

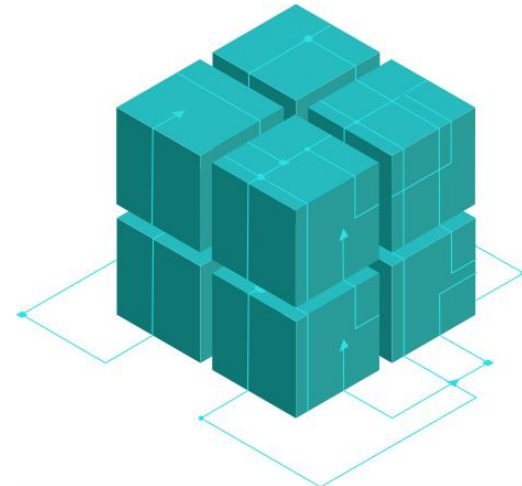


2020

Uyuni, the solution to manage your Linux infrastructure

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About me



Pau Garcia Quiles

Product Owner & Technical Project Manager
SUSE Manager

Former Debian Developer
Former KDE developer
Former... more things

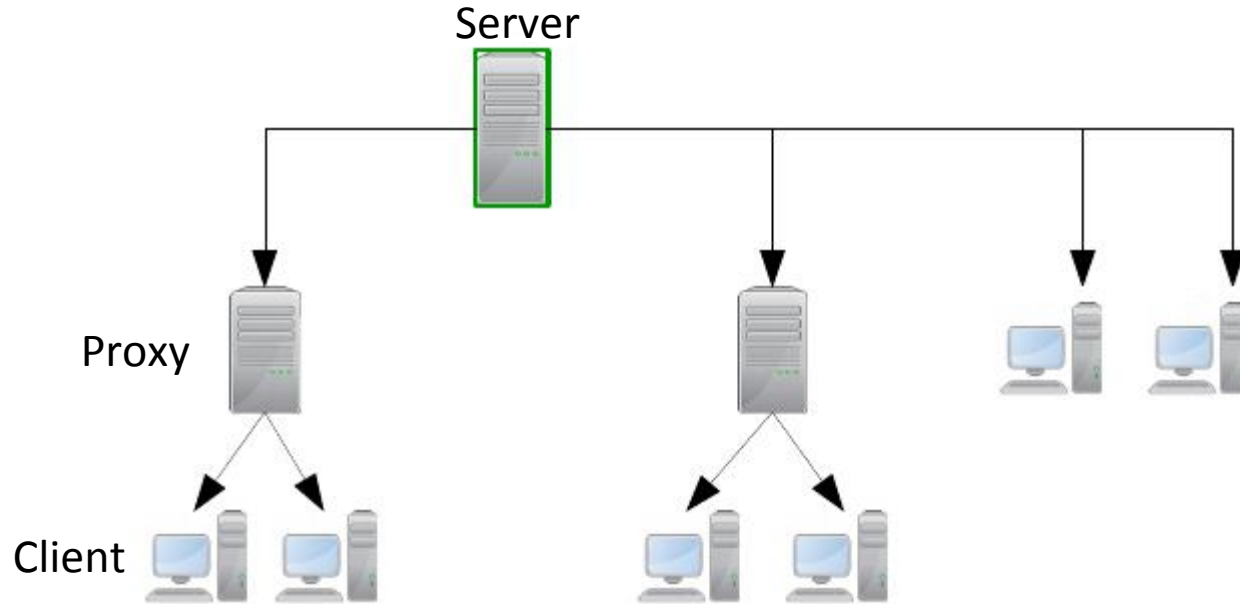
FreeNode: pagarcia / pgquiles
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What?

- Systems management solution
- Deploy and manage all kind of workloads from a single place
- Automate audit and reporting capabilities
- Hardware and software inventories
- Configuration management: automatically maintain standard configurations
- Virtualization

Architecture



Origins: Spacewalk

- Free & Open Source Systems Management
- Around since 2008
- Base for Red Hat Satellite 5 and SUSE Manager ≤ 3.2
- EOL: May 2020 (dead!)

“Salar de Uyuni” is the world's largest salt flat*

Uyuni

ujuni/



* https://en.wikipedia.org/wiki/Salar_de_Uyuni

Image: https://www.flickr.com/photos/madeleine_h/9468953452/

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Uyuni: the future of Spacewalk

- Simple installation
- Two stacks: traditional client (“spacewalk”) and Salt
 - New development goes into Salt clients (“minions”)
 - Traditional stack lets you continue using your Spacewalk/Satellite stack and knowledge in Uyuni. No need to convert to Salt.
- Containers/Kubernetes integration
- Scalability
- Usability
- React Web UI
- Python 3 and JDK11 codebase
- Upstream for SUSE Manager ≥ 4.0 since June 2018



U Y U N I

Features



- System deployment
- Patch management
- Service Pack migration
- Configuration management
- Bare-metal provisioning
- Schedule action chains to be performed on systems
- Compliance management: OpenSCAP and CVE Audit! Get alerts and fix in 1-click!
- API

Cool features!



- Transparent integration with Salt
- Manage on-prem, cloud, hybrid cloud or multi-cloud systems
- Content Lifecycle Management: define stages (DEV, TEST, PRO) for your software channels and apply filters to add/remove contents and create new channels
- Recurring actions
- Build OS and container images
- Compliance: CVE audit, SCAP, subscription matching
- Virtualization management
- Monitoring (Prometheus & Grafana stack), including federation
- Formulas with Forms: create YAML automation templates, no programming skills required!

Current situation

- Public repository and public development: upstream first policy
- Mailing lists, IRC, Gitter
- (Semi) Public CI
- Base OS: openSUSE Leap 15.2
- Clients:
 - SLE 11/12/15
 - openSUSE 42.x/15.x
 - RHEL 6/7/8
 - CentOS 6/7/8
 - Oracle Linux 6/7/8
 - SLES ES 6/7/8
 - (Fedora 30/31)
 - Amazon Linux 2⁽²⁾
 - Ubuntu 16.04/18.04/20.04
 - Debian 9/10
 - Astra Linux Orel

What's new?

Uyuni progress in 2020



More Uyuni

- Almost-monthly releases: 7 releases from January to September, next release in ~2 weeks from now
- VM and cloud images: AWS, Azure, GCE, KVM, Xen, Hyper-V, OpenStack
 - Not yet in marketplaces
- Gitter channel
- Uyuni Community Hours
- Google Summer of Code

More features

- Hub: multiple Uyuni Server, with orchestration (WIP)
- Maintenance windows
- Recurring highstate
- Yomi: new installer framework (WIP)
- Virtualization: storage pools
- EFI HTTP boot
- Single Sign On
- New formulas: OpenVPN, CPU mitigations, Prometheus and Grafana
- Add custom headers to reposync (AKA: support RHEL PAYG)

More monitoring

- Prometheus Service Discovery
- Prometheus Federation
- Prometheus reverse proxy (simplify Security setup)
- Grafana dashboards for Uyuni and CaaSP
- Server self-monitoring
- No more server corruption due to exhausted disk space

More clients

- SUSE Container as a Service Platform 4 support
- Debian client support
- RHEL 8-family support
 - Including Content Lifecycle Management: filters, appstream selector and repository flattening
 - Including: CentOS 8, SLES ES 8, Oracle Linux 8 and SpringDale Linux 8 (!?)
- Subscription matching in public clouds

More usability

- Huge performance improvements in reposync, CLM project build, etc
- Automatic migration of database schemas
- Autogeneration of bootstrap repositories
- Passwordless bootstrap of clients with SSH (cloud!)
- Service Pack migration: remember settings after successful dry-run
- Better support for Debian and Ubuntu: headers, signed metadata, etc
- Single Page Application UI

More documentation

- New Large Deployments Guide
- New Public Cloud Quickstart Guide
- Huge improvements to Administration Guide, Client Configuration Guide, Reference Guide, etc
- Salt Kitchensync Formula: see all the features of the Formulas with Forms frameworks in action and write your own formula!

What's next?



The future: new features

- Translations (2020.10/2020.11)
- Support for mirroring retracted patches
- SAP content: Prometheus exporters, Grafana dashboard, quickstart guide
- WebUI themes!
- RedFish power management
- Debian and Ubuntu errata information

The future: enhancements

- More Hub
- More virtualization
- More maintenance windows (end of 2020)
- More cluster management (end of 2020)
- More usability work
- Continue building the community!

A wide-angle photograph of a vast wetland landscape. In the foreground and middle ground, hundreds of pink flamingos are wading in shallow, reddish-brown water. The birds are scattered across the scene, some standing in small pools, others wading. In the far distance, a range of low, hazy mountains stretches across the horizon under a clear sky. The overall scene is a natural habitat for these birds.

How to contribute to Uyuni

Join our community



- Contribute with ideas and feedback: mailing list, Gitter, GitHub issues
- Contribute with code:
 - Set up your development environment: <https://github.com/uyuni-project/uyuni/wiki>
 - Hack & submit pull request
- Contribute with translations:
 - <https://l10n.opensuse.org/projects/uyuni/>
 - <https://github.com/uyuni-project/uyuni/wiki/Translating-Uyuni-to-your-language>
 - <https://github.com/uyuni-project/uyuni-docs-toolchain-vm>

Opportunities for the community

- Translations: software strings, documentation (no coding skills required)
- Learning pills (articles or videos)
- Take Salt formula, add form: Active Directory authentication, Samba, web server, etc (no real coding skills required)
- Import Debian and Ubuntu patch (“errata”) information
- Debian autoinstallation: preseed and/or Kickstart support
- Amazon Linux 2 metadata import (sqlite vs XML)
- Virtual host gatherers for your favorite cloud or virtualization platform: XenServer/XCP? OVH? Hetzner? You name it
- Enable Virtual Desktop Infrastructure
- Containers: manage Helm charts, integrate containers + packages in CLM, use Harbord for staging, etc
- Virtualization enhancements: network configuration, snapshot management, PXE boot, etc
- Support for more operating systems: MS Windows, Mac, Android, etc
- Integrated file viewer/editor with LSP support (e. g. Eclipse Theia / Microsoft Monaco)
- Integrate create-your-own-dashboards framework

HacktoberFest 2020



- Contribute code or docs or translations and get a t-shirt
- Existing idea or create your own
 - Get it touch first if your own

<https://github.com/uyuni-project/uyuni/labels/hacktoberfest>

<https://hacktoberfest.digitalocean.com/>



A wide-angle photograph of a salt flat at sunset. The ground is covered with numerous white, conical mounds of salt, some of which are partially submerged in shallow, reflective pools of water. The sky is a vibrant mix of orange, yellow, and blue, with soft clouds catching the low light. In the far distance, a dark silhouette of a mountain range is visible against the horizon. The overall scene is serene and visually striking due to the contrast between the white salt and the colorful sky.

Q&A

A&Q

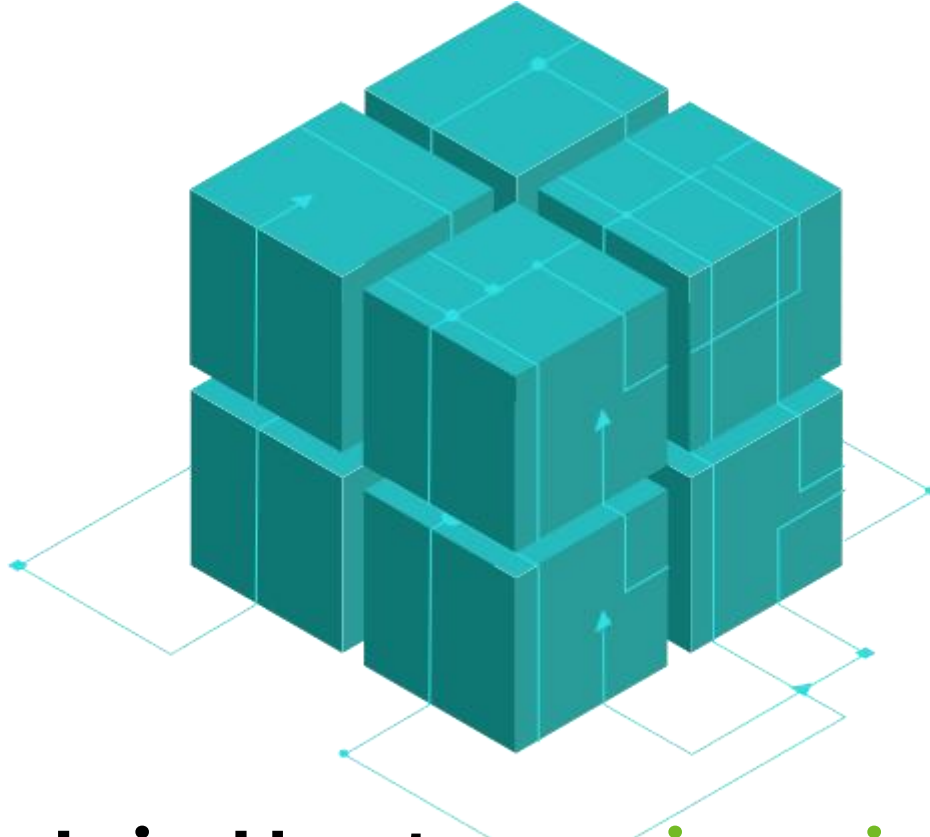


- Is Uyuni available for CentOS/RHEL/OL/Debian?
 - No but we will accept it if the community contributes it
 - At least one community effort already in that direction

A&Q



- Can Uyuni manage Microsoft Windows?
 - Not yet
 - My pet project
 - Contact me if you want to help, it's not that difficult



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Join Us at uyuni-project.org



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Credits

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Inspiration

openSUSE Design Team

<http://opensuse.github.io/branding-guidelines/>