White Paper

SUSE Manager

Keep It Simple

Your Linux assets are a complex assortment of servers and workstations running in virtualized, remote cloud and hardware environments. How do you manage all that diversity and still keep it simple to maximize IT efficiency? SUSE® Manager is a single open source tool that offers complete lifecycle support for your enterprise Linux environment—from deployment, to configuration, to software updates and auditing.

Keep It Simple

Enterprise networks grow organically. New servers come online as needs change and budgets expand. Sometimes different departments have differing priorities, leading to dissimilar configurations with varying degrees of compatibility. Even if management succeeds in establishing basic objectives for uniformity and interoperability, subtle differences in management tools and configuration methods can lead to wheel spinning and staffing inefficiencies for admins who are tasked with managing and troubleshooting the network.

According to many experts, the best way to save on cost and maximize efficiency for IT staff is to reduce the number of different management tools. A uniform management environment saves money and time by providing:

- **Simplified workflow**—*Processes and deployments occur in a predictable and reproducible manner, saving time and allowing for more accurate staffing estimates. Tasks and responsibilities are clearly and consistently separated between expert and novice system administrators.*
- **Error reduction**—*Automation of configuration and maintenance procedures reduces the chance of costly mistakes. Restricting the management environment to a common interface or command set builds competence through familiarity and repetition, further reducing both errors and downtime.*
- **Staffing flexibility**—*IT managers can deploy staff across different locations and departments with the assurance of productivity from the moment of arrival and quickly redeploy them to deal with any local or temporary workload peaks.*
- **Training savings**—*Fewer tools means significantly less training and a flatter learning curve for IT staff.*

SUSE Manager is a single tool that enables your staff to manage the complete lifecycle of both RPM-based and DEB-based Linux systems (supported late 2018) through a single user interface. You can use SUSE Manager to administer, deploy, configure and audit all your Linux systems, whether they are running on bare metal or in a virtual environment. A powerful collection of automation and orchestration features included with SUSE Manager lets you extend and expand the power of a single admin, minimizing staffing cost and reducing the time for system deployment and updates, even in complex DevOps scenarios.

SDI
SUSE Manager is part of a new generation of tools for managing a software-defined infrastructure (SDI). A single SDI might consist of many thousands of objects, running on any possible mix of compatible hardware, IoT devices and cloud platforms. SDIs allow IT staff to manage dynamic, heterogeneous networks in a hardware- and location-independent way. All systems on the network are managed through the same interface and procedures, regardless of where they are running and whether they are running on hypervisors, containers, bare metal, IoT devices or third-party cloud platforms.

Comprehensive

The power of SUSE Manager is deep as well as wide. SUSE Manager combines all-in-one versatility with a comprehensive feature set. Many organizations discover that SUSE Manager is as efficient and as tailored to the needs of the IT Infrastructure as a full custom management system would be, but without any of the associated risks and costs. Regardless of the complexity of your local network or SDI, SUSE Manager will help to make it simpler with:

- *More efficient deployment*
- *Tighter and more granular control of Linux system configurations*
- *Streamlined management for software and system updates*
- *Audit for ironclad compliance with corporate policies*

The next sections provide a closer look at the power and economy of SUSE Manager.

Easy Deployment

Deployment couldn't be easier. You just declare how many Linux systems you need and what you need them for, and SUSE Manager does the rest. Admins can build their own images for bare metal, containers or virtual machines (VMs). The tools included with SUSE Manager enable staff to define system prototypes and then adapt the definitions for easy automation and complex environments. When the system images are ready, SUSE Manager can install them on individual computers or on groups of systems—in fully unattended fashion.

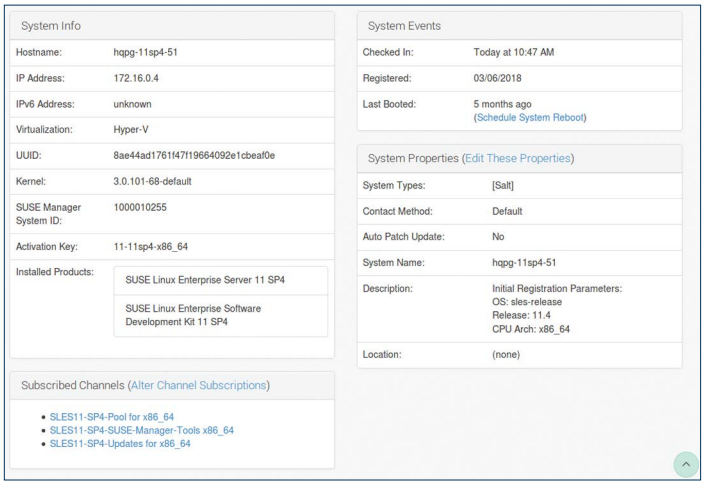

Figure 1.

Cloud deployments are easy and convenient with SUSE Manager. The procedures used for creating and managing Linux systems on private or public clouds closely match the procedures used for deploying on-site resources, thus keeping the learning curve to a minimum.

Provisioning is only a few clicks away. For each system, the administrator just defines a system type, configuration method, software channels and a few other parameters. Once the system is up and running, the system configuration is visible in a single window.

SUSE Manager adapts easily to organizations that have different departments with very different IT needs. You can partition your landscape into independent units, each with its own separate management team and software repositories. Each department can deploy and update its infrastructure at its own pace, but in a common environment with common rules that are easy to maintain and verify.

Software Management

Once the systems are deployed and configured, SUSE Manager lets you install and manage software in an efficient and comprehensive

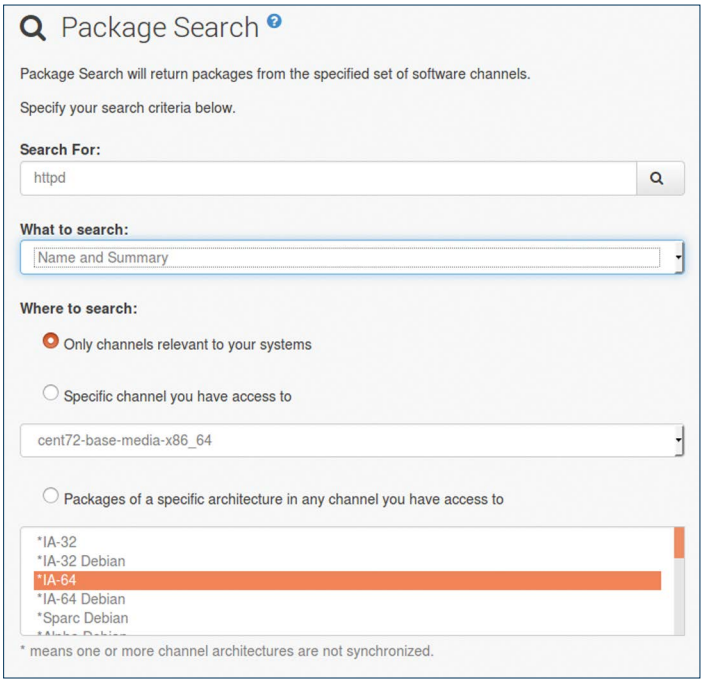

Figure 2.

manner. SUSE Manager automates software updates for whole systems, groups of systems or individual packages. You can schedule and execute multiple software updates at once, using one command, and SUSE Manager guides you through the complete upgrade process.

Use SUSE Manager to lock down software installations and keep your Linux systems free of unauthorized packages that could threaten security or stability. You can configure predefined software channels that each system must use to receive a package update and define a software channel for each use case, thus ensuring that software targeted for a development or testing system is never installed on a production machine. SUSE Manager lets you authorize every package deployed in the environment, from critical security updates to packages developed in-house.

Compliance

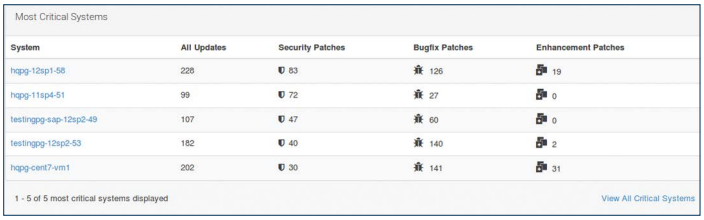

Figure 3.

Careless employees configuring Linux systems in a sloppy and inconsistent manner can cause headaches, downtime and security problems for the management team. SUSE Manager makes it much easier to enforce and demonstrate compliance to both company rules and external security or licensing policies. You can use SUSE Manager to perform an initial inventory. Once the inventory is complete, SUSE Manager reports on any deviation from the configuration, desired patch levels or security requirements. You can also check the compliance of Linux systems against publicly distributed vulnerability lists (CVE, common vulnerabilities and exposures) or security policies imposed through the Open Security Content Automation Protocol (OpenSCAP). SUSE Manager even lets you check containers running in Kubernetes for missing patches or CVE vulnerabilities.

Administrators can generate custom reports of all the machines affected by a specific vulnerability and use SUSE Manager to prepare and analyze licensing audits. SUSE Manager's auditing

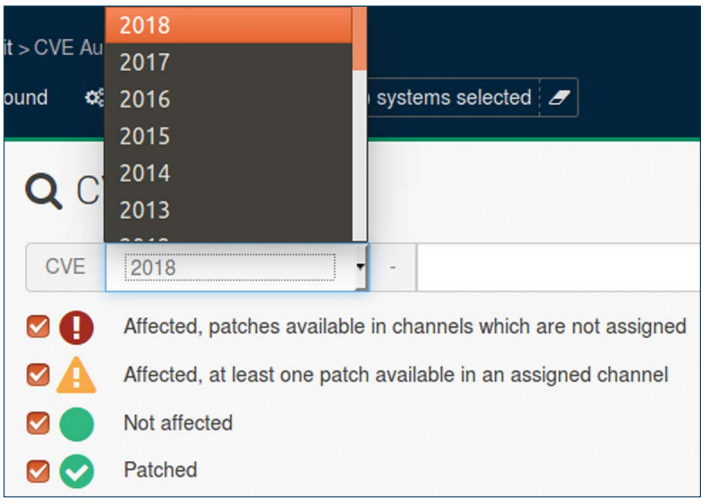

Figure 4.

and compliance tools help you spot "shadow IT" activities that might indicate uncontrolled or undocumented systems.

Powerful Automation

One powerful way for an IT management system to save you time and money is for it to do as much of the routine work as possible by itself. SUSE Manager includes several features that can help you automate the daily management operations for your Linux infrastructure, including:

Automated image building: Built-in integration with the Kiwi image-building server lets you build custom images for both hardware systems and virtual machines in a fraction of the time.

Salt on steroids: The Salt functions in SUSE Manager allow admins to configure and install a complete system from bare metal to application. SUSE Manager extends the Salt configuration system with action chains, a feature that lets administrators package several configuration actions as one single command. Action chains can even specify a series of actions that will continue through a reboot or update of the Salt minion itself. The formula interface speeds up the bundling and application of Salt formulas, making it easy for a Salt expert to define general configuration directives that are then customized and implemented for specific systems by the local IT staff.

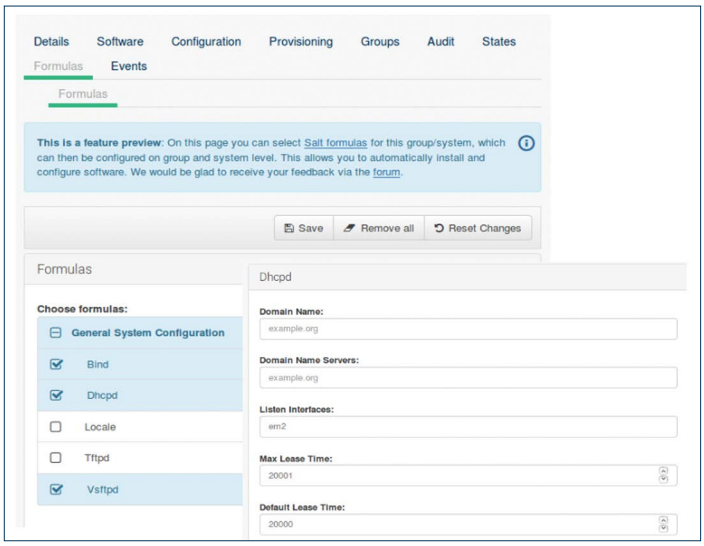

Figure 5.

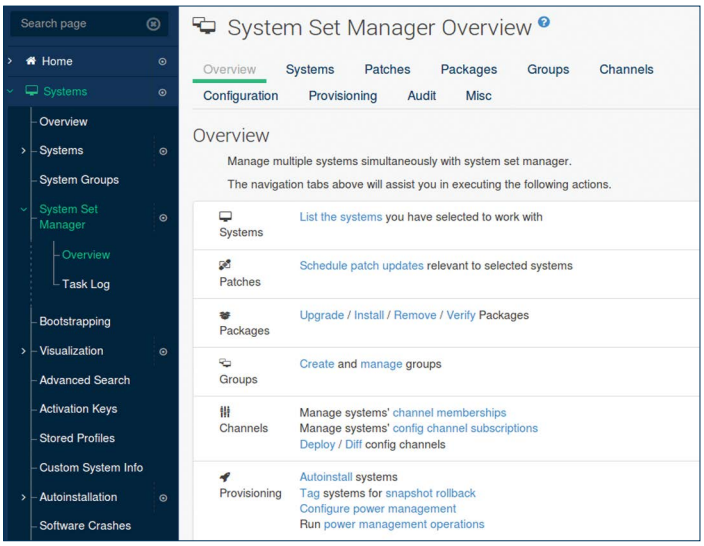

Figure 6.

Command-line automation: Graphical interfaces are easy to learn and use, but command lines and scripts are faster, more flexible and easier to automate. SUSE Manager provides the best of both worlds. The "spacecmd" command-line tool supports scripting for all functions of SUSE Manager without manual interaction.

APIs: Several Application Programming Interfaces (APIs) and services enable you to integrate SUSE Manager with your existing tools and processes, as well as with third-party tools, further extending the opportunities for automation.

SSM: System Set Manager (SSM) lets you administer many systems simultaneously from the graphical interface. The SSM main window provides quick access, through one set of tabs, to the controls you need to apply configuration states, schedule patch updates, group or migrate systems and much more.

Better Organization of Human Resources

SUSE Manager can reduce your IT costs by helping your staff share the workload.

The main administrator of a SUSE Manager installation can delegate different tasks to other users at different levels. It is possible to divide the Linux landscape and provide separate administrators for each subgroup. Also, the ability to give different admins responsibility for diverse tasks, such as key activation, image preparation, system configuration and software channel maintenance is possible. SUSE Manager's workload allocation features facilitate a clean separation of concerns between high-end expert responsibilities and day-to-day admin tasks.

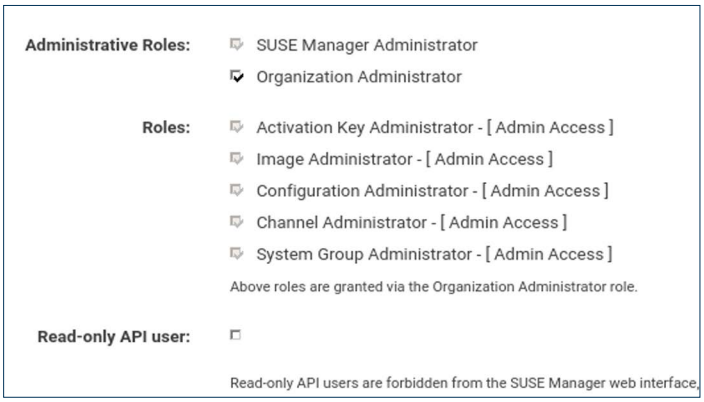

Figure 7.

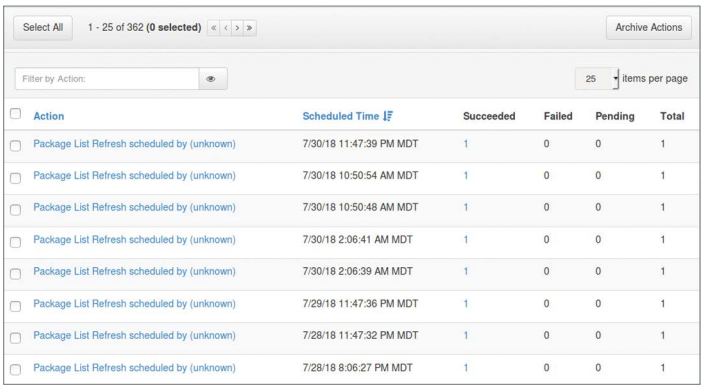

Figure 8.

SUSE Manager's task manager and scheduler allows administrators to manage many kinds of tasks automatically. For instance, you can quickly schedule, browse, review or audit all activities related to:

- *Software packages and channels (installation, removal, rollbacks or upgrades)*
- *Single systems or groups (automated installations, reboots, patching, configuration changes or hardware updates)*

Top-Notch Enterprise Support with No lock-In Risk

Unlike several of its competitors, SUSE offers the full feature set of SUSE Manager through its upstream, community-based development project, Uyuni, thus preventing lock-in, simplifying evaluation and maximizing the benefits of open source development.

Uyuni is developed publicly, with frequent releases and solid, automated testing that constantly improves quality. SUSE adds technical support, hardware certification and lifecycle guarantees to the SUSE Manager Enterprise edition, but Uyuni offers the complete feature scope in an open development setting, thus providing significantly more transparency than alternative tools that strip down the community edition and stuff advanced features into the commercial version as proprietary extensions.

Conclusion

Managing a large, complex Linux estate with dissimilar tools adds significantly to your total cost of ownership (TCO). Deploying and configuring systems under constantly changing requirements and business needs can slow down your IT operations and increase the possibility of errors if you don't have the right tool for the task.

SUSE Manager is a powerful, fully open source, future-proof platform that makes it possible to manage the whole lifecycle of your entire Linux infrastructure in a controlled and cost-effective way. SUSE Manager reduces TCO, simplifies administration and manages risks associated to your Linux infrastructure by:

- *Fully supporting SDIs that constantly change to adapt to business needs—in DevOps environments and also in more conventional management scenarios*
- *Sparing your staff from having to learn multiple dissimilar tools to do their jobs*
- *Automating as many operations as possible, while allowing for easy customization and adapting to your company's needs*
- *Enforcing compliance with both internal policies and external security standards*

If you're looking for a versatile and powerful platform for deploying, configuring, updating and auditing all your Linux systems from a single interface, contact the experts to learn more about SUSE Manager, at 1-800-796-3700 for U.S. and Canada or 1-801-861-4500 worldwide.

Additional contact information and office locations:
www.suse.com

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