SUSE Manager in Large Scale
17220

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Geeko comes to SHARE
Agenda

- What is SUSE Manager?
- What can I do with it for Linux on System z?
- How do I design it to scale?
- Best practices
- Demonstration
- Q&A
SUSE Manager
SUSE Manager: Operating System Lifecycle Management

- Gain control
- Optimize operations
- Enable innovation
- Implement quickly
SUSE Manager is Open Source

What is the Spacewalk Project?

- Upstream version of SUSE Manager and Red Hat Network (RHN) Satellite Server 5.X
- Red Hat open sourced RHN Satellite (GPL v2) in June 2008

What is the role of SUSE in the Spacewalk Project?

- SUSE Manager is based on Spacewalk, but SUSE has adapted it for SUSE Linux Enterprise
- SUSE is an active contributor to Spacewalk
- SUSE embraces the open source development model and Spacewalk is just one of the many open source projects we support

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What can I do with SUSE Manager?

- Manage SUSE Linux Enterprise Server and Red Hat Enterprise Linux with SUSE's Expanded Support
- Deploy and manage your systems in **physical**, **virtual** and **cloud** environments – across architectures
- SUSE Manager server can run as a z/VM (new)
SUSE Manager – run on z/VM

• Announced 8/4/2015
  SUSE Manager Server 2.1 for z Systems has reached GOLD MASTER status and is ready for immediate release.
• Image for SUSE Manager Server for System z is available to download/eval here:
  https://download.suse.com/Download?buildid=BGjVf-pTgjQ~
• Documentation is now updated to include z/VM installation instructions
• Z/VM specific memory recommendations:
  – 5GB Memory minimum (3GB RAM + 2GB VDISK swap) for a small number of clients
  – For a larger production system the ratio of physical memory to vdisk will need to be re-evaluated based on the number of clients being supported
SUSE Manager 2.1

**Usability**
- Setup wizard
- Improved web UI
- Action chaining

**Provisioning**
- Unattended bare-metal system provisioning
- First time installation support

**Patch Management**
- Package lock

**Compliance and security**
- Compliance check based on CVE numbers
- OpenSCAP

**Power management**
- Power on, off and reboot bare-metal systems via the IPMI (Intelligent Platform Management Interface) protocol

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SUSE Manager Roadmap

SUSE Manager 1.7
SUSE Linux Enterprise Server 11 SP2

SUSE Manager 2.1
SUSE Linux Enterprise Server 11 SP3
• Setup wizard
• Improved UI
• Action chaining
• Unattended bare-metal system provisioning
• Power management
• Compliance check based on CVE numbers

SUSE Manager 3
SUSE Linux Enterprise Server 12 SP1
• Service Availability / Scalability
• Topology Awareness
• Subscription counting (compliance)
• Configuration management
• External Monitoring

SUSE Manager 4
SUSE Linux Enterprise Server 12 SP2
Cloud / Virtualization

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Designing SUSE Manager implementation
SUSE® Manager
System Components

Jabber
Instant Deployment

Cobbler
Bare Metal Provisioning

API
Scripting, Third-party

Proxy
Load Balancing, Branches

SUSE Manager Server
Python, Perl, Java, Tomcat, Apache Application Server

Database
Embedded: postgresql    External: Oracle*, postgresql

*Oracle database support will end with SUSE Manager 2.1

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SUSE Manager services

spacewalk-service

- `{start|stop|status|reload|restart|enable|disable}`
- `list`

Listing spacewalk services...

<table>
<thead>
<tr>
<th>Service</th>
<th>Status 1</th>
<th>Status 2</th>
<th>Status 3</th>
<th>Status 4</th>
<th>Status 5</th>
<th>Status 6</th>
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<td>3:on</td>
<td>4:on</td>
<td>5:on</td>
</tr>
</tbody>
</table>

- Individual components may be separately stopped/started as needed
- Database has its own separate startup and is assumed
How Does SUSE Manager Work?

Single / Proxy

SUSE Customer Center

Firewall (and optional SMT)

SUSE Manager Server

API Layer

IT Application

Custom Content

Web Interface

Managed Systems

Managed Systems

SUSE Manager Proxy Server

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How Does SUSE Manager Work?

Inter Server Sync

- Not limited to Master / Slave.
- Can have multi-level syncs (Staging / Master / Slave)
General best practices - part 1

- Update your SUMA server(s) regularly
- Do not cheat on memory allocation
- Use embedded postgresql as database
  - Switch to external can be done later as need arises
- Add memory for taskomatic process
  - /etc/rhn/rhn.conf
    
    # Set max taskomatic mem
    taskomatic.maxmemory=3072

- Attach disk space via LVM to /var/spacewalk
- Leave lots of time for channel sync
  - Only sync the ones that matter
General best practices - part2

• Choose your client contact method carefully:
  – Pull: rhnsd or osad
  – Push via ssh – preferred for large environment, single key exchange

• Stagger scheduled events that may overload taskomatic
  – Action chains that are long
  – Remote commands – minimize length

• Schedule your channel syncs and system actions with minimum overlap
Best Practices – Large Systems

- Use proxies to mitigate load
- Limit scope of ISS to needed subsets
- Create system groups by location, and use role-based administration
- Consider using HA for service availability
- Avoid using osad if using pull client method
- Consider using content staging – especially for distributed environment
  - Settings on both server and client to enable
    - Server: Admin -> Organizations -> Enable Staging Contents
    - Client: /etc/sysconfig/rhn/up2date:
      stagingContent=1
      stagingContentWindow=24
SUSE Manager Demo

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