Enabling Business Agility with SUSE CaaS Platform

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Tech Trends CHANGING Business Outcomes

10 Tech Trends Shaping Our World

- AI/Machine Learning
- Robotics
- IoT
- Autonomous Vehicles/Drones
- Big Data/Analytics
- 3D Printing
- VR/AR
- Blockchain
- Cloud/Mobile/SDx
- Cyber Security

Deliver New Offerings, Faster
Increase Agility
Service Customers Better
Drive Efficiency
Evolving Approaches

Centralised Architecture

N-Tier Architecture

Microservices
What are Containers?

Making more efficient use of your server resources while empowering your development and operations staff

Deploying the same code to dev and prod

Easier for developers – creating a package with just the software needed to run
Build and Deliver Cloud Native Applications

Increase agility with Microservices

Smaller Codebase + Specialized Teams + Deconstructed Services = Agile IT = Opportunity!

Containers are ideal for developing Microservices
Issues with Containers

Networking

Load Balancing

Scaling

Monitoring

Hardware

Hardware

Hardware
“Building a container stack from the ground up is not for everyone.”

Container Services in the Public Cloud. Gartner 2017
Deploying at Scale Requires Automation

Orchestration
- Scheduling
- Service discovery

Performance and availability
- Scaling
- Load balancing
- Self-healing
- Monitoring

Maintenance
- Rollout
- Rollback
Kubernetes is a new container technology leader

Container orchestration and management

Orchestration
- Scheduling
- Service discovery

Performance and availability
- Scaling
- Load balancing
- Self-healing
- Monitoring

Maintenance
- Rollout
- Rollback
SUSE CaaS Platform

Speed application delivery to improve business agility

SUSE CaaS Platform is an enterprise class container management solution that enables IT and DevOps professionals to more easily deploy, manage, and scale container-based applications and services.
SUSE Application Delivery Platforms
Support multiple approaches to speed application delivery

Cloud Foundry
- Productivity

Kubernetes
- Flexibility

SUSE Cloud Application Platform
- Accelerate end-to-end application development and delivery at scale
- Maximize productivity with abstractions, patterns, and full lifecycle automation

SUSE CaaS Platform
- Simplify deployment and management of containers and containerized applications
3 Key Technology Components

- **Orchestration**
  - Kubernetes

- **Configuration**
  - Container Engines
  - Salt

- **OS for Microservices & Containers**
  - SUSE MicroOS

**SUSE CaaS Platform**
Container Management for the Enterprise
Choose SUSE CaaS Platform to…

Achieve faster time to value
• Complete, curated platform
• Efficient installation and configuration
• Enterprise-ready

Simplify management and control
• Holistic security
• Easy scaling
• Update automation

Maximize return on your investment
• Industry standard technologies
• Open, open source
• Leverage into broader IT transformation
SUSE CaaS Platform simplifies and extends Kubernetes

Container management for the enterprise

**Platform management**
- Install
- Configure
- Update
- Scale

**Application Services**
- SUSE Registry
- Secure SUSE base Images
- Third party images
- Third party image scanning

**APIs and Integrations**
- LDAP integration
- Monitoring
- Package Mgt (Helm)

**Kubernetes**
- Certified conformant

**Extensions & Complementary Svcs**
- Networking (Flannel/Cilium)
- Storage (SUSE Enterprise Storage, NFS)
- Dashboard

**SUSE Micro OS**
- OCI-compliant container runtime
- Transactional update/rollback

**Enterprise Grade**
- integrated
- tested
- maintained

Enterprise Grade - integrated - tested - maintained
# Flexible Deployment options

<table>
<thead>
<tr>
<th>Public Cloud</th>
<th>Private Cloud</th>
<th>Virtual Machines</th>
<th>Bare Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon, Google, Microsoft</td>
<td>SUSE OpenStack Cloud</td>
<td>KVM, Xen, VMware, Microsoft</td>
<td>SLES supported hardware</td>
</tr>
</tbody>
</table>

**Bare Metal**

- Run on Machines that are dedicated **CaaS Platform** and **Kubernetes**
- Deploy new node from installation via PXE or iso/dvd

**SUSE OpenStack Cloud**

- Deploy CaaS Platform nodes as workloads on the Cloud
- Deploy new nodes via cloud images using cloud-init for config

**Public Cloud**

- Ready to Run
What Does This Change?

When embraced along with agile/DevOps processes, responsibilities change

Operations team focus on the platform
- Including the services providing it

Developers focus on code (and containers), but also:
- Storage mapping/claims, Ingress, Service discovery, Secrets, etc

Organisations embrace third party OSS components to assist developers in their journey

Culture of blame shifts

Kubernetes is not a magic bullet. Avoid applying legacy/existing thinking to the new world
Success Stories
Municipality in Scandinavia - SUSE CaaS Platform

Looking for a container platform due to they see that the new trend of deliver applications as containers into their organization.

IT Department deliver IT services ans support to

- Pupils in primary school
  - Inter municipalities
  - The inhabitants of municipality (Portals and services )
- 20.000 administration IT user
- 30.000 students
- 600 locations, 25.000 PCs with support, 900 servers, 2 000 printers, 3 000 wireless network 400+ databases and 160+ systems. 130 000+ support calls.
Successfull - Goal was to be able to receive containers from developers and manage them.

- Looking for an open and easy platform to implement
  - Easy to install, manage and orchestrate
  - Start small and grow easy
  - Close to upstream

- First meetings
  - Quick understand that all IT departments need to be involved

- Implementation
  - Preparation – who, hardware, security, IP, storage,,,firewalls
  - Server, storage, network, applications and endcustomer
  - All involved with use during this time
    - Knowledge and understanding
    - Questions solved within minutes
    - Education parallel
    - Hands on
    - Documentation done parallel during the implementation
  - Follow-up day
  - Implementation to production within 4 days

Direct into production, no PoC needed
Manufacturing Company Sweden - SUSE CaaS Platform

Looking for a container platform due to they see that the new trend of deliver applications as containers into their organization

Currently in early stage, building pipelines and refactor their applications (using CaaS in this step)

**IT Department deliver IT services ans support to**

- Development in Azure
- Production in Manufacturing site
- Same CI/CD pipelines in dev/test/prod
Conclusion

Microservices to help achieve IT transformation

Containers are ideal for Microservices development

SUSE CaaS Platform is the key to realizing production grade container use at scale
Q&A