# the current state of

orcharhino

DEPLOY RUN CONTROL SIMPLIFY YOUR DATACENTER

## Mark Hlawatschek

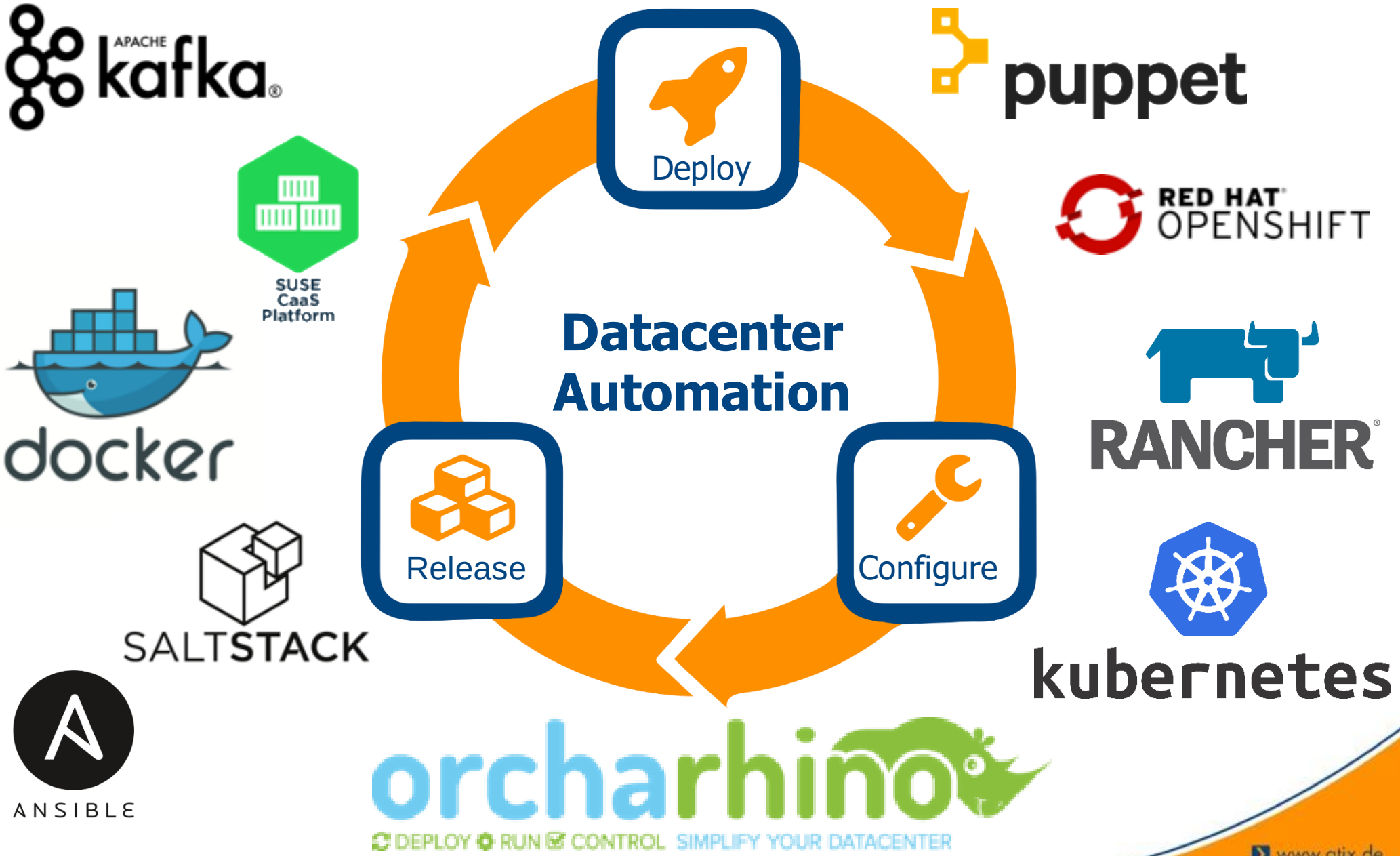
Linux STAMMTISCH

NETWORKING ▪ BUSINESS ▪ VORTRÄGE



ino

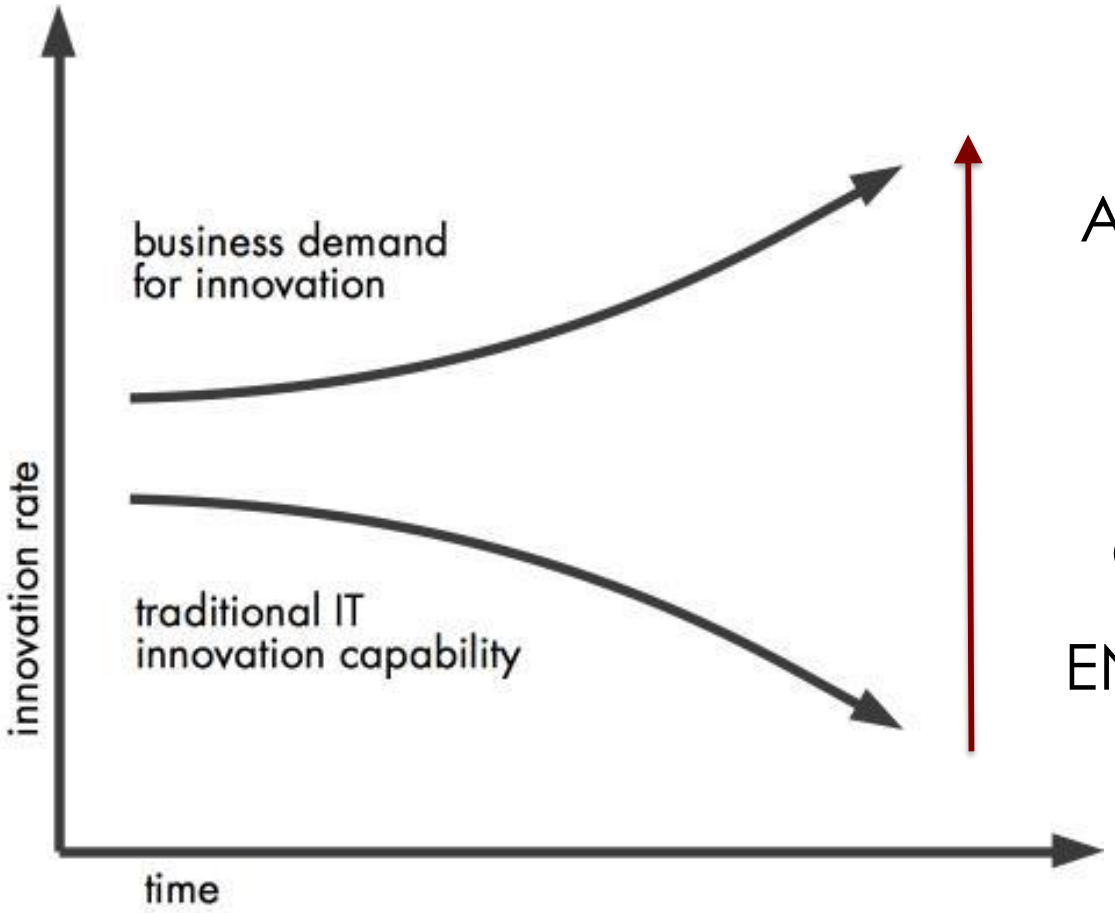



APACHE kafka
puppet
SUSE CaaS Platform
RED HAT OPENSHIFT
docker
RANCHER
Deploy
Datacenter Automation
Release
Configure
SALTSTACK
kubernetes
ANSIBLE
orcharhino
DEPLOY RUN CONTROL SIMPLIFY YOUR DATACENTER

# Recurring Tasks



# Simplify your datacenter




AUTOMATION

&

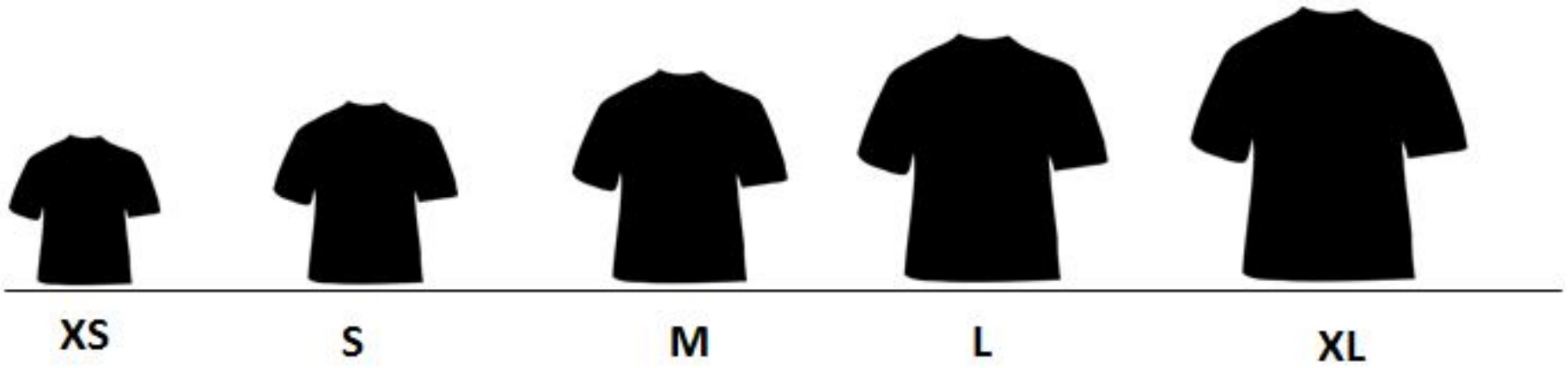
STANDARD

OPERATING

ENVIRONMENT

# Standardization

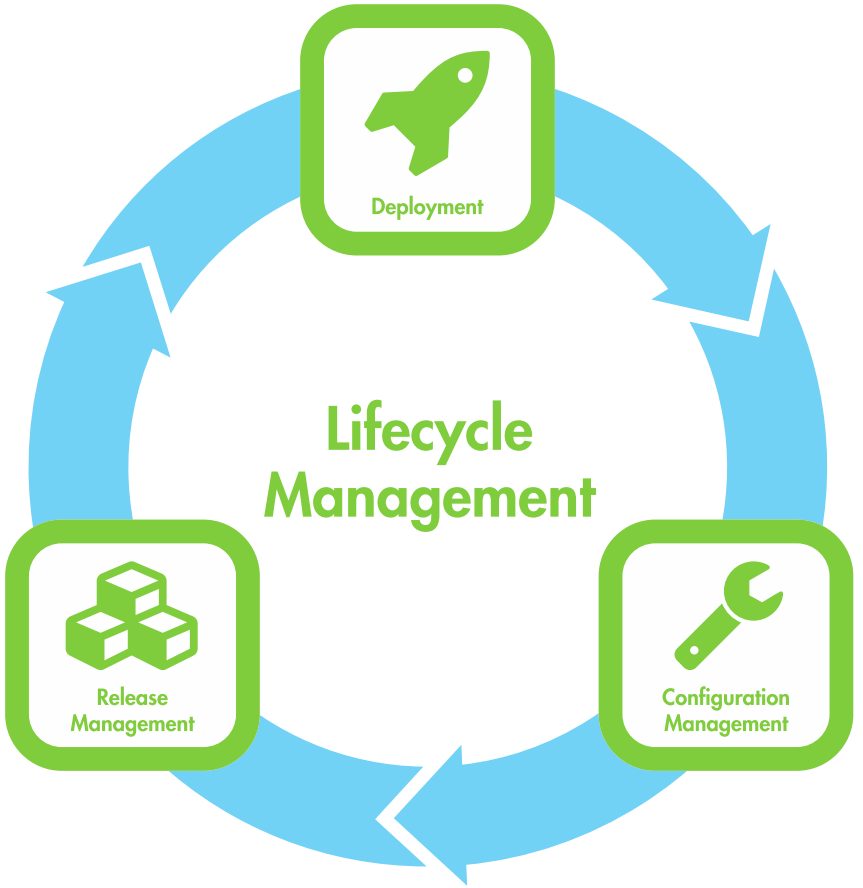
- SOE - Standard Operating Environment
- Standardization for automation and reproducability



# Overview

**orcharhino Features:**

- Server Deployment
- Lifecycle- & Patchmanagement
- Configuration Management
- Compliance Reporting
- Remote Management




⇒ Full Life Cycle Servermanagement

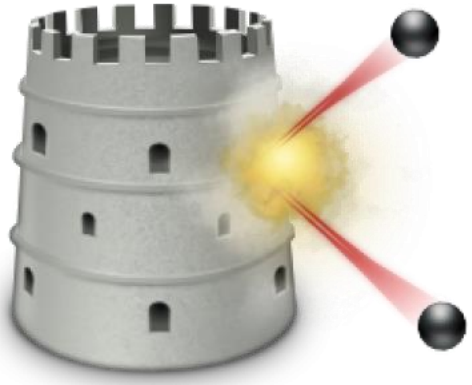
# Open Source Origin

orcharhino consists of several Open Source Projects:

- Foreman
- Katello
- Pulp
- Candlepin
- and many more community projects... (plugins etc.)



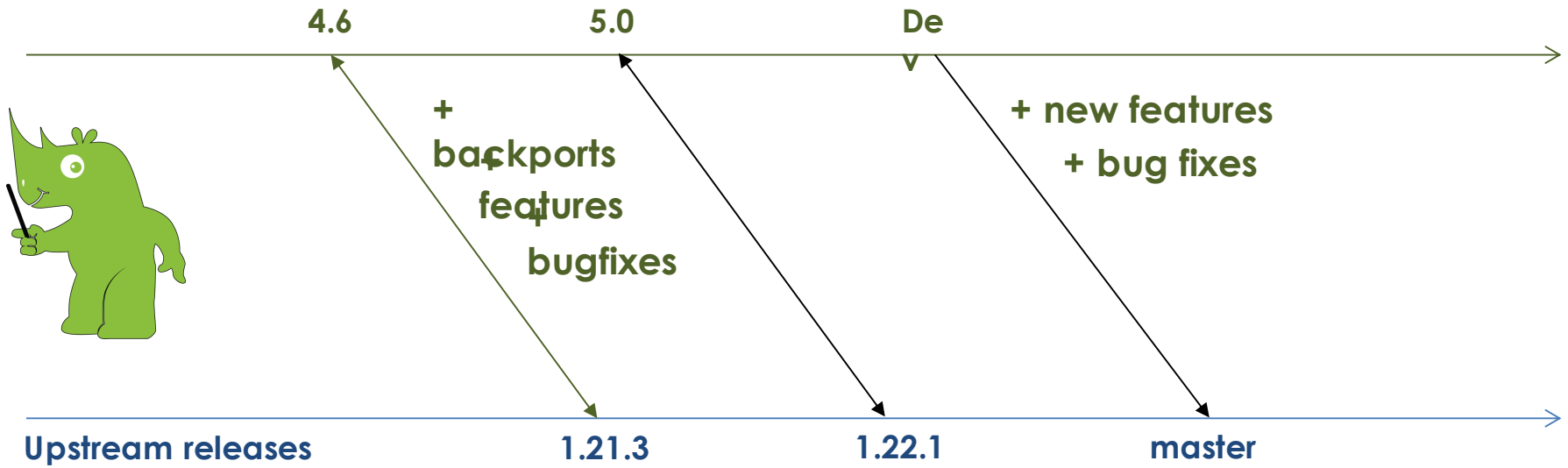




# orcharhino development cycle

- Open Source Development
- New Release every 6 - 8 weeks






# Deployment

- Deploy new servers on
  - Bare metal
  - Virtual machines (VM)
  - Cloud providers
- Manage DHCP and DNS
- Different hypervisors & cloudprovider:



vmware vSphere

PROXMOX

Microsoft Azure

Google Cloud Platform

oVirt

KVM

amazon web services™ EC2

# Configuration Management

- Configuration management tools:
  - Puppet
  - Ansible
  - SaltStack
- Describe configuration of application using code
- Centralized management
- Receive new status reports automatically



puppet

ANSIBLE

SALTSTACK

# Release and Patch Management

- Manage package versions and updates for all servers
- Get errata (security) information
- Main enterprise Linux distributions
- supported



CentOS

debian

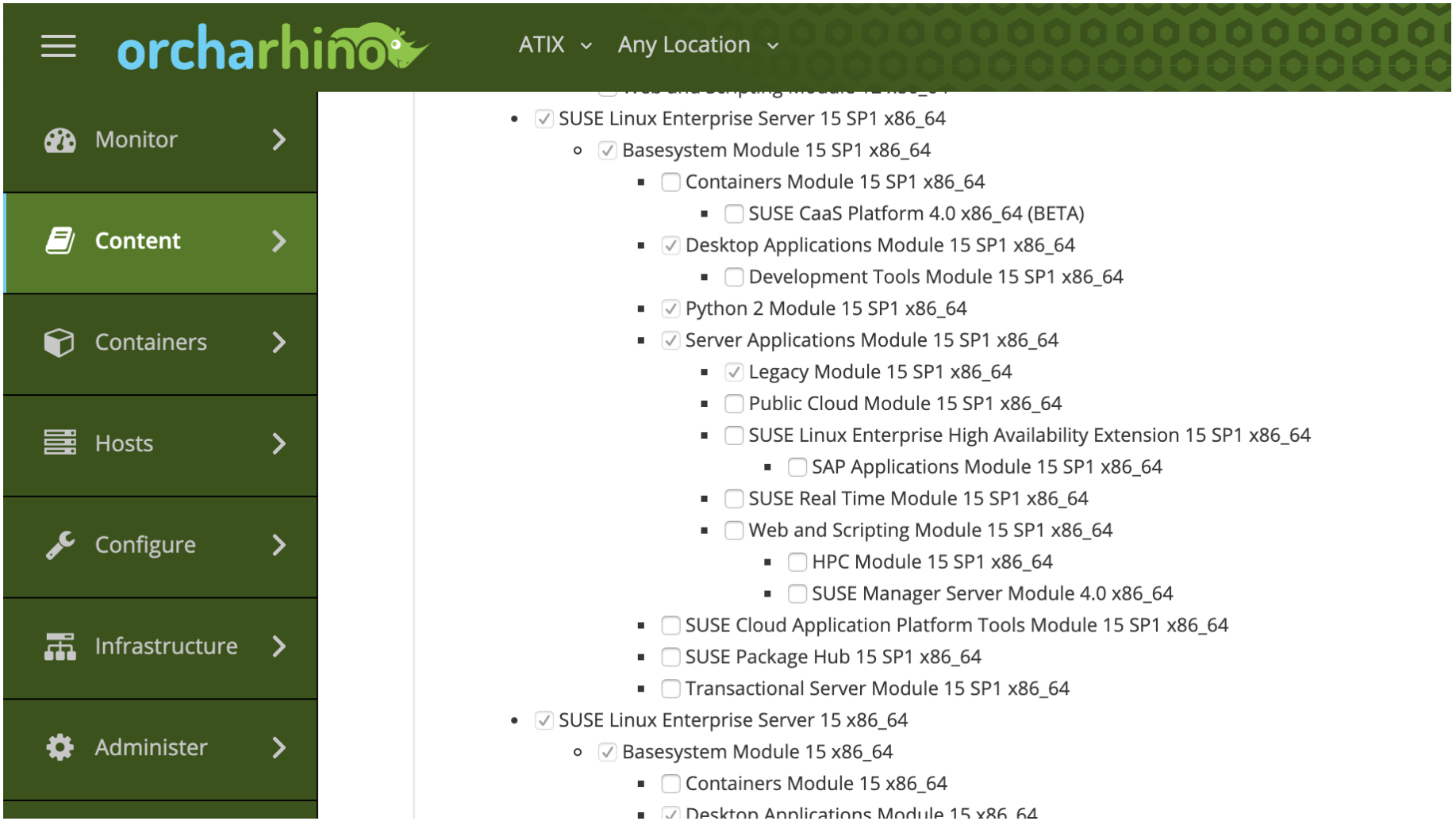
SUSE

Red Hat

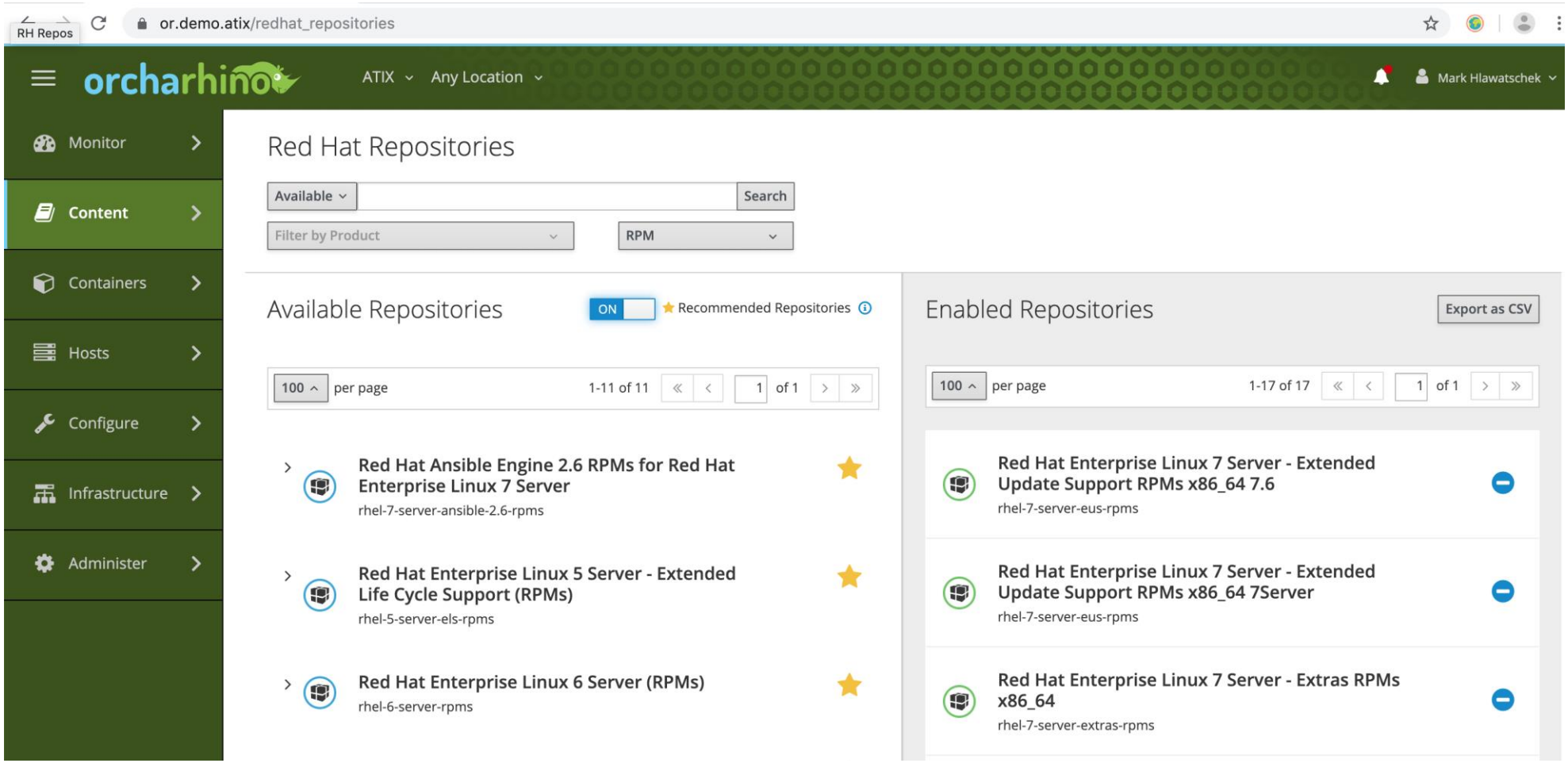
ORACLE LINUX

ubuntu

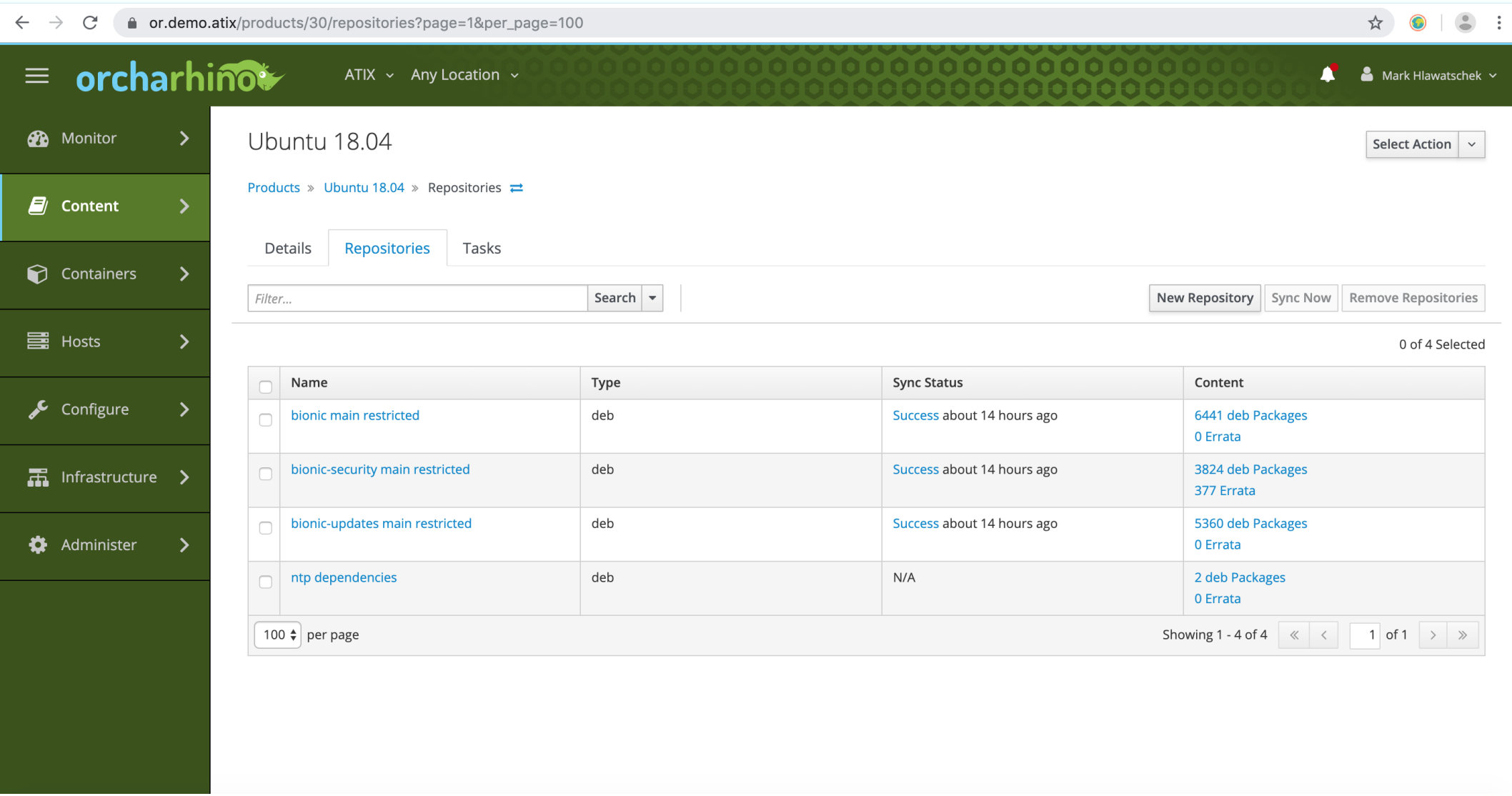
# SCC Manager


orcharhino
ATIX
Any Location
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Administer
SUSE Linux Enterprise Server 15 SP1 x86_64
Basesystem Module 15 SP1 x86_64
Containers Module 15 SP1 x86_64
SUSE CaaS Platform 4.0 x86_64 (BETA)
Desktop Applications Module 15 SP1 x86_64
Development Tools Module 15 SP1 x86_64
Python 2 Module 15 SP1 x86_64
Server Applications Module 15 SP1 x86_64
Legacy Module 15 SP1 x86_64
Public Cloud Module 15 SP1 x86_64
SUSE Linux Enterprise High Availability Extension 15 SP1 x86_64
SAP Applications Module 15 SP1 x86_64
SUSE Real Time Module 15 SP1 x86_64
Web and Scripting Module 15 SP1 x86_64
HPC Module 15 SP1 x86_64
SUSE Manager Server Module 4.0 x86_64
SUSE Cloud Application Platform Tools Module 15 SP1 x86_64
SUSE Package Hub 15 SP1 x86_64
Transactional Server Module 15 SP1 x86_64
SUSE Linux Enterprise Server 15 x86_64
Basesystem Module 15 x86_64
Containers Module 15 x86_64

# Red Hat Repositories

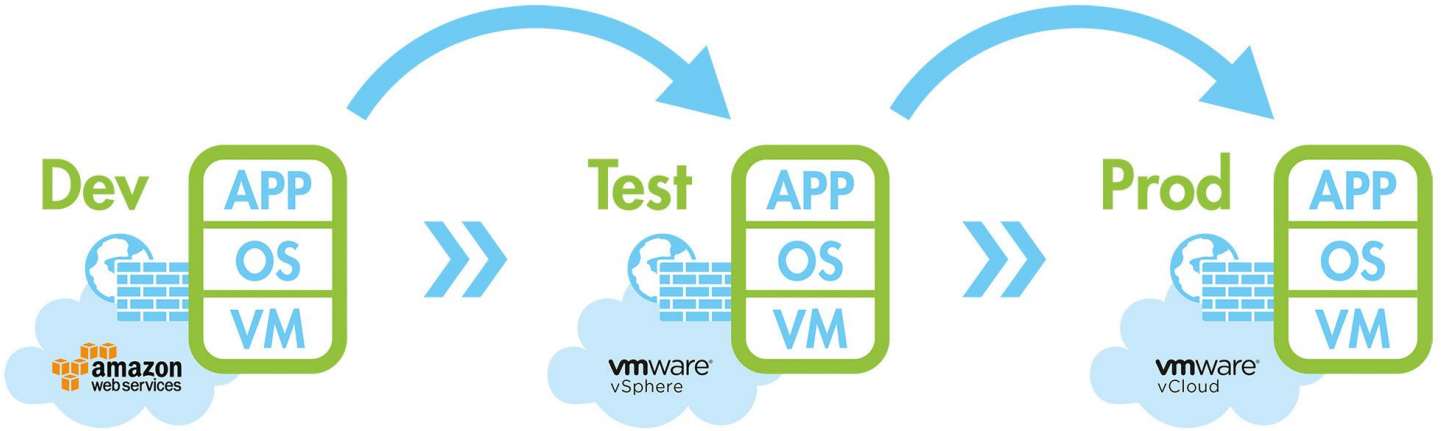


# Debian/Ubuntu Repositories



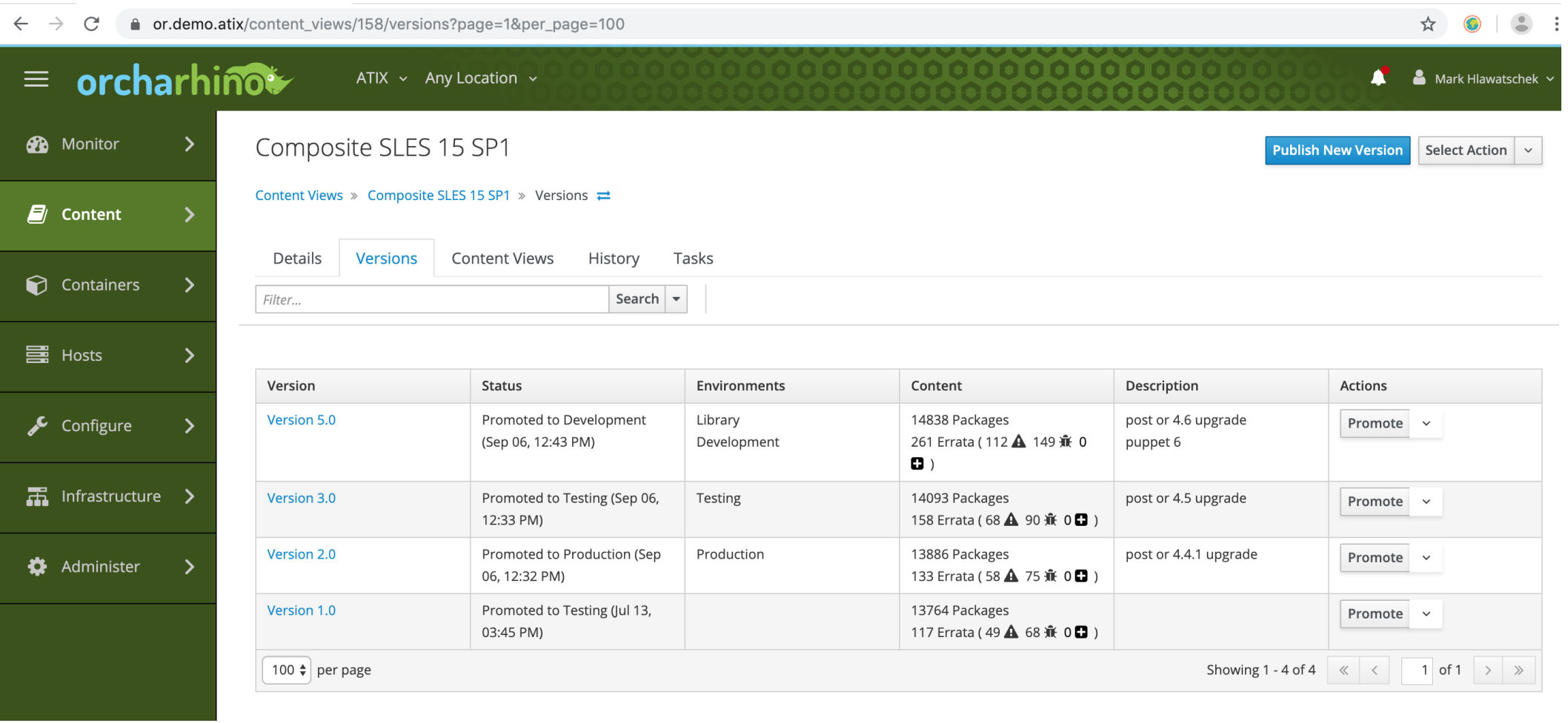

#linuxstammtisch #orcharhino

# Lifecycle Management




- Use your defined life cycle enviroment
- Like: development → testing → production
- Packages, patches and configuration based on lifecycle step (dev, test, prod)

# Software Lifecycle



# Reporting

- Security Report
- Compliance Report
- Configuration Report
- Updates Report
- Auditing



Host Subscription Status

| | Count |
|---|---|
| Invalid | 0 |
| Partial | 0 |
| Valid | 10 |
| Unknown | 0 |
| Unregistered | 3 |
| Total Content Hosts | 13 |

# OpenSCAP Compliance Checks

## Compliance and Scoring

**There were no failed or uncertain rules.** It seems that no action is necessary.

### Rule results

19 passed

### Severity of failed rules

0

### Score

| Scoring system | Score | Maximum | Percent |
|---|---|---|---|
| urn:xccdf:scoring:default | 100.000000 | 100.000000 | 100% |

# Remote Management

- Ansible Modules

  https://github.com/theforeman/foreman-ansible-modules

```
- name: "Create a host"
  foreman_host:
    username: "admin"
    password: "changeme"
    server_url: "https://orcharhino.example.com"
    name: "new_host"
    hostgroup: „Ubuntu18“
    state: present
```

# Remote Management

- Hammer CLI

```
hammer host create \
--name “new_host" \
--hostgroup “ubuntu18" \
--organization-id 1 \
--location-id 1\
```

# Remote Management

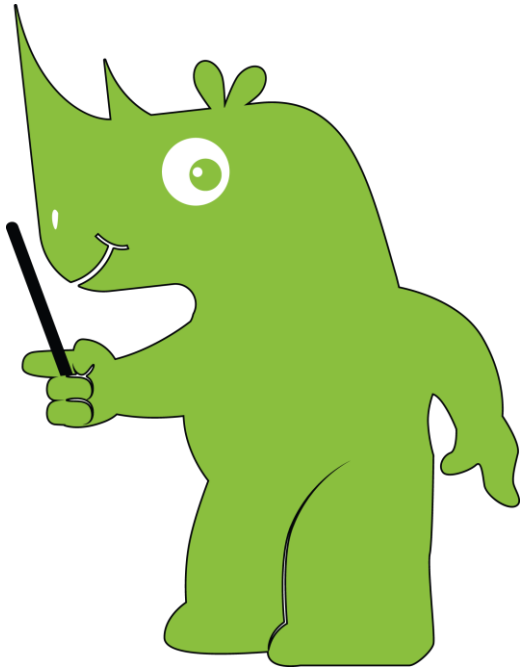
- API

```
curl -request GET --insecure --user ORUSER:PASSWORD \
https://or.demo.atix/api/v2/hosts/centos7.demo.atix | \
python -m json.tool
```

```
{
    "all_parameters": [
            ],
    "all_puppetclasses": [
        {
            "id": 133,
            "module_name": "foreman_scap_client",
            "name": "foreman_scap_client"
        },
    ],
    "architecture_name": "x86_64",
…
    "uuid": "5027beac-6bb9-9b13-5a38-e617158b2df3"
}
```

# orcharhino for enterprise requirements

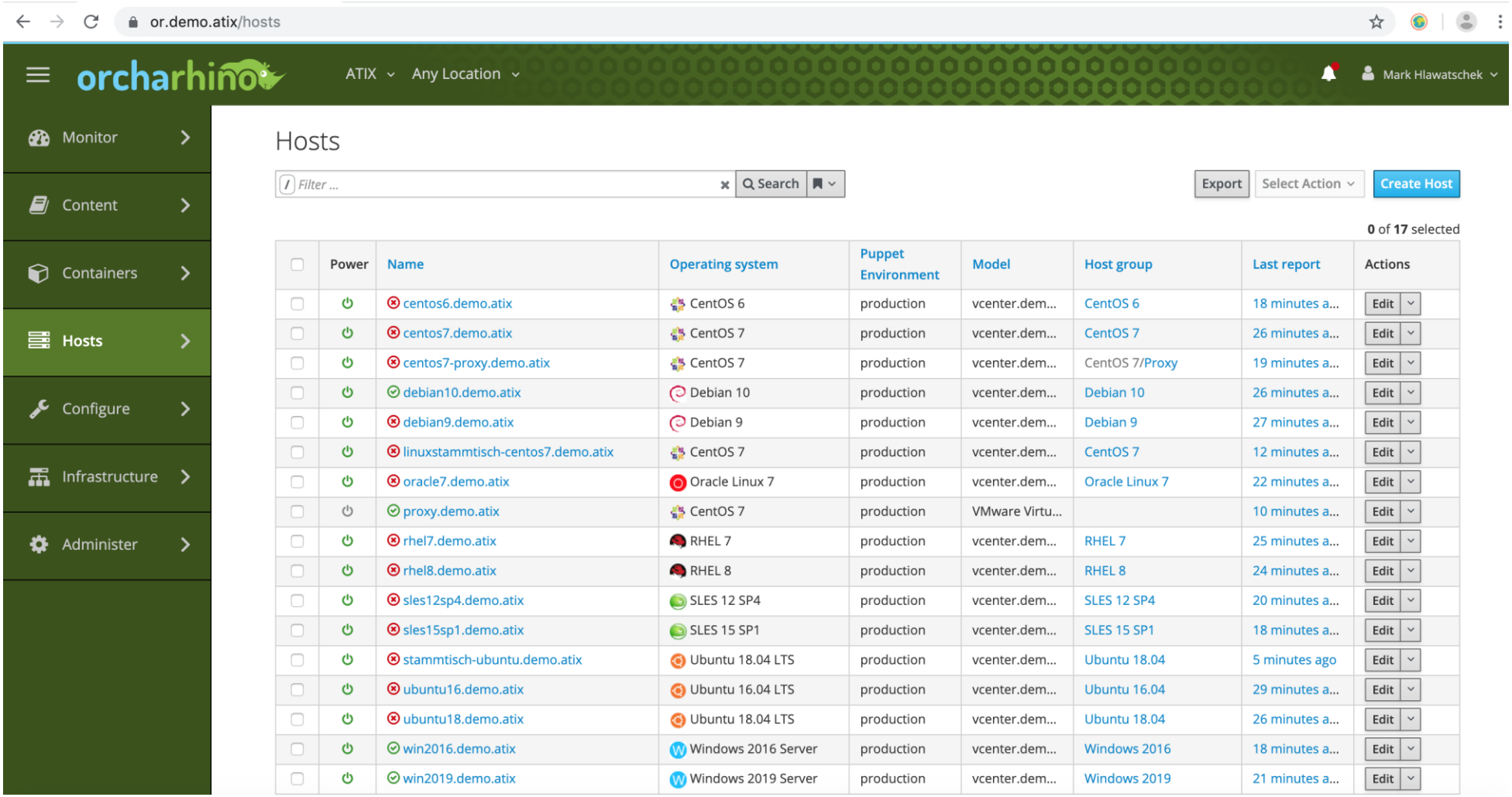
- Web Installer
- Quality assurance
- Improvements
- Support
- Documentation
- Enterprise features by ATIX:
  - Snapshot Management
  - Debian, Ubuntu-Support
  - Oracle and SUSE-Integration
- Errata:
  - CentOS, Ubuntu, Debian



# Installation and Configuration



# DEMO




#linuxstammtisch #orcharhino

# Install host

## New in Progress

- completed - Set up compute instance leo-harles.demo.atix
- completed - Query instance details for leo-harles.demo.atix
- completed - Create DHCP Settings for leo-harles.demo.atix
- completed - Create IPv4 DNS record for leo-harles.demo.atix
- completed - Create Reverse IPv4 DNS record for leo-harles.demo.atix
- completed - Deploy TFTP PXELinux config for leo-harles.demo.atix
- completed - Deploy TFTP PXEGrub2 config for leo-harles.demo.atix
- completed - Deploy TFTP PXEGrub config for leo-harles.demo.atix
- running - Deploy TFTP iPXE config for leo-harles.demo.atix
- pending - Fetch TFTP boot files for leo-harles.demo.atix
- pending - Power up compute instance leo-harles.demo.atix
- pending - Cleanup PuppetCA certificates for leo-harles.demo.atix
- pending - Enable PuppetCA autosigning for leo-harles.demo.atix

# More information

- orcharhino Website: https://orcharhino.com
- orcharhino Webinar: https://orcharhino.com/webinar
- Meet us at OSAD: https://osad-munich.org
  - Workshop: https://osad-munich.org/workshops/#foreman
- orcharhino docs: https://docs.orcharhino.com
- Get your own: https://orcharhino.com/downloads

# Über ATIX

- The Linux and Open Source Company
- Open Source Datacenter Automation

**Consulting**

**Engineering**

**Support**

**Training**







# Mark Hlawatschek


hlawatschek@atix.de

@hla_mark

www.xing.com/profile/Mark_Hlawatschek

www.linkedin.com/in/mark-hlawatschek

# Installer Demo

