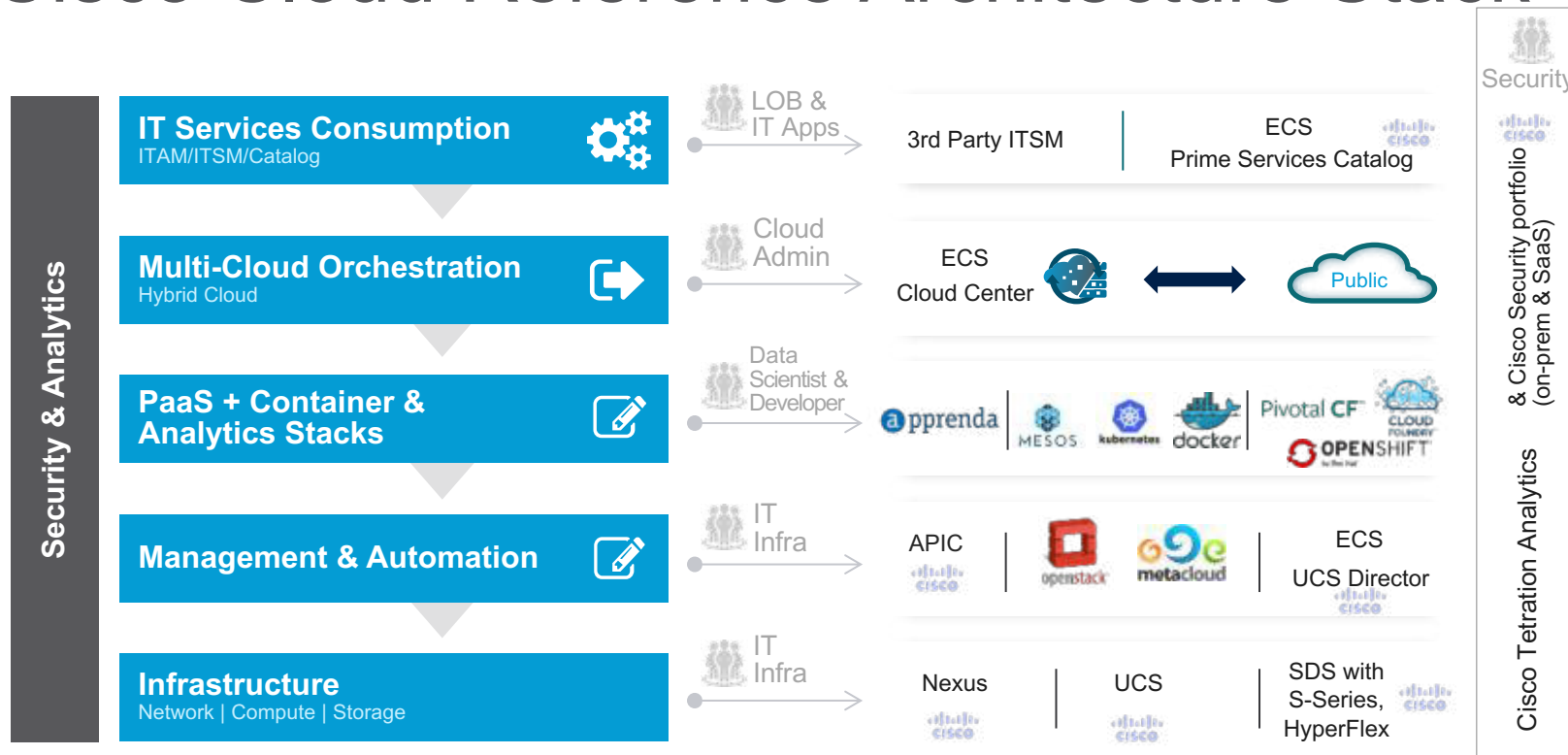
# DevOps Use Case with Netstream Hybrid Cloud

Rolf Schärer  
Microservice Evangelist  
Cisco Systems (Switzerland) GmbH



 @SwissCCIE

# Cisco Cloud Reference Architecture Stack

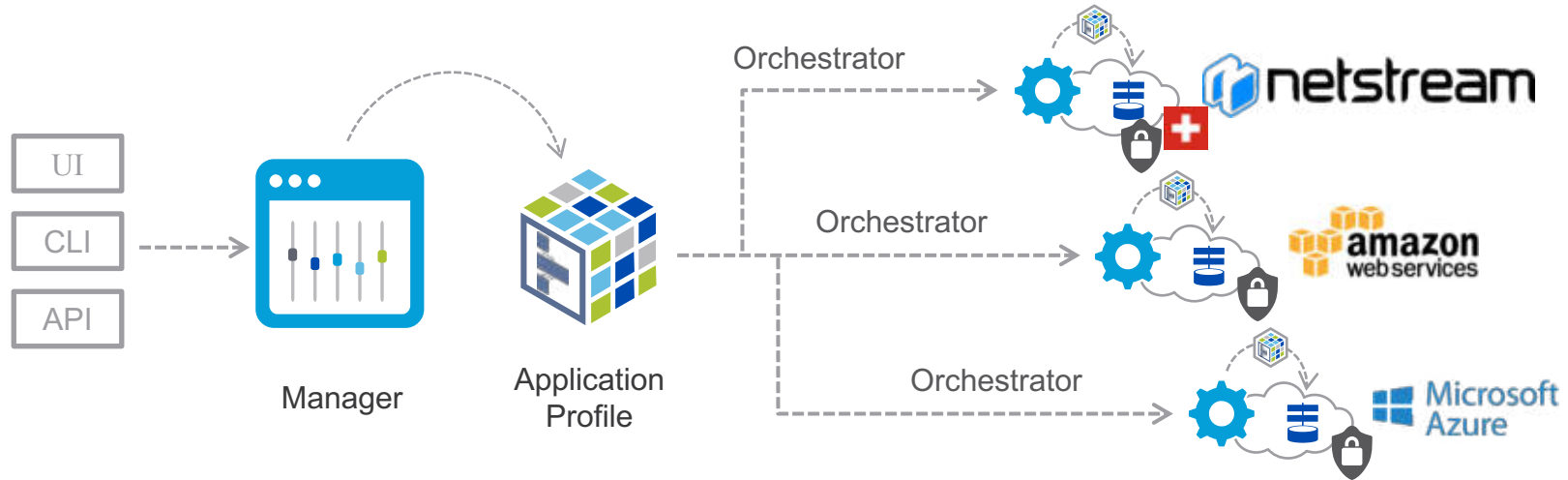


# Hybrid Cloud Management

## One Platform – Cisco Cloud Center Architecture

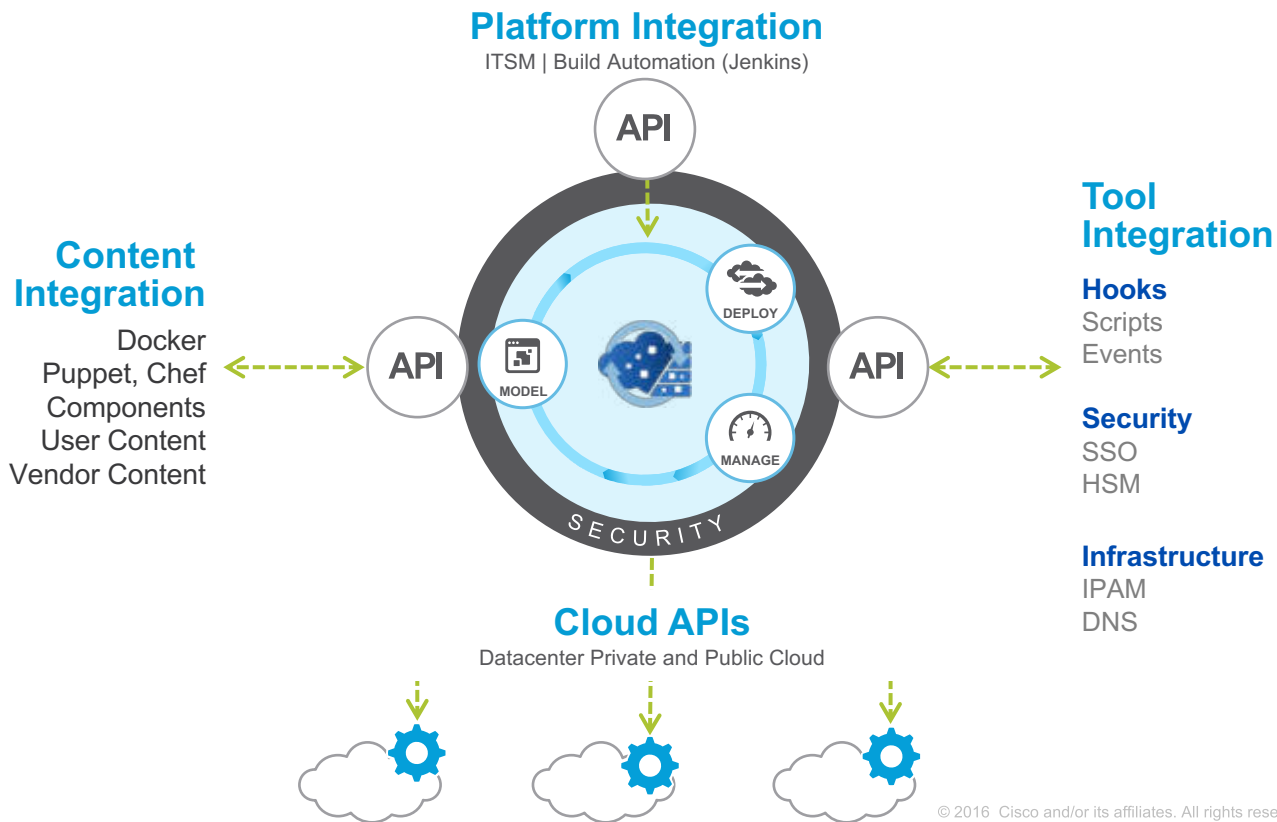
### Cloud Agnostic

### Cloud API-Specific





# Cisco Cloud Center - Interfaces



# Cloud Center - Application Profile

Edit "PetClinic" Application Profile  
Version: 1 (Revision: 1)

Basic Information Global Parameters Topology Modeler

Services

- File System
- Frontend Cache
- Load Balancer
- Web Server
- Message Bus
- Backend Cache
- Database
  - NoSQL Database
    - Cassandra  
NoSQL DB designed to handle large data
    - MongoDB  
NoSQL document database
- OS Service
- Custom Service
- Workflow
- Orchestration

Topology Modeler

Diagram showing the application architecture:

- Load Balancer (LoadBal...)
- AppCluster (AppClus...): CPU: 1, Memory: 1GB, Storage: 10GB
- Varnish (varnish...)
- Memcached (memcac...)
- RabbitMQ (rabbitmq...)
- Tomcat (tomcat7...)
- Database (Databas...)
- Docker (docker...)

Properties

General Settings

- Number of Volumes: 0
- Number of persistent data storage volumes for Web Server: 0
- Default Volume Size: 0 GB
- Persistent data storage for Web Server: 0 GB
- App Run-Time: JDK 7
- App Package: cliqr/petclinic/petclinic.war
- Application package file. The file is in relative path from <http://cliqr-demo-repo.s3.amazonaws.com/>

Service Initialization

External Initialization

Firewall Rules

Custom Parameters

Minimum Hardware Specification

Environment Variables

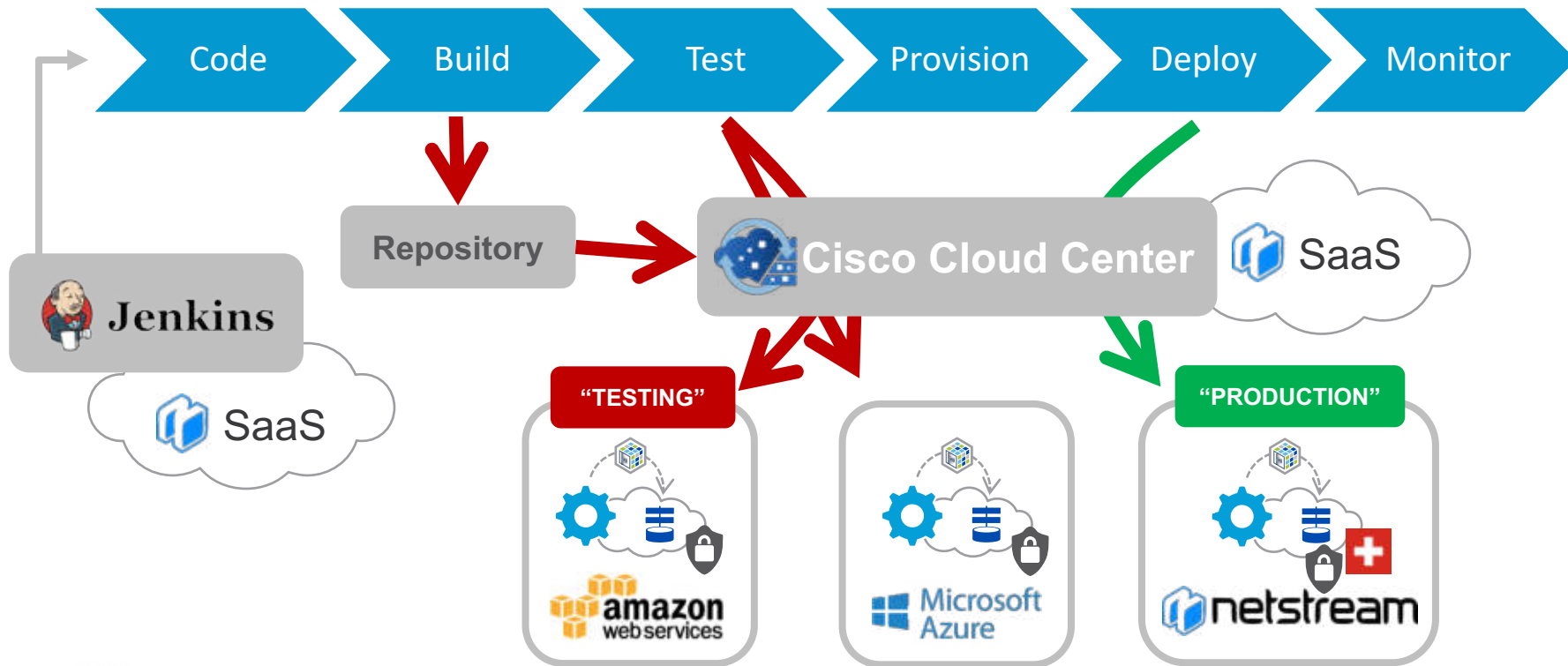
Node Initialization & Clean Up

Migration

Upgrade

Save App Cancel

# DevOps Use Case: Hybrid CI/CD Service



# EVENT: DevOps Hands-On Cloud Lab

## Session Description

Agile environments are the key success factor in the digital transformation journey. Learn and see how this new paradigm effects your business. Amanox Solutions (AWS, AVI and Cisco Integration Partner) and Cisco invite you to our Pop-Up event. We showcase a cloud based DevOps CI/CD tool chain.



CICD Services  
by Amazon WebServices



Software Defined Load balancing  
by AVI Networks



Multi Cloud Deployment  
by Cisco CloudCenter

## Agenda Overview

08:30 - 09:00 Welcome Table

09:00 - 11:30 Kick-Start Blueprint  
Overview

11:30 - 12:30 Networking / Appetizer

12:30 - 17:00 Hands-On-Lab



Learn variety of AWS CICD Services

Learn Anatomy of CICD Process

Integrate Load-Balancing as a Service (AVI Networks)

Deploy Cloud Native App Profile(Cisco CloudCenter)

Integrate App Monitoring (AppDynamics)

## Event Location #registration

04. April Berne #<https://goo.gl/TrfUMm>

05. April Zurich #<https://goo.gl/AVcUfu>

11. April Genève #<https://goo.gl/62Pftf>



APPDYNAMICS



Jenkins

# Cisco Switzerland Tech Blog

<http://gblogs.cisco.com/ch-tech/category/data-centre>



## Data Centre

How to prepare meals at scale –  
Building Application Models in Cisco  
CloudCenter | Part1/4

<http://gblogs.cisco.com/ch-tech/how-to-prepare-meals-at-scale-building-application-models-in-cisco-cloudcenter-part1of4/>



## Data Centre

HyperFlex Architecture and how it  
works

<http://gblogs.cisco.com/ch-tech/hyperflex-architecture-and-how-it-works/>



## Data Centre

Almost one year of Cisco HyperFlex

<http://gblogs.cisco.com/ch-tech/almost-one-year-of-cisco-hyperflex/>

# Cisco Switzerland Business Blog

<http://gblogs.cisco.com/ch-de/category/cloud/>



Cloud

Die Applikation im Rampenlicht

<http://gblogs.cisco.com/ch-de/2017/03/02/die-applikation-im-rampenlicht/>



Cloud

Von High Fashion zu Mainstream –  
Cloud ist alltagstauglich

<http://gblogs.cisco.com/ch-de/2017/02/16/von-high-fashion-zu-mainstream-cloud-ist-alltagstauglich/>



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E-Book statt Sonntagszeitung – Im Sog  
des digitalen Wandels

<http://gblogs.cisco.com/ch-de/2017/01/31/e-book-statt-sonntagszeitung-im-sog-des-digitalen-wandels/>



