Cisco Cloud Strategy

Uwe Müller
Leader PreSales Cloud & Datacenter
Germany
Hyper Explosion of Applications & Data

- **277X**: Data created by IoE devices v. end-user
- **30M**: New devices connected every week
- **180B**: Mobile apps downloaded in 2015
- **5TB+**: of data per person by 2020
- **50B**: Things connected by 2020

- **78%**: Workloads processed in Cloud DCs by 2018
Hyper-Distribution of Applications and Data
New Approach to Reach and Analyze Data

Structured Data
- Traditional Data Warehouse

Unstructured Data
- Big Data Store

Data Streaming at the Edge

Analytics 1.0
- Days/Hours

Analytics 2.0
- Hours/Minutes/Seconds

Analytics 3.0
- Seconds/Milliseonds
New Approach for Application Development

**Existing IT**

- App
- App
- App

- Web Servers
- App Servers

- Physical Infrastructure

**Cloud-Enabled**

- App
- App

- Web Servers
- App Servers

- Service

**Cloud-Native (Containers)**

- App

- Service

- .rb
- .py
- .go

- Java

Runtime Micro-services on Containers
In words: Cisco Cloud Strategy

1. Cisco delivers XaaS via Cisco Partner
2. Cloud Infrastructure Stacks
3. Multi Cloud Orchestration
4. Platform as a Service
5. Cisco Cloud Services
6. Cisco IoT Software Stack
Cisco Cloud Strategy – 6 streams
CMSP Partner in Germany

Coming up

Cisco Architecture for Hybrid Clouds

2. Cloud Infrastructure Stacks

Cisco Hybrid Cloud Orchestration & Management

Type of Workloads

- Bare Metal / Virtual
- Cloud-Enabled
- Cloud-Native

### Traditional / Converged
- Application
- DB / DV/ Middleware
- OS
- Hypervisor
- Infrastructure

### Hyper Converged Infrastructure
- Cisco HyperFlex

### OpenStack
- Application
- DB / Middleware
- OS
- KVM
- Virtual Infrastructure

### Containers
- Cluster Managers
- Containers
- HDFS
- Lightweight Linux
- Scale out Infra.

### Streaming Data & Analytics
- Kafka, Spark
- Containers
- Object HDFS
- Lightweight Linux
- Scale out Infra.

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Cisco ONE Enterprise Cloud Suite

End User/Developer or Consumer

IT App Designer

Infrastructure Admin

Cisco CloudCenter

 Cisco Prime™ Service Catalog Self-Service Portal

Integrated Infrastructure Management Cisco UCS® Director

Hybrid Cloud Management Cisco Intercloud Fabric

Cisco UCS Performance Manager

Cisco Energy Mgmt

Cisco® Virtual Application Cloud Segmentation

Multivendor Computing, Network, Storage, and Virtualization

Cloud Services

Ecosystem of Service Providers

3. Multi Cloud Orchestration

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Cisco Platform as a Service Solutions

Eco Partnership

- Legacy Application and .Net Support with Apprenda
- Cloud Native Development with Pivotal and Cloud Foundry

Cisco Container Stack

- Container Management Kubernetes or MESOS
- Network affinity through Contiv
4. Platform as a Service

Cisco PaaS Management Service
Environment registration, deployment, data collection and health monitoring.
Cloud-native CI/CD View

4. Platform as a Service

- Dev
- Laptop
- Sandbox
- Microservice Infrastructure
  - Cisco MetaStack
  - Cisco Intercloud
  - AWS/Azure/Google
  - Partner Cloud

- GitHub
- CI Drone
- Shipped Deploy
- Catalog

- Shipped
- Marketplace

- Project Shipped
Cisco Cloud Services
IoT Blueprint

Things

Gateways

Cloud Managed Services

Customer Premise

Public / Private Cloud

IoT Ready Fog Nodes

IOT Trusted Data Pathway

Device Interface

Network Interface

Client Control of Data

Tools for Application Developers

Data Storage Integration w/ Big Data

Integration with Analytics

Event Management

APIs for Dashboards

Customer Value Added Services

Service Interface

Clients

Cisco IoT Software Stack
...based on Policy-Driven-Infrastructure
Why Policy?

- Operational Simplicity
- Application Centricity
- Security and Compliance
- Multi-Vendor Innovation
SIM Cards and Application Profiles

SIM Card Identity for a Phone

Service Profile Identity for Compute

Application Profile Identity for the Network

Service Profile
- Network Policy
- Storage Policy
- Compute Policy

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Application Profile – Automated Provisioning

CloudCenter Manager
Single Intuitive Platform
CliQr-Hosted SaaS or Onsite Deployment
Full N-Tier Multi-Tenancy
Integrated Security
Highly Scalable Distributed Architecture

CloudCenter Orchestrator
Automated Provisioning and Deployment
Native, No Overhead
Cisco Cloud Reference Architecture

Software-as-a-Service
- Cisco Cloud Services

Platform-as-a-Service / Container Stacks
- Cisco and Partner PaaS
- Cisco Container Stacks

Cloud Management
- Multi-Cloud Application Management

Clouds
- Cisco, Partner and Public Clouds (Private – Public – Hybrid)

Cloud Infrastructure
- Infrastructure-as-Code, Automation & Hardware

Cisco Cloud Services
Cisco and Partner PaaS
Cisco Container Stacks
Multi-Cloud Application Management
Cisco, Partner and Public Clouds (Private – Public – Hybrid)
Infrastructure-as-Code, Automation & Hardware
Key Take Aways

1. Full Hybrid-Cloud Stack
2. Cisco Cloud Services (IoT & NFV & SaaS)
3. Partner Cloud Landscape (Cisco powered)