Geekos, Containers, & Clouds... Oh my!

A case study for the SUSE Sales Engineering Lab

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The Sales Engineering Lab!

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What’s the big deal?
Why did we need this?

75+ SEs around the world
Why do we need this?

Inconsistent Demo Capabilities
Why do we need this?

Stuff keeps getting more complex!
What do we want to do?
What do we want to do

- Usability
- Security
- Maintenance
What do we want to do?

Usability

Public Cloud wouldn’t work for us
  • Needed to do local OpenStack
  • Costs are much more predictable
What do we want to do?

Usability

• **Production-type environment**
  • Available for strategic events
  • Available for spontaneous customer demos

• **Sufficient resources to avoid contention scheduling**
• **Create complete, integrated SUSE stack**
SUSE Software-defined Infrastructure and Application Delivery Approach

Application Delivery

- **Container Management**
  - SUSE CaaS Platform

- **Platform as a Service**
  - SUSE Cloud Application Platform

Software-Defined Infrastructure

- **Private Cloud / IaaS**
  - SUSE OpenStack Cloud

- **Compute**
  - Virtual Machine & Container

- **Storage**
  - SUSE Enterprise Storage

- **Operating System**
  - SUSE Linux Enterprise Server

- **Networking**
  - SDN and NFV

Physical Infrastructure: Server, Switches, Storage

Infrastructure & Lifecycle Management

- SUSE Manager
- SUSE OpenStack Cloud Monitoring

Public Cloud

- SUSE Cloud Service Provider Program
What do we want to do?

Security

• Centralized Authentication
• SSL for all traffic using recognized signer
• Restrict root/admin access as much as possible
• Most traffic via VPN
What do we want to do?

Maintenance

• Minimize impact on highly-utilized engineers
• Represent current-release versions of products
• Production-like patch cycles
• Find bugs before customers do 😊
Whoa boy…
Challenges

Hardware

- Correct balance of compute vs storage in resource allocation
- SUSE separation forced physical relocation
- Initial hardware was repurposed, causing intermittent failures
Challenges

People

• Working around port blocking by internal IT
• Too many (heavily opinionated) cooks in the kitchen at times
• Lab scheduling during SUSECon
• We still have day jobs…
• Overcoming lone-wolf tendencies of SEs
• “Can I have six multi-terabyte VMs with 400 GB RAM each?”
Challenges

Software

Performance tuning (software)

Found & fixed bugs in SSL deployment

• LetsEncrypt issues certificates that are valid for 90 days

• Needed standardized process for updating certs
Mission accomplished!!!
Q&A