



# 미래형 하이브리드 클라우드의 실현

조원섭 수석 클라우드 컨설턴트  
Networked Society Day 2017

# SERVICE INNOVATION AND VELOCITY REQUIRE A NEW IT APPROACH



DevOps



Serverless &  
Containers



Multi-Cloud



Security &  
Governance

Faster response  
to customer  
demand

Development  
speed and  
efficiency

Scale and  
resource  
optimization

Protection and  
Compliance

# FACTORS DETERMINING WHAT CLOUD TO GO TO





# DELIVERING THE HYBRID CLOUD

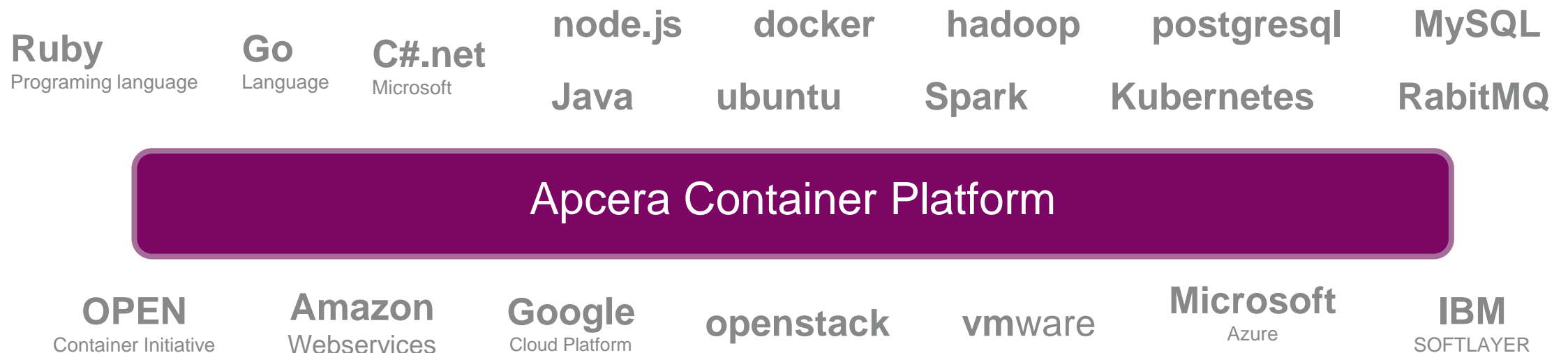
Any application, workload, environment or cloud



## Application Migration Offering



## Application Management Platform



# APCERA PLATFORM



## MULTI-WORKLOADS



Docker



Bare OS for Traditional Applications



Web Applications



Big Data Frameworks



## POLICY

Declaration and Enforcements Framework



DEPLOY

ORCHESTRATE

GOVERN

## MULTICLOUDS



Bare metal

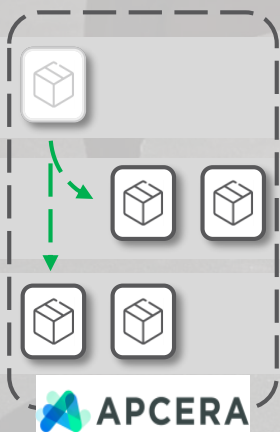


vmware



# CONTAINERS ON HYBRID CLOUD

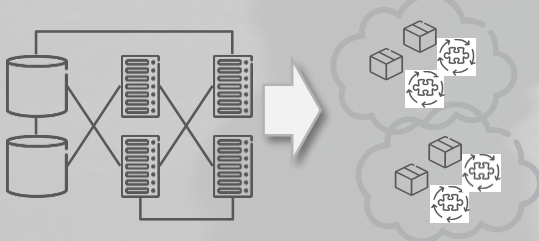
## Multi-Cloud Workload Portability



### Benefits

- Streamline Workload Orchestration: Policy-defined workload composition, resource management, placement and connectivity
- Improve Auditing and Tracking: Reduce application security audit times and track every operation
- Automate Enforcement: Have peace of mind knowing that your system only functions as explicitly defined by policy

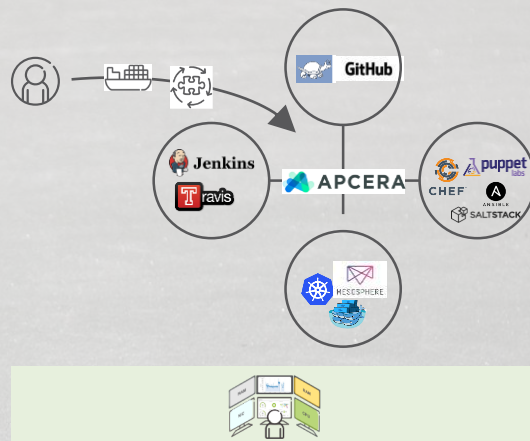
## Application Modernization



### Benefits

- Deploy traditional x86 applications in the cloud with strong OPEX savings by cutting costs, and boosting performance
- Reduce legacy infrastructure cost and reduce CAPEX
- Enable a holistic IT strategy and infrastructure independence; the right approach for each part of the business

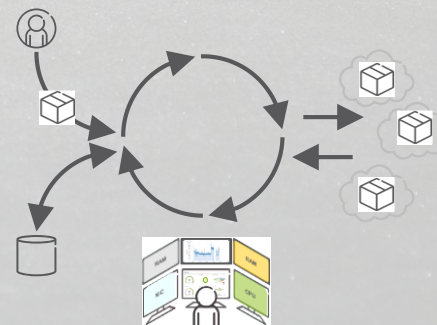
## New Application Architectures



### Benefits

- Align Type 1 and Type 2 IT: Embrace new technologies while bridging the divide between Dev. and Ops. teams
- Faster Time to Market: Rapid technology cycles — development through deployment
- Use Any Modern Tooling: Integrates with today's development tools — no "rip and replace"
- Risk Mitigation and Full Compliance: A safe and secure infrastructure for traditional and cloud-native workloads

## Policy Driven Application Governance



### Benefits

- Streamline workload orchestration with policy-defined workload composition, resource management, placement and connectivity
- Reduce application security audit times possibility to track every operation
- Have peace of mind knowing that your system only functions as explicitly defined by policy



# ADVANCING E-ESTONIA WITH HYBRID GOVERNMENT CLOUD



## THE CHALLENGE

- › Optimal ICT infrastructure for the Estonian e-society services
- › Preserve the state's distributed IT architecture
- › Retain possibility for free competition
- › Bring quality of ICT services for ministries/agencies to next level



OPTIMIZED  
STATE ICT

## THE SOLUTION

- › Ericsson-lead public-private consortium to deploy and operate hybrid cloud environment
- › Scalable, future-proof hybrid infrastructure (private and public) and platform as a service
- › Hybrid cloud solution that provides a DevOps environment



PUBLIC-  
PRIVATE CLOUD

## EXPECTED RESULT

- › Enhanced scalability, resilience and data security of a wide range of e-society services in Estonia.
- › Ensured continuity and security for e-services like tax reporting and online health care advice
- › Maximized resource efficiency and accessibility



ENHANCED  
E-SOCIETY

## Policy-driven Application Platform

- › Policy, governance & enforcement for all workloads
- › Multi-cloud workload mobility
- › Container deployment at scale

## Ericsson Application Migration Offering

- › Unmatched CSI services offering
- › Proven Transformation Framework and automation tools built upon successful IT Services migration projects
- › Industrialized Transformation Factories for large migrations
- › Global partnership with leading S/W & H/W market vendors

## Modern Application Eco-system

**OPEN**  
Container Initiative

**CLOUD NATIVE**  
COMPUTING FOUNDATION

**Amazon**  
Webservices

**OPEN**  
DAYLIGHT

**ONF**

**IETF**

**DMTF**

**ETSI**  
World Class Standards

**Openstack**

**OPEN**  
COMPUTE PROJECT

**OPNFV**

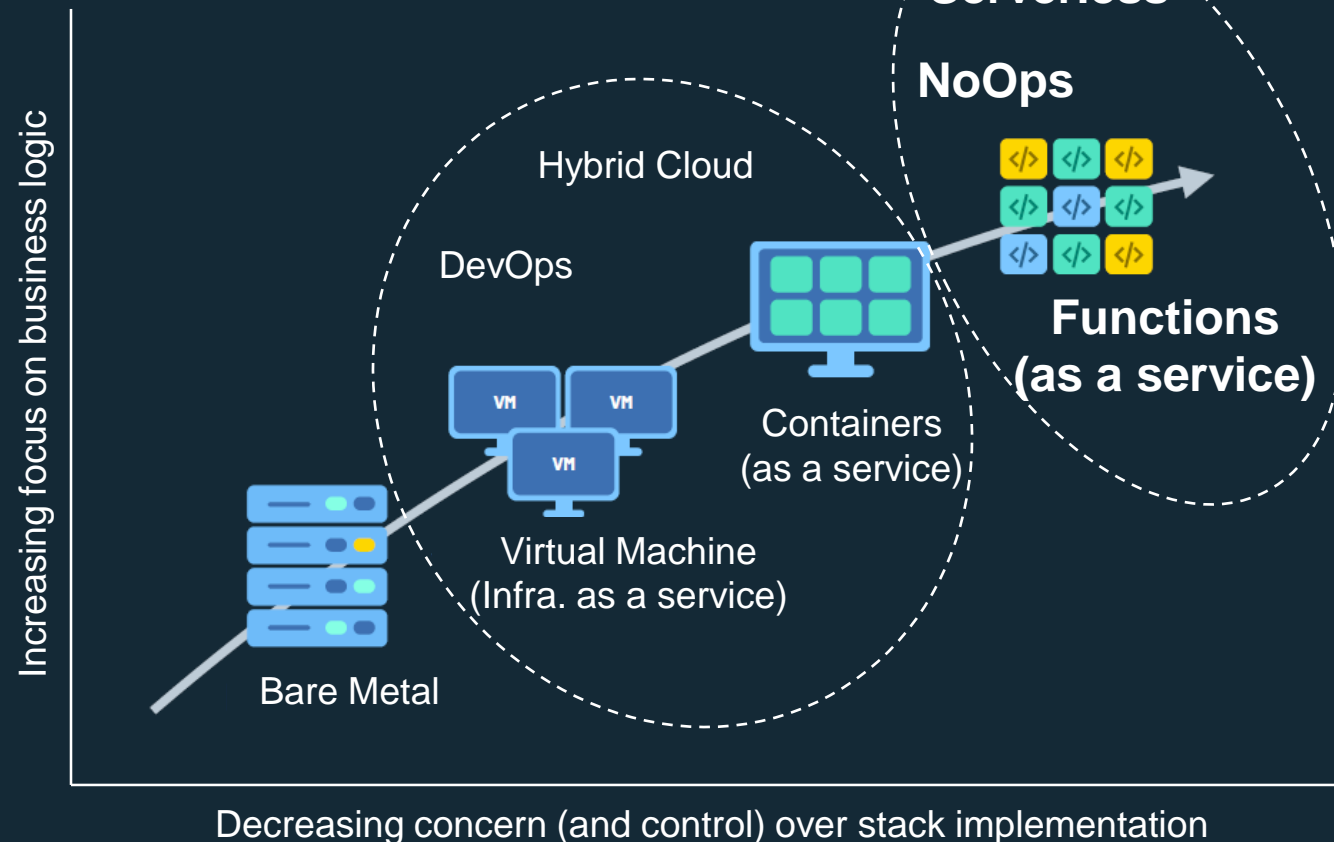
**Open Data**  
Center Committee

**tmforum**

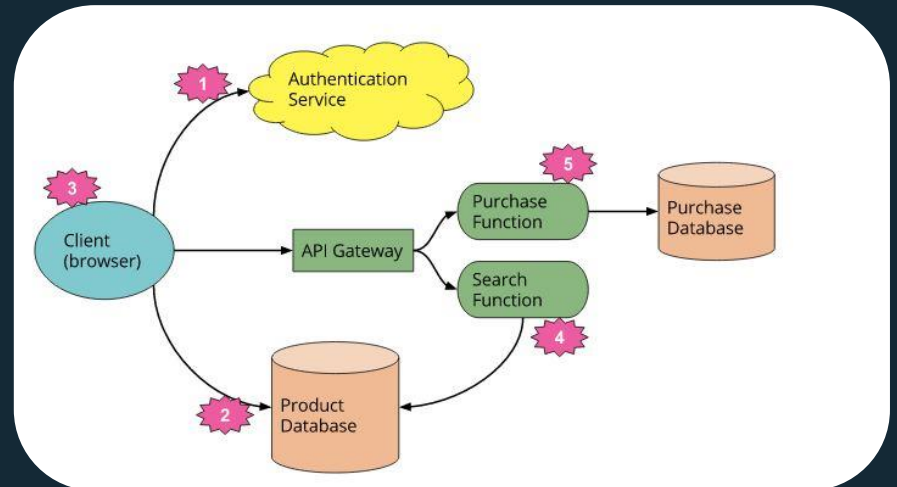
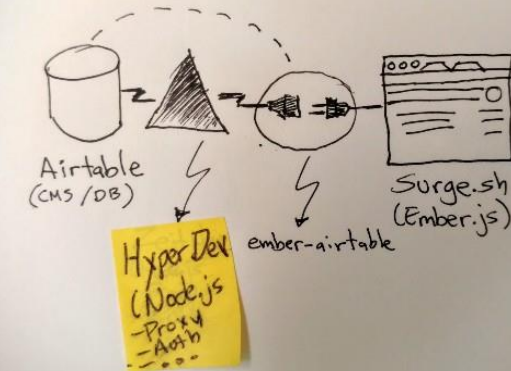


# WAY FORWARD

Monolithic Application >>> Services >>> Microservices >>> Serverless



SERVERLESS EXPERIMENT #XT014-D



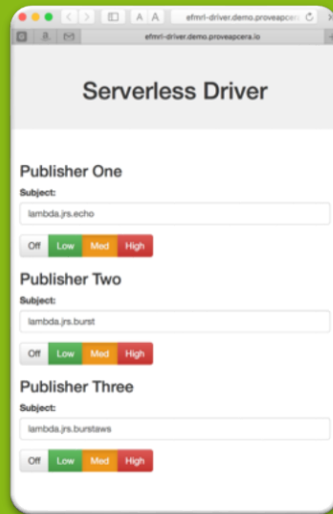
\* Source

1) <https://medium.com/the-backlog-by-nimbo-x/creating-a-serverless-web-app-with-node-js-ember-js-and-paas-services-hyperdev-surge-sh-8e3ebe263a76>

2) <https://martinfowler.com/articles/serverless.html>

# SERVERLESS COMPUTE

Web Request generator



NATS Messaging  
Binding



Apcera Serverless Compute Daemons



HTTP REST  
Binding



Input data

Spawn function

Apcera Platform

function  
Instances

Function  
Packages

# EVERYTHING ON HYBRID CLOUD

## Ericsson Apcera Container Platform



3<sup>rd</sup> Party Hardware

HDS 8000



Intel RSD

AWS

Azure

Google

*Delivers dynamic supply of  
resources to meet the demands  
from business*



Dynamic  
Supply

Dynamic  
Demand





