



## SUSE Manager in Large Scale 17220

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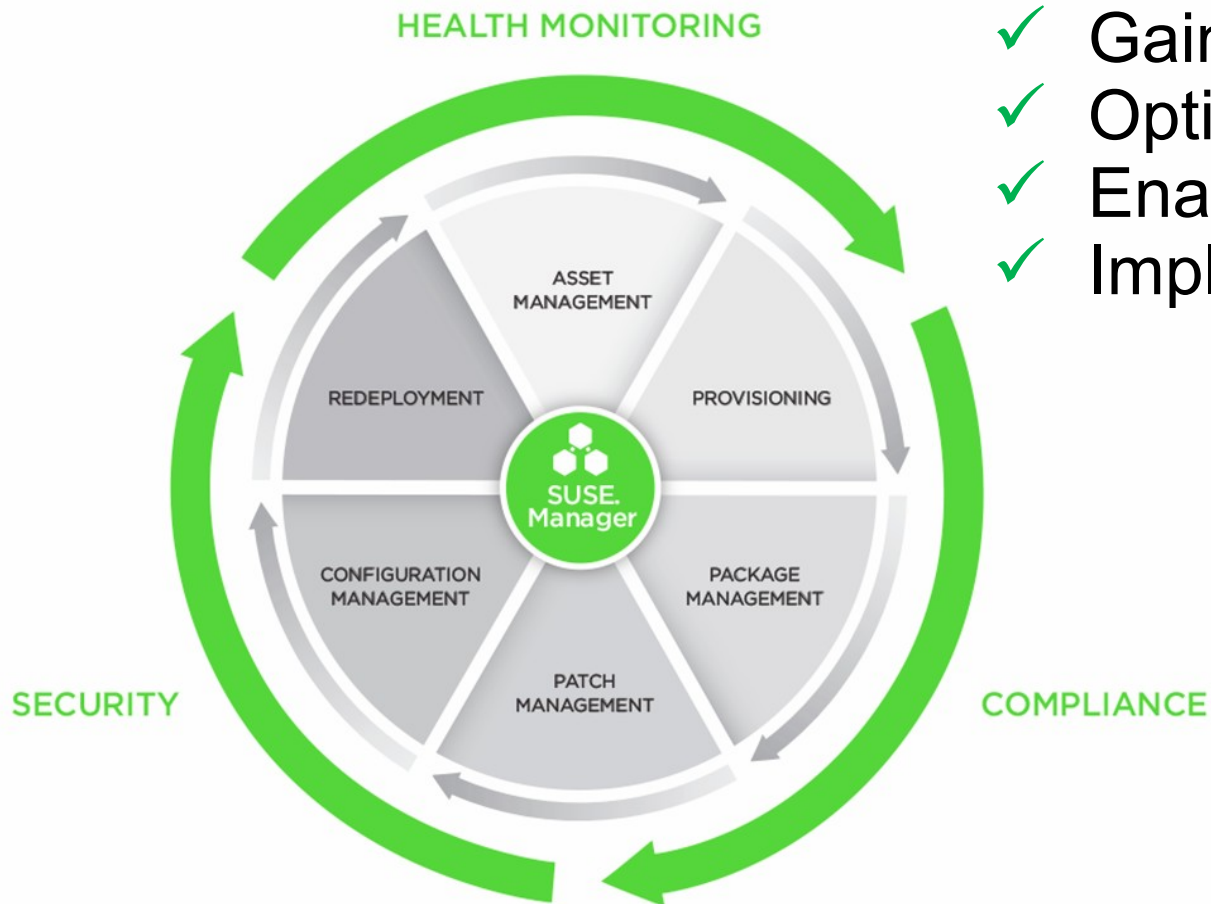
# Agenda

- 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

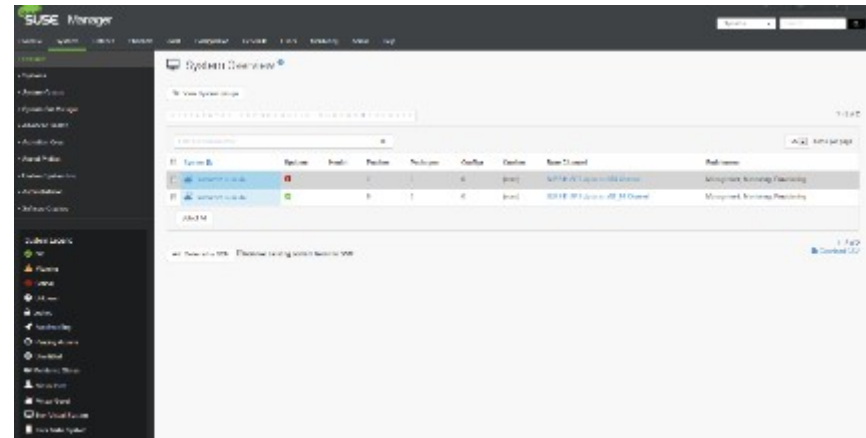


## What is the role of SUSE in the Spacewalk Project?

- 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

# 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

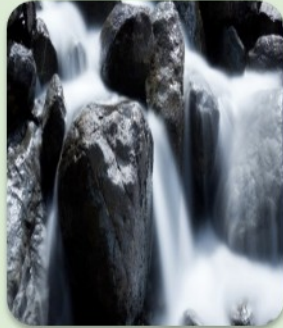


# SUSE Manager 2.1



## 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

# 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

2014

2015

2016

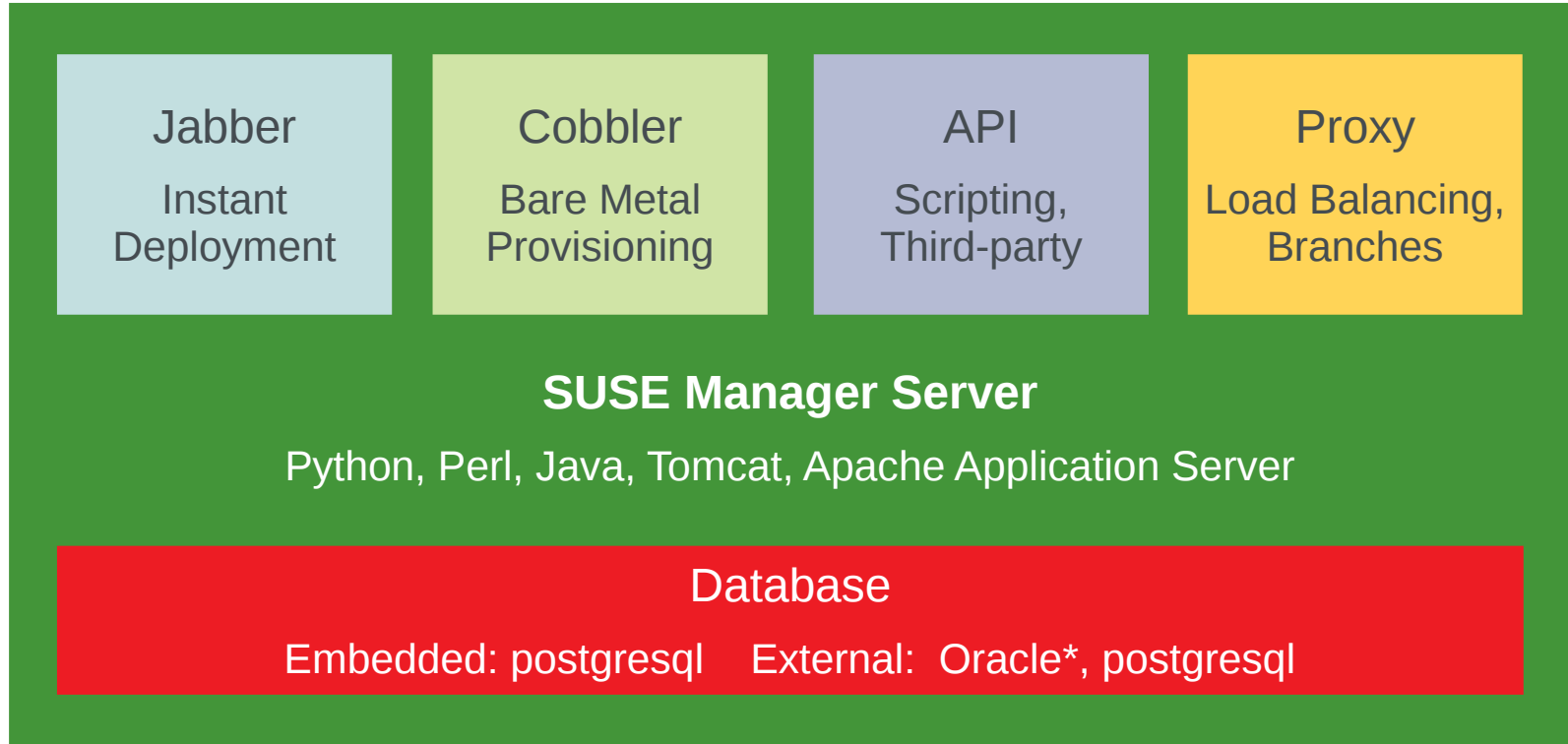
2017

2018

2019

# Designing SUSE Manager implementation

# SUSE<sup>®</sup> Manager System Components



*\*Oracle database support will end with SUSE Manager 2.1*

# SUSE Manager services

## spacewalk-service

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

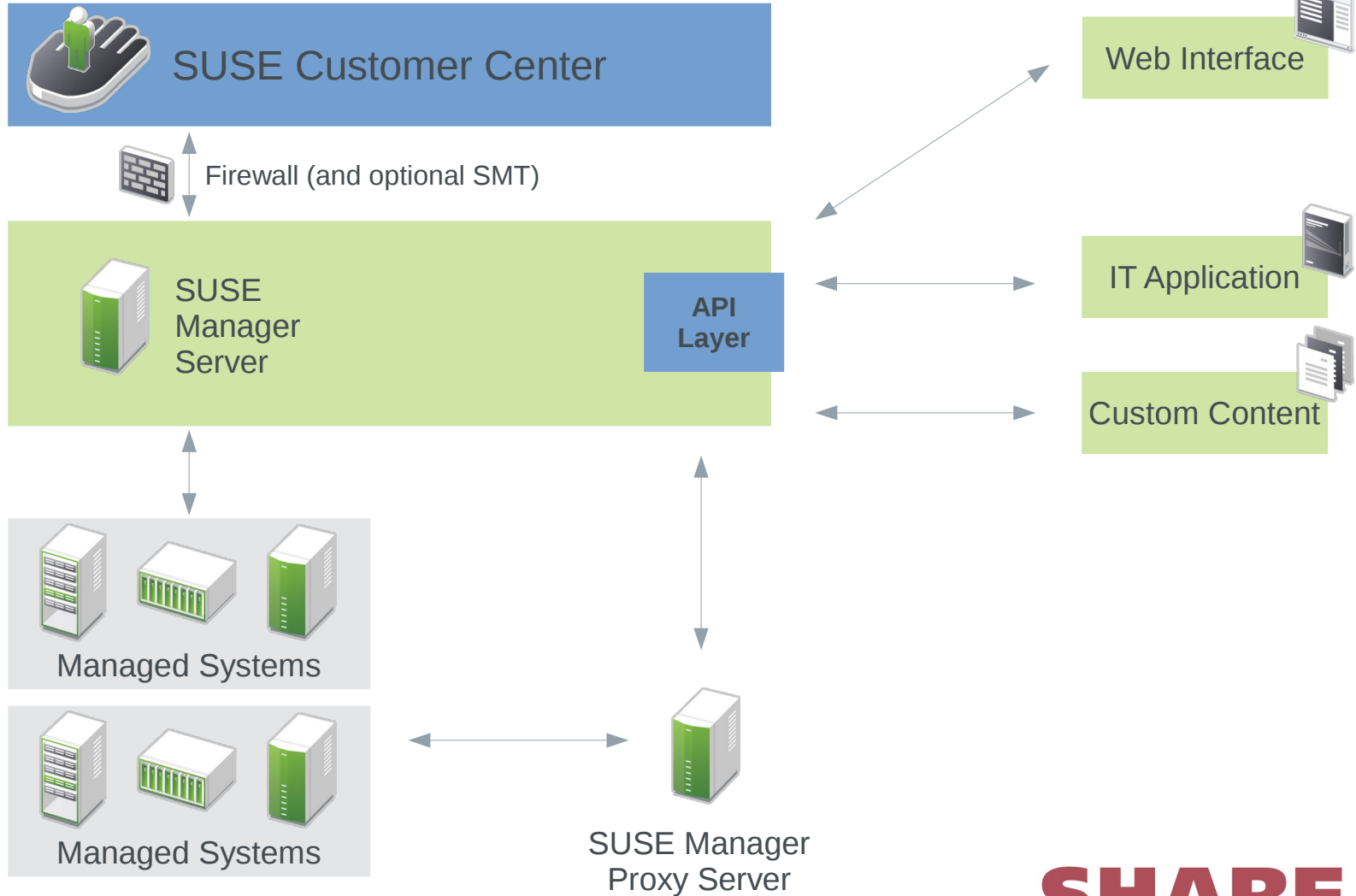
Listing spacewalk services...

jabberd	0:off	1:off	2:off	3:on	4:on	5:on	6:off
tomcat6	0:off	1:off	2:off	3:on	4:on	5:on	6:off
apache2	0:off	1:off	2:off	3:on	4:on	5:on	6:off
osa-dispatcher	0:off	1:off	2:off	3:on	4:on	5:on	6:off
Monitoring	0:off	1:off	2:off	3:on	4:on	5:on	6:off
MonitoringScout	0:off	1:off	2:off	3:on	4:on	5:on	6:off
rhn-search	0:off	1:off	2:off	3:on	4:on	5:on	6:off
cobblerd	0:off	1:off	2:off	3:on	4:on	5:on	6:off
taskomatic	0:off	1:off	2:off	3:on	4:on	5:on	6:off

- 
- Individual components may be separately stopped/started as needed
- Database has its own separate startup and is assumed



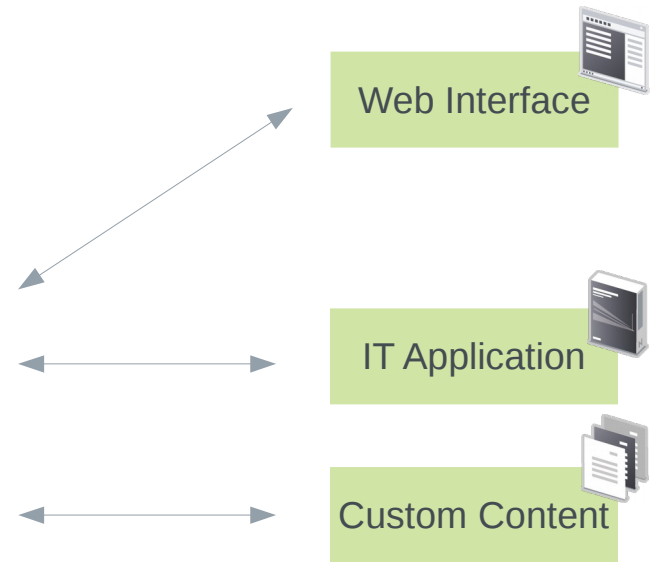
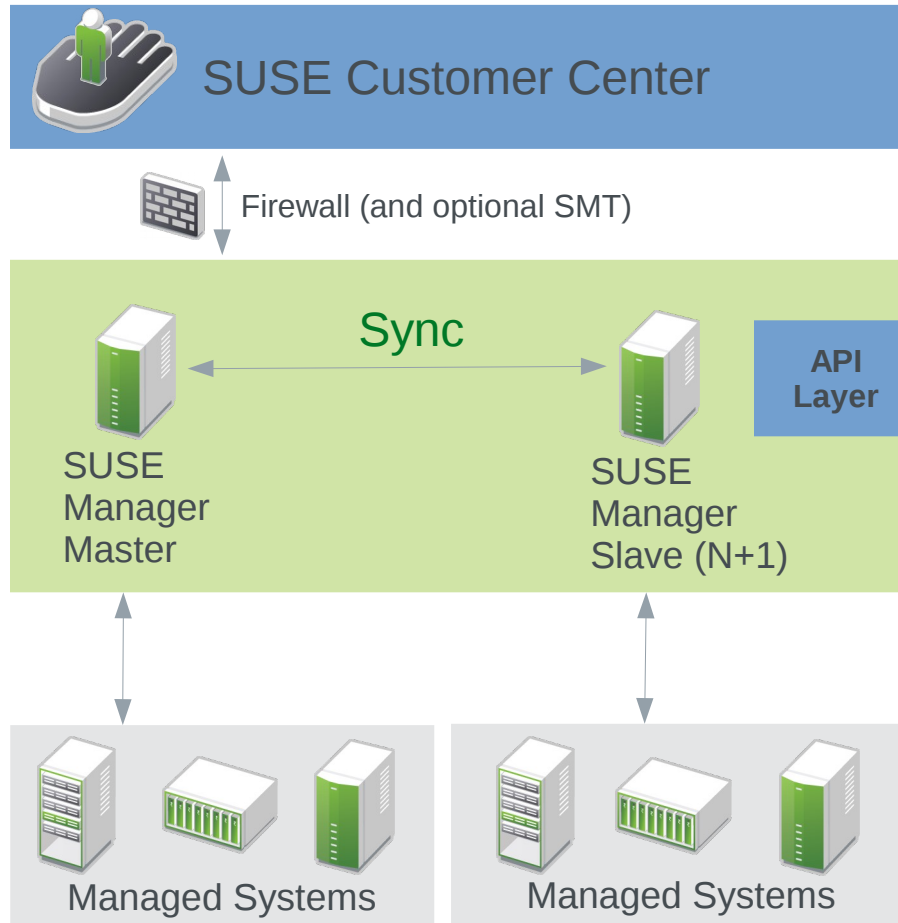
# How Does SUSE Manager Work? Single / Proxy



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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 - part1

- 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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8/13/15



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