

Be smart  
Think Open Source

Linux on Power User Day

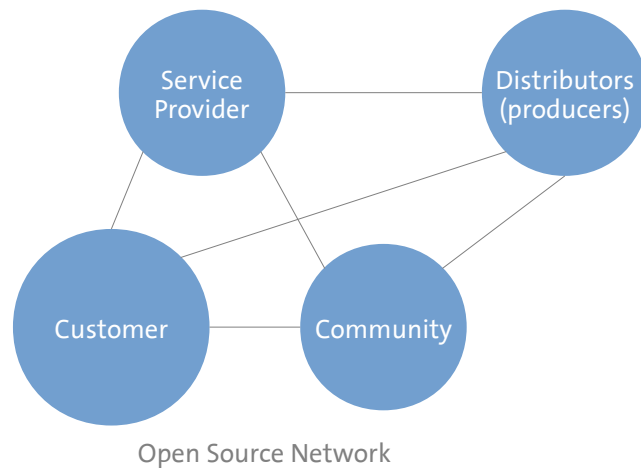
Adfinis<sup>sy</sup>Group

## About Adfinis SyGroup

For 15 years, Adfinis SyGroup has consistently been active in the open source environment and successfully competes as a leader in this trend-setting technology.

We combine quality expertise, many years of experience and professionalism with the innovative potential of open source technology!

As a proven service provider and partner, we support customers from the private and public sectors, competently complete projects and support our customers in the design, implementation and quality management of software projects.



## Our facts

- Establishment in the year 2000
- Over 40 employees
- Headquartered in Bern
- Offices in 3 locations (Bern, Basel, Zurich)
- 100% Open Source committed

## Our offices

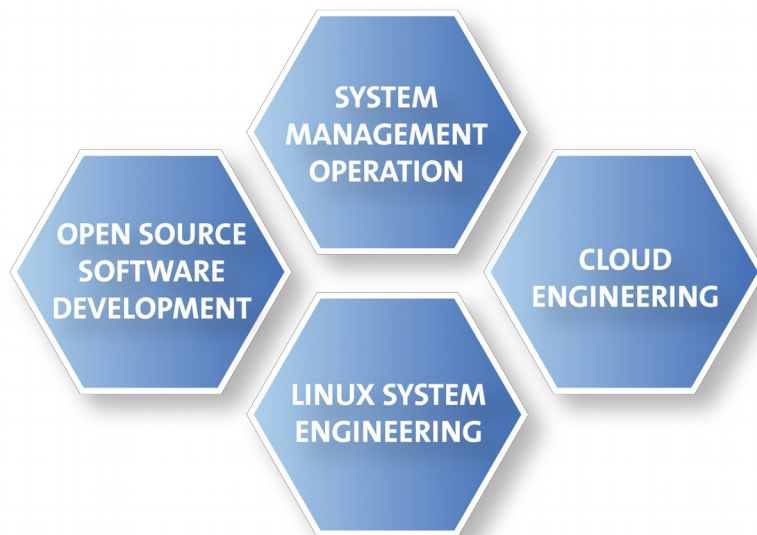
- **Bern**  
Keltenstrasse 98  
CH-3018 Bern
- **Basel**  
Güterstrasse 86  
CH-4053 Basel
- **Zurich**  
Neptunstrasse 109  
CH-8032 Zurich

## Our Product & Service List

With its in-depth expertise, Adfinis SyGroup supports a wide range of services. It is also characterized by the following features:

- Swiss Open Source Software (OSS) Service Provider with a consequent focus on Open Source
- active OSS Community member
- 15 years of experience in the Open Source Environment and with Linux projects

Our products and services are based on the following four pillars:



## Our expertise

|                                          |                                                                                                                                                                                                                                                                             |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Systems Management</b>                | <ul style="list-style-type: none"><li>➤ Monitoring with Icinga/Nagios</li><li>➤ Monitoring with Zabbix</li><li>➤ Configuration Management</li><li>➤ Deployment Management</li><li>➤ Automatization and Orchestration</li><li>➤ Service Level Agreement (24x7x365)</li></ul> |
| <b>Linux Engineering</b>                 | <ul style="list-style-type: none"><li>➤ Linux on Power8</li><li>➤ MariaDB Clustering &amp; Optimization</li><li>➤ Postgres Cluster &amp; Optimization</li><li>➤ VDI Solution based on KVM</li></ul>                                                                         |
| <b>Identity &amp; Systems Management</b> | <ul style="list-style-type: none"><li>➤ Univention Corporate Server</li><li>➤ LDAP, Kerberos, SAML, oAuth</li></ul>                                                                                                                                                         |
| <b>Private Cloud with OpenStack</b>      | <ul style="list-style-type: none"><li>➤ Openstack</li><li>➤ Platform as a Service</li><li>➤ Cloud Service Broker</li><li>➤ Horizon Customization (Django)</li><li>➤ Orchestration &amp; Auto Scaling</li></ul>                                                              |
| <b>Open Source Development</b>           | <ul style="list-style-type: none"><li>➤ PHP, Javascript, Bash, Node.js</li><li>➤ Python/Django Development</li><li>➤ Profiling &amp; Code Optimization</li></ul>                                                                                                            |
| <b>Managed Services</b>                  | <ul style="list-style-type: none"><li>➤ Managed Server</li><li>➤ White Label Hosting</li><li>➤ Remote Backup Service</li><li>➤ High Scale Web Solutions</li><li>➤ Managed Web Solution Platform</li><li>➤ Geo-Redundant Web Solutions</li></ul>                             |

## Selected references



Roche Diagnostics: Automation for system deployments of diagnostic devices and desktops using ansible. Provision of 1st - 3rd Support for the house Ubuntu Linux desktop.



Swissport International: Introduction of SyMonitoring for the purpose of monitoring the global system landscape as well as the construction and operation of a database cluster with Percona for around 200 applications.



Canton of Uri: introduction and development of Camac for handling applications for planning permission



Parallels International: Migration of large and complex data from the shared hosting environment with the help of automated tools



Swisscom: architecture-based consultancy for cloud platforms and integration of cloud solutions within Swisscom

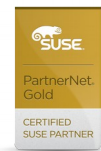


DKSH Market Place: Implementation and operation of a geo-redundant web platform for the global real-time quote based on RHEL, Tomcat and Oracle WebCenter



BVB: development of an infotainment solution for all trams of Basler Verkehrsbetriebe, based on Node.js

## Our partners



# About me – Sandro Köchli

- 17 Years Open Source and Linux experience
- Solution Architect and Technical Sales
- Co-Founder Adfinis SyGroup AG

[https://www.xing.com/profile/Sandro\\_Koechli](https://www.xing.com/profile/Sandro_Koechli)

# From Silo to Cloud

# A quick reminder about Power 8

- The Power8 Architecture has...
  - Better Level 3 Caching
    - Larger L3 memory cache structures provide a greater potential for computing power at higher density, perfect for data- intensive applications
  - More Threads per Core
    - Allowing a higher number of tasks to run simultaneously
  - CAPI.....
  - ...

# The Goal

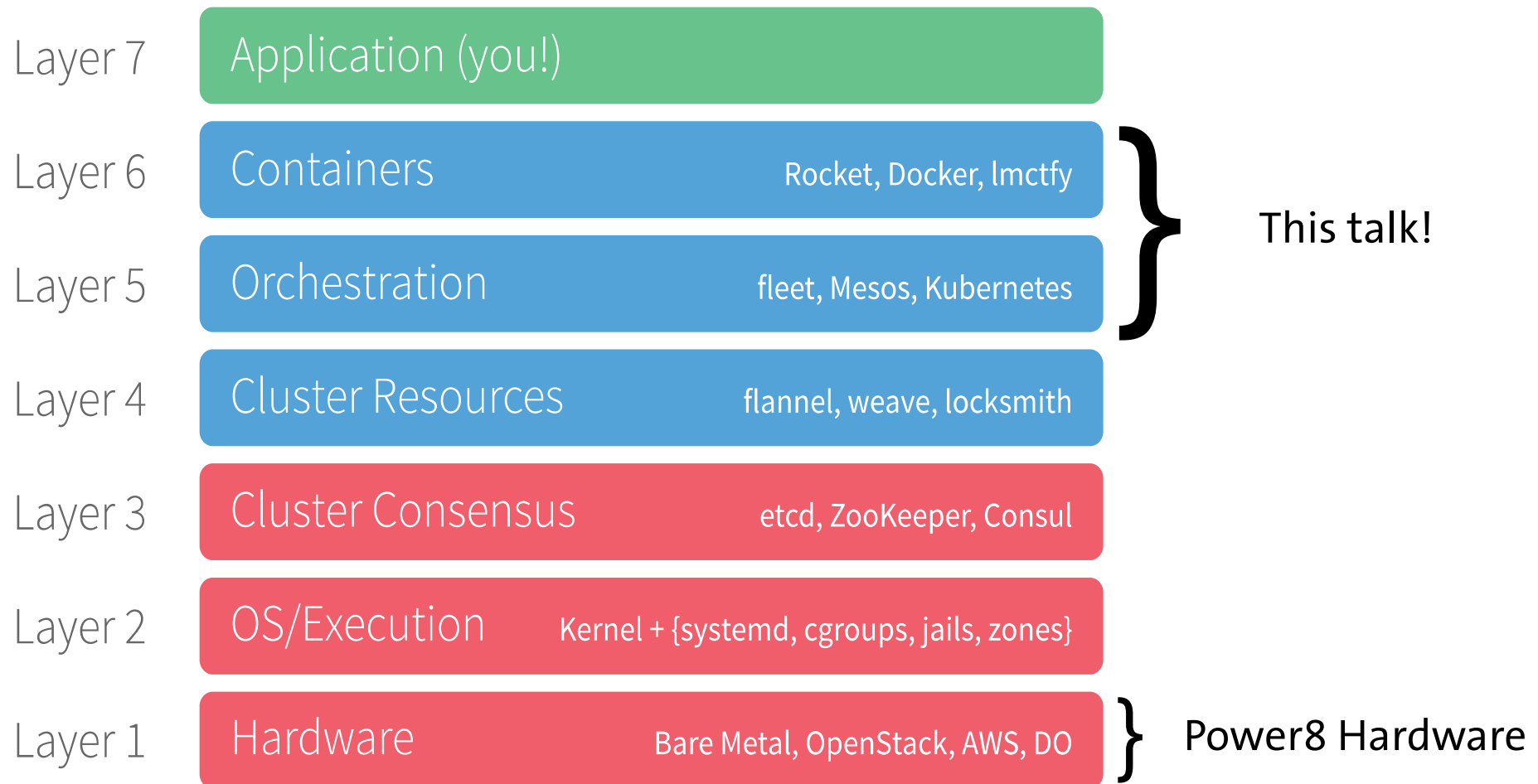
- A talk about Power8 without talking about Power8
- Instead we talk about:
  - Config Management
  - Orchestration
  - Container
  - And the Enterprise Linux Vendors
- To demonstrate that Power8 is ready for upcoming standards combined with huge advantages for certain workloads

# Key Facts

- Linux, Open Source, Open Architecture, Open Platforms and Software defined “everything” are growing markets
- Cloud abstraction lets hardware become a commodity
- OpenStack, Docker and Co. drive the paradigm shift
- Automation changes how System Administrators work

*Transformation from Silo to Cloud...*

# Layers of Abstraction



Source: <https://coreos.com/blog/cluster-osi-model/>

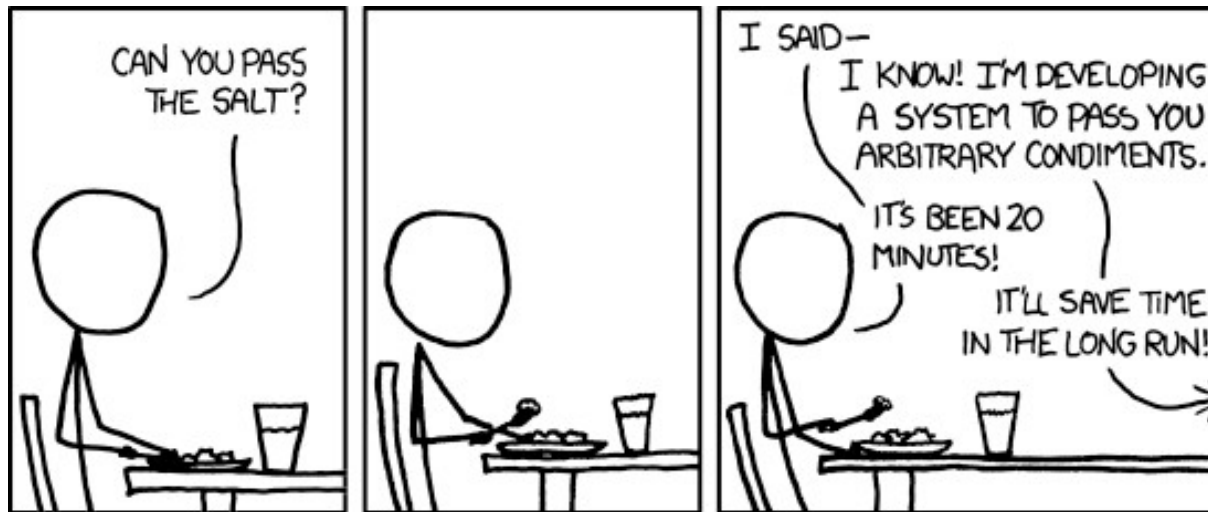
# Configuration Management and Orchestration

„Define how a system should look like in an abstract way.“

„Run a set of tasks on a set of servers at once“

# Why?

- Reproducibility
- Consistency
- Save time on the long run



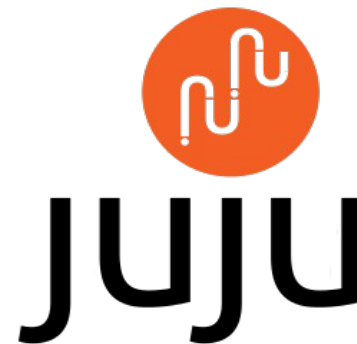
# The Agony of Choice

- Ansible
- Saltstack
- Chef
- Puppet



# The Agony of Choice

- Kubernetes
  - Container
- Juju
  - VMs, Container, Metal
- Heat (Open Stack)
  - VMs, Container



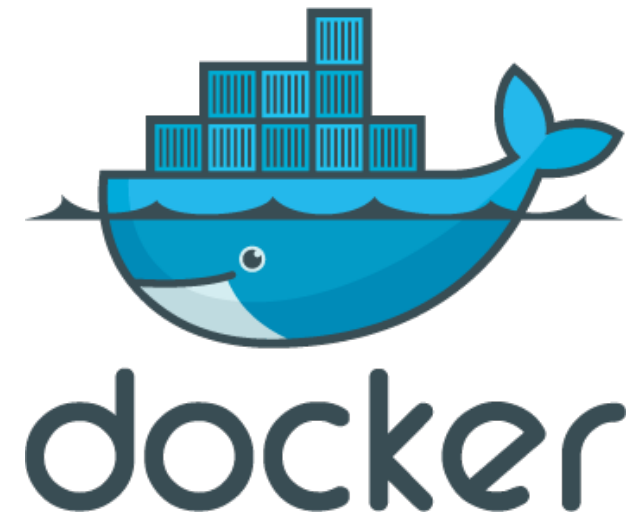
# How useful could ANSIBLE be for you?

- No need for traditional documentations of configuration files
  - Human readable and reproducible at the same time
  - New employee can read the ANSIBLE playbooks and understands how things work
- Reinstalling systems after a security issue, where it is not allowed to restore from backup is super easy
  - More reliable than images and snapshots
- No need to maintain images



# Container

- Self Contained
- Limited Scope
- No changes during runtime
- Rapid application deployment
- Portability across machines
- Version control and component reuse
- Lightweight footprint and minimal overhead
- Simplified maintenance



# Where do I get support?

- All Enterprise Linux Vendors support those technologies
- Who are they?

The Canonical logo is displayed on a solid purple rectangular background. The word "CANONICAL" is written in a white, uppercase, sans-serif font, with a small trademark symbol (TM) to the right.

# Products from SUSE

- SUSE Cloud (OpenStack)
  - Automated deployment using Chef
- SUSE Manager (Systems and Patch Management)
  - Real-time configuration with Salt



# Products from Red Hat

- Red Hat Satellite (Systems and Patch Management)
  - Puppet (Config management)
- Red Hat OpenShift
  - Docker Container



# Product from Canonical

- MaaS (Deployment, Discovery)
- Juju (Orchestration, Config Management)
- Landscape (Patch Management)

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# Finally!

- Everything shown runs also on Linux on Power
- Depending on the workload, it runs a lot better on Power8
- No need for Power8 specialist, every Linux Sysadmin can integrate the power8 platform in his architecture.
- Only the workloads should care about architecture.



# I want a Silo. I'm not ready for this fancy stuff

- Adfinis and IBM are working on turn key solutions.
- Linux on Power Servers optimized for PostgreSQL to replace Oracle Databases
- Linux on Power Servers optimized for MariaDB to replace MySQL Environments

***More to come....***

## Release and Patch Management with SUSE Manager 3

10 MARCH 2016 on SUSE, SUSE Manager, SUSE Manager 3, Patch Management, Release Management

The SUSE Manager 3 beta programme was started at the end of December 2015. We would like to take this opportunity to gain a basic understanding of what the next version will offer. To start, the most important change is the integration of SaltStack as a remote execution and configuration management framework.

We have selected the following use case for this blog post and drafted a brief description of how it would be implemented in practice.

### Scenario

In order to be able to perform reasonable release and patch management in larger IT system environments, identical systems are often operated in different environments (phases or stages). When a new release or a patch becomes available, it is first installed on the development systems where various tests and, if necessary, adjustments are performed before it is rolled out to the production systems.

# Thanks

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