

# RED HAT FORUM 2018 ZURICH



HANA AUTOMATED

A TALE WITH PENGUINS AND PYTHONS

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# WHO WE ARE

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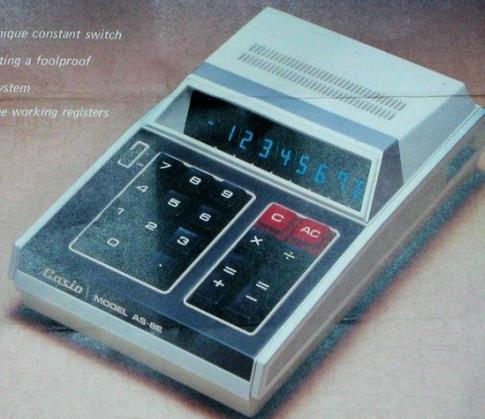


# A BIT OF HISTORY - 70s

# The latest personal compact calculator

## Casio AS-8E

*Featuring a unique constant switch  
and incorporating a foolproof  
Under-Flow system  
as well as three working registers*



8-DIGIT, ZERO SUPPRESSION, ALL FOUR BASIC FUNCTIONS, MIXED SEQUENTIAL CALCULATIONS, FULL FLOATING DECIMAL & ECONOMICALLY PRICED

CASIO COMPUTER CO., LTD.

THE AGE OF PORTABLE  
CALCULATORS

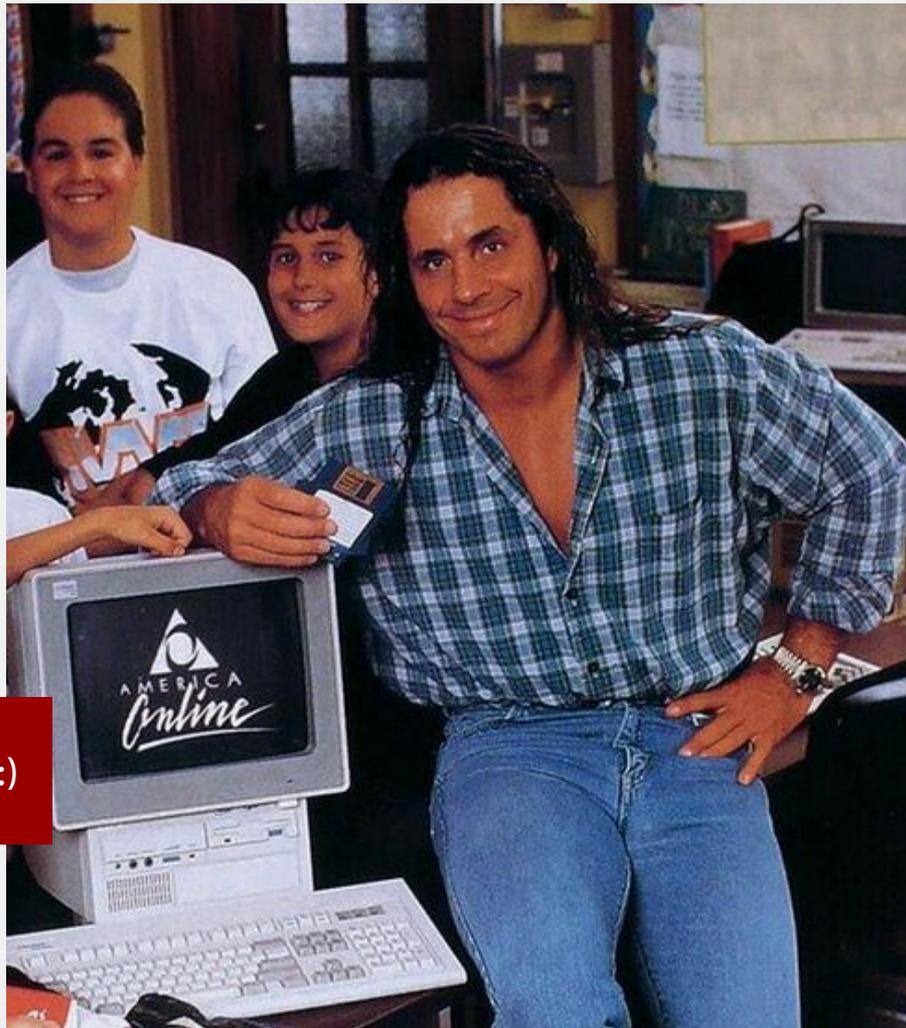


C & UNIX ARE INVENTED



SAP WAS BORN (1972)

A LOT HAS HAPPENED SINCE THEN



Internet, AOL and Floppies! :)



Virtual/Mixed Reality



Cloud & Container

# IT TRANSFORMATION

## Hand made IT

Physical boxes

Slow processes

Almost no automation

~ overcome

## IT industrialization

Infrastructure as a Service

Fast processes

Most steps automated

~ current situation

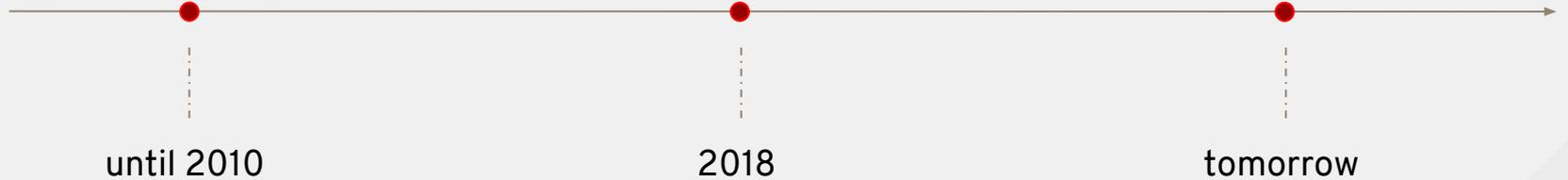
## IT becomes a commodity

Platform as a Service

Immediate results

Completely automated IT

~ future



# WHAT HAPPENED IN THE SAP AREA?

# SAP CHANGED AS WELL

## NEW PLATFORMS FOR NEW SOLUTIONS

### HANA WAS BORN

- One vendor strategy introduced ~2015 / Linux as Operating System of choice

### CONTAINER & AUTOMATION BECAME IMPORTANT

- Red Hat automates the SAP stack (<https://github.com/rhmk/>)
- New solutions start to work with Kubernetes, e.g. SAP Vora, SAP Leonardo, Hadoop, ...

### CLOUD

- HANA Enterprise Cloud, Support for Azure, AWS, GCE, ...
- On-premise & Cloud grow together

WHAT DOES THIS IMPLY FOR  
CUSTOMERS?

# ONE DATABASE STRATEGY

ORACLE, DB2, SQL SERVER -> HANA

## HANA MEANS...

- Organizations need to switch to a new OS
  - Approx 70% of SAP installation bases are powered by Windows
- Migration of large parts of the SAP landscape to a new technology stack
- Different hardware requirements
  - Database is in RAM
  - IoT devices create much more data to store
- IT pros need to acquire new skills

# CONTAINER FOCUS

VORA, LEONARDO, ET AL.

## CONTAINER & AUTOMATION MEANS...

- Automation of the whole stack is ~possible
- Containers are different to operate compared to VMs
- Scaling and scheduling of resources done by container management solution such as Kubernetes not admins
- Microservices result in new paradigms
- Bi-Modal IT becomes a reality in many organizations
- IT pros need to acquire new skills

# CLOUD EMBRACEMENT

HEC, AZURE, AWS, GCE, ...

## CLOUD MEANS...

- Even more automation than in classic on-prem installations
- HANA Enterprise Cloud is the cloud offering from SAP
  - Managed cloud solution available only from SAP
- Other Hyperscaler support HANA as well
  - Azure is our way to go (20+ year partnership between Microsoft and SAP, over 50 regions, ...)
- Compliance becomes an important topic
- IT pros need to acquire new skills

MANY NEW CHALLENGES

# SOLUTIONS

CLOUD CONSUMPTION PREDICTION, MIGRATION, AUTOMATION, LINUX OPERATIONS,

...

## Red Hat

### Base Stack

- RHEL f. SAP Solutions
- Red Hat JBoss
- Red Hat Satellite

### Automation

- Ansible
- OpenShift Container Platform

## SOLHANA

### Planning & Migration

- Assessment
- Consulting
- Migration

### Operation

- SLA (24/7/365)
- Maintenance
- Support

## SoftwareONE

### Enterprise Cloud Management

- Consumption Prediction
- Cost Management
- Comparison

### License & Asset Management

- Optimization
- Compliance



# Red Hat & SAP

# RED HAT & SAP / STRATEGIC ALLIANCE

SPEED AND FLEXIBILITY ACROSS EVERY ENVIRONMENT

## Red Hat Portfolio for Typical SAP Workloads

- Red Hat Enterprise Linux for SAP Solutions
- Red Hat Virtualization
- Red Hat OpenShift Container Platform
- Red Hat Satellite
- **Red Hat Ansible Automation**

## SAP Solutions for Red Hat

- SAP HANA on RHEL for SAP Solutions
- SAP Vora on OpenShift Container Platform
- SAP Leonardo and Red Hat JBoss Middleware

# HANA INSTALLATION ON RHEL

ON YOUR MARK, GET SET, GO!

## HANA on RHEL - The not so cool way

- Verify machine requirements (RAM, Disks, Cores, ...)
- Register machine, add channels, ...
- Install additional packages
- Activate SAP HANA specific tuned profiles
- Disable SELinux (psssst)
- Disable automatic NUMA balancing
- Create some symbolic links
- Configure local firewall
- Disable core dumps
- Increase file handles
- Set some rather fancy sysctl settings
- ...

Hello are you still there? We are already 5% through it... ;)

# BRING IN THE SNAKES!

HHHHHSSSSSSHSS

<Sonium> someone speak python here?

<lucky> HHHHHSSSSSSHSS

<lucky> SSSSS

<Sonium> the programming language



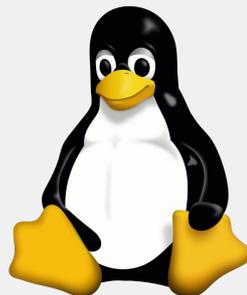
# AN AUTOMATION FAIRY TALE

ANSIBLE IN THE RED HAT / HANA SPACE



**RED HAT**<sup>®</sup>  
**ANSIBLE**<sup>®</sup>  
Automation

+



+



# ANSIBLE?

## THE VERSATILE AUTOMATION TOOL

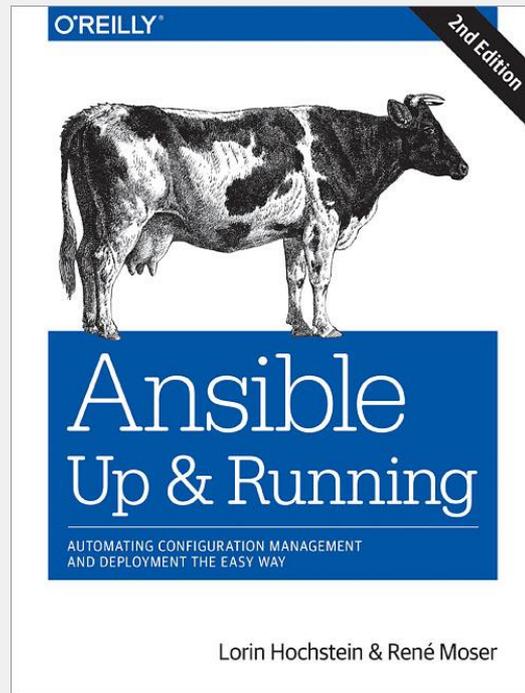
### Ansible Basics

- Automates software provisioning, configuration management and application deployment
- Ansible uses Python and connects via SSH
- Roles/Playbooks are written in YAML

### Example

---

```
- name: install Postgres 10
  package:
    name: rh-postgresql10
    state: present
```



# ANSIBLE & RHEL & HANA

YOU MAY HAVE HEARD ABOUT IT... IT'S COOL!

## Ansible System Roles

- <https://linux-system-roles.github.io/>
- A collection of roles and modules executed by Ansible to assist Linux admins in the configuration of common GNU/Linux subsystems
- <https://galaxy.ansible.com/linux-system-roles/>

## What about HANA?

- Markus Koch & friends created roles for SAP workloads:  
<https://github.com/rhmk?tab=repositories>



# AUTOMATE SAP WORKLOADS WITH RED HAT

AUDIT CAPABILITIES, FASTER PROCESSES, FOCUS ON YOUR GOALS

## Ansible Roles

- HANA System preparation
- HANA installation
- HANA Studio installation
- SEP server/client installation

## Container (kubernetes) workloads

- Didn't look too much into it until now, but Vora and Leonardo announcements sound interesting!
- SAP joined the Cloud Native Computing Foundation (CNCF) - hopefully (a lot) more to come

SOLHANA

# SOLHANA - SOLUTIONS FOR HANA

A JOINT SOLUTION BY ITPC AND ADFINIS SYGROUP

## SOLHANA in a nutshell

- We plan your migration to HANA with you
- We migrate your workloads to HANA
- We operate your SAP landscape

# SOLHANA OVERVIEW

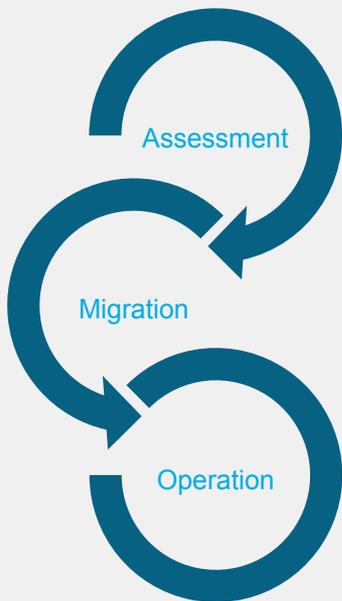


Single Solution Provider

- > **SAP HANA** + **Linux** 
- > SAP Technical
- > SAP Functional



# SOLHANA STEPS



Assessment

Plans and evaluates the optimal pathway to S/4HANA from a functional and technical perspective

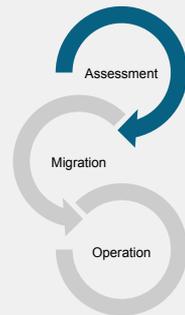
Migration

Update current SAP ERP landscape to S/4, install HANA database and adapt the needed business processes

Operation

Diverse support options for the S/4HANA landscape, in both SAP and Linux environments

# SOLHANA ASSESSMENT

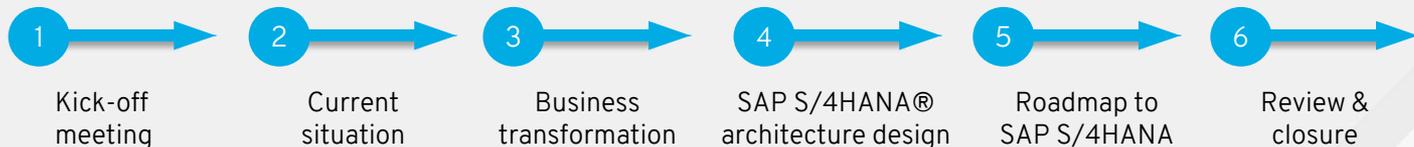


**Goal** | Evaluate the optimal pathway for moving the SAP landscape to S/4HANA

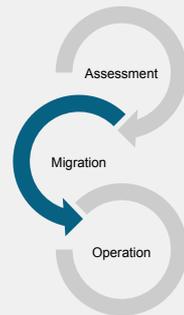
## Outcomes

- > SAP S/4HANA Readiness Check
- > Overview of the new features in S/4HANA related to your business processes
- > Architecture design proposals
- > Conversion path options
- > High-level plan for the conversion with milestones and approximate dates

## Steps



# SOLHANA MIGRATION



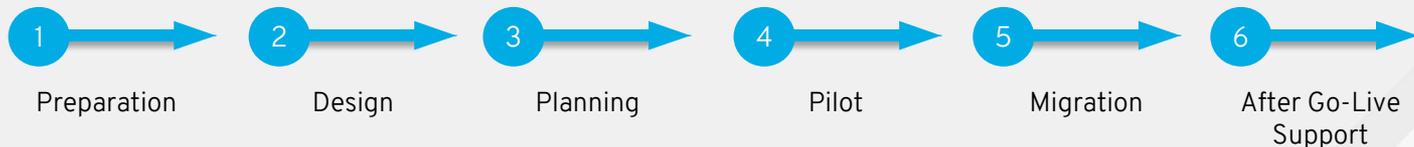
## Goal

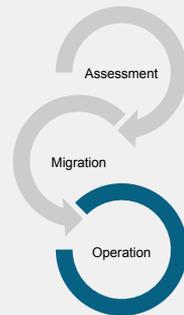
Update current SAP ERP landscape to S/4, convert to HANA database and adapt the needed business processes

## Outcomes

- > The SAP system is migrated from ERP to S/4HANA
- > Delta customizing is performed
- > Objects of the Simplification List are analyzed with Pre-Checks
- > New innovations are implemented

## Steps





For worry-free operation of your IT landscape, so you can fully concentrate on your core business.

Within the framework of our Service Level Agreements (SLA), we offer you comprehensive support and monitoring services, tailored to your individual needs and wishes:



24/7/365



Monitoring



Maintenance

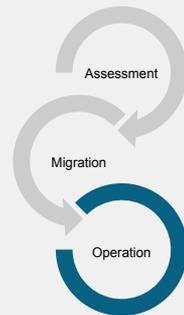


Support

Thanks to SOLHANA Operation, you can now fully concentrate on your core business.



# SOLHANA OPERATION



## Support Times

- > 5 x 24h
- > 7 x 24h
- > Customized

## Support Options

- > Option 1: Includes the Service Desk, SAP system monitoring and proactive health checks
- > Option 2: Additionally includes support for any technical issues arising in the SAP landscape
- > Option 3: Additionally includes consulting activities and most of the operating activities from the Run SAP methodology
- > Option 4: Manages the entire SAP landscape, including consulting, enhancement of functionality performance and stability

## Support Levels

- > Level 1: max. 12h reaction time, suitable for non-critical business processes
- > Level 2: max. 4h reaction time, suitable for not fully mission-critical business processes
- > Level 3: 30min reaction time, suitable for mission-critical business processes

# SoftwareONE AG

# SOFTWAREONE AT A GLANCE

GLOBAL FOOTPRINT, LOCAL PRESENCE AND SCALE & STABILITY



## THE STORY

FOUNDED  
**1985**  
IN SWITZERLAND

GLOBALLY  
HEADQUARTERED



SWITZERLAND

PRIVATELY  
OWNED  
**KKR**

ADDITIONAL POWER  
BY KKR 2015

## FACTS & STATS

**82**   
OFFICES

LOCAL PRESENCE IN



**65 COUNTRIES**  
ABILITY TO SELL IN 145  
COUNTRIES

## LATEST ACHIEVEMENTS

MORE THAN  
**3'000**



CERTIFIED  
SOFTWARE EXPERT  
CONSULTANTS

MORE THAN  
**35'000**



CUSTOMERS  
WORLDWIDE

ALL INDUSTRIES &  
SICES

HELPED  
MORE THAN  
**5'000'000**



USERS TO CLOUD



OVER  
**7B**   
NET SALES

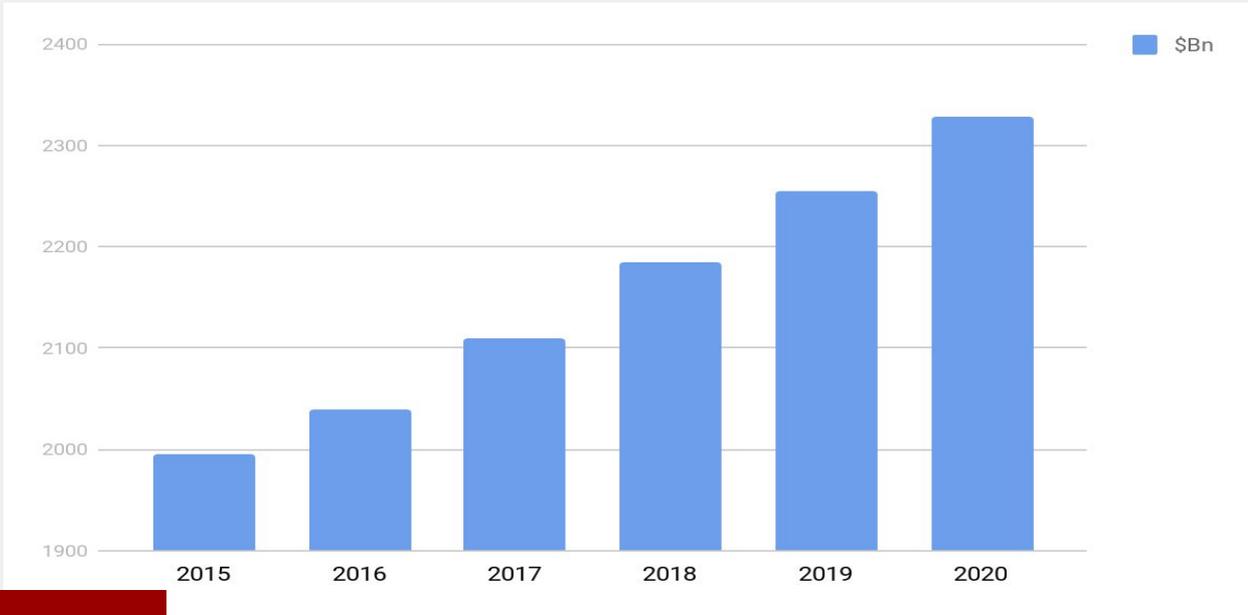
10,000+  
SOFTWARE VENDORS



MANAGED & AUTOMATED  
BY PYRA CLOUD

SUPPORTING  
MORE THAN  
**10'000**  
PUBLISHERS

UC POINT JOINS  
SOFTWAREONE  
FAMILY



## GLOBAL IT SPEND



MANAGE THE COMPLEXITY



SOFTWARE ASSET  
MANAGEMENT IN THE PAST

# SOFTWARE LIFECYCLE MANAGEMENT

## FROM REQUIREMENT TO RETIREMENT



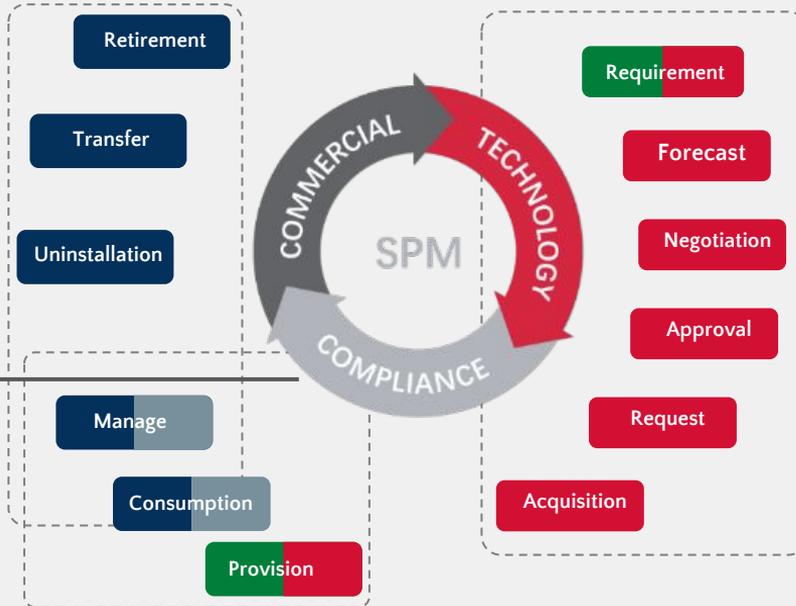
### Software Asset Management

- Reduce Complexity in License Management
- Audit protection
- Usage Tracking and Optimization
- Fit to Purpose SAM Tool Selection
- SAM Advisory up to SAM Managed services



### Technology Services

- Hybrid Infrastructure and Cloud Advisory
- Business Productivity Advisory
- Application and Workload transformation
- Cloud Support Services



### Software Procurement Services

- Contract Consolidation
- Technology Optimisation and Demand Management
- EULA/Contract management
- Vendor Advisory and Contract Negotiation
- Price Benchmarking
- Asset/Inventory Discovery



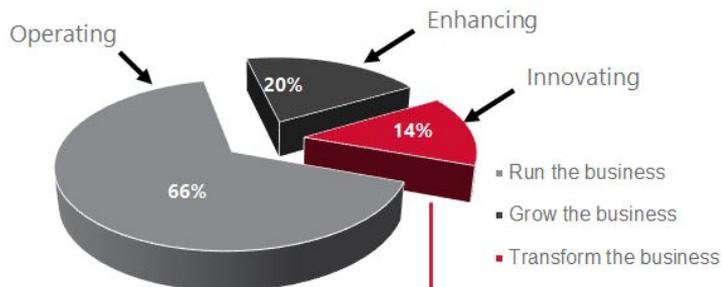
### Global License Solution Partner

- Account Management
- Catalogue Management
- Order Fulfilment
- Withholding-Tax Avoidance
- Tail End Spend Management

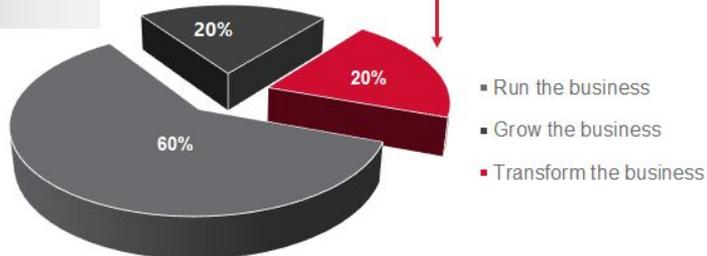
# DRIVE SAVINGS TO INNOVATION

OPTIMIZATION IN SOFTWARE LICENSE MANAGEMENT AND INNOVATE MORE!

Before



After

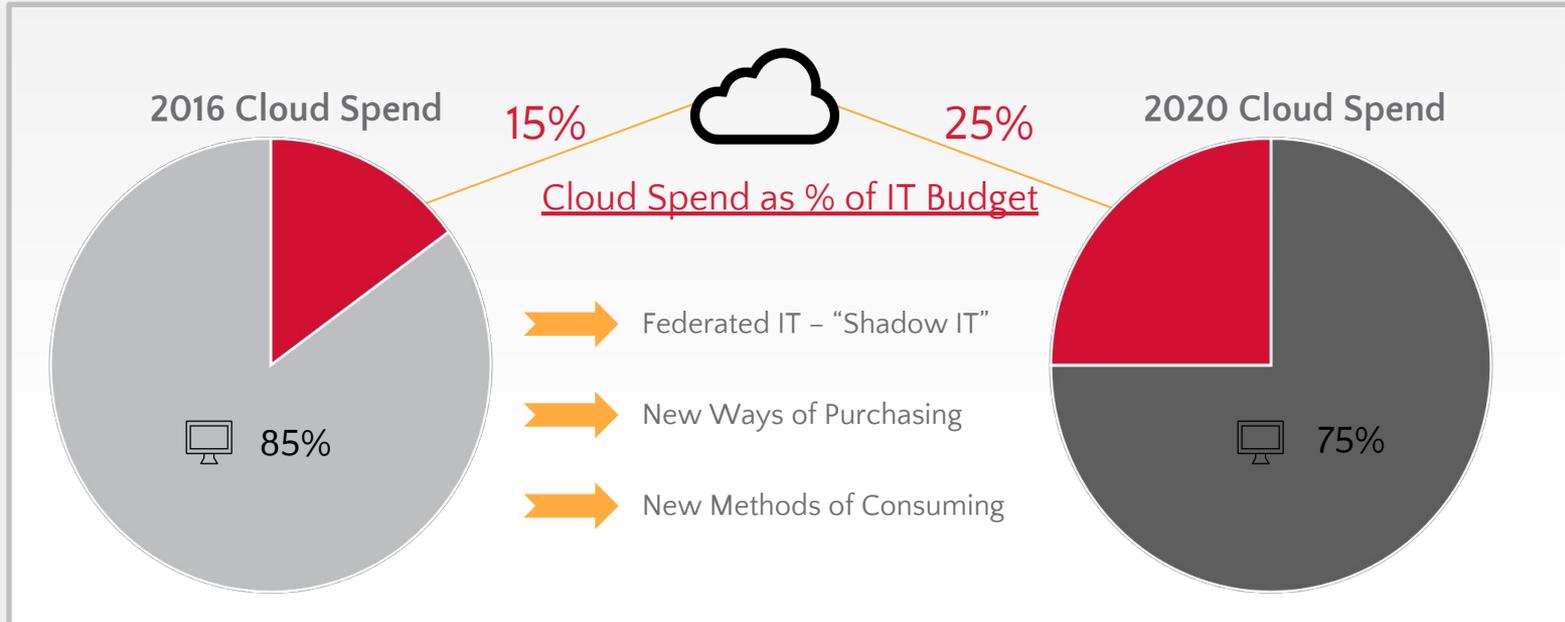


## Customer Example

- \$2B Manufacturer
- Spends \$100M on IT
- 20% of that, or \$20M on Software
- 30% of that Equals Annualized Savings of \$6M
- \$6M Shifts from **OPERATING** to **INNOVATING**

# SOFTWARE ESTATE IS EXPANDING TO CLOUD

ORGANIZATIONS ARE SHIFTING TO THE CLOUD



Requires a Comprehensive Approach to Managing Software Spend

# PYRACLOUD PLATFORM

## SOFTWARE AND CLOUD PORTFOLIO MANAGEMENT

DATA | INPUTS



PUBLISHER/  
CATALOGS



PURCHASES



INVOICES



CONSUMPTION  
Cloud Spend



CONTRACTS



*Insights*

Maximize the Value of Your Software and  
Cloud Portfolio

LOWER  
SW AND  
CLOUD PROCUREMENT  
COSTS

PREDICTIVE  
ANALYTICS FOR  
BUDGETING /  
FORECASTING

TRACK AND  
MANAGE SPEND BY  
BUSINESS UNIT

ELIMINATE  
COMPLIANCE  
RISK

SW AND CLOUD  
PORTFOLIO MGMT.

COMPLETE CONTROL OF SW AND CLOUD LIFECYCLE | SW SPEND | CLOUD SPEND

# Dashboard

[New Dashboard](#) [Customize](#)



## Notifications

- 3 Active Agreements
- 1 Expiring Agreements
- 1 Recent Quotes
- 7 Recent Orders

### Software Downloads

### Decision Calculator

### Risk Profiler

### Office 365 – Licensed

35% Exchange Licensed

46% Sharepoint Licensed

35% S4B Licensed

Updated: an hour ago

### Office 365 – In Use

0% Exchange In Use

11% OneDrive In Use

0% S4B In Use

Updated: an hour ago

### Resource Stats

4916 Total resources

98% Tagged

0 Tag Conflicts

✓ Last sync an hour ago

### My Account Team

Click to chat

**David Greve**  
Account Manager  
Email Chat Call

Inside Sales

**Mueller Ramon**  
International Account Manager  
Email Chat Call

### News & Events

- Twitter SoftwareONE Latin America**  
¿Tres de cada cuatro empresas no se preparan adecuadamen...
- Twitter SoftwareONE Latin America**  
Transforma tu negocio con ayuda de los servicios de IaaS, P...
- Twitter SoftwareONE Careeres**  
Our amazing growth means we need more amazing people. ...

### Consumption Overview

251 Day

\$779k \$1m Budget

Budget is on target

# Consolidated Consumption

## Total Budget

Jan 1, 2018 - Dec 31, 2018

1.20 m

USD

[Go To Budgets](#)



## Grouped Resources

13,645

Ungrouped

30

Partial Match

5,850

Grouped

[Go To Custom Groups](#)



From 3/1/2018



To 11/30/2018



Apply

Reset

Currency

USD

[Show Filters](#)

[Overview by Provider](#)

[Providers](#)

[Daily Consumption](#)

[Summary](#)

Cost (USD) by Month and Provider

Bar Chart

Prediction



# Cloud Budget Manager

Custom Groups

Per Provider

2017

**2018**

+ Add Reporting Period

Manage Resources →

2018 Edit

01/01/2018 - 12/31/2018

Utilized **778,799** of **1,200,000 USD**

■ Tracked ■ Untracked

Predicted 986,600 USD 112 days left

Currency

USD i

Alerts Edit

3 budget(s) 20%    5 budget(s) 50%    2 budget(s) 80% i

+ Add Budget

Expand All

Collapse All

Customize | Export

Name	Budget Am...	Consumpti...	Utilized %	Predicted ...	Predicted ...	Start	End	Budget Owner	Actions
<ul style="list-style-type: none"> <li>▼ APAC                             <ul style="list-style-type: none"> <li>▼ IT                                     <ul style="list-style-type: none"> <li>Robotics_project</li> </ul> </li> <li>▼ Marketing                                     <ul style="list-style-type: none"> <li>IOT_Deployment</li> </ul> </li> <li>finance</li> </ul> </li> </ul>	122,000	43,284	35%	72,722	60%	01/01/2018	12/31/2018	ramon.mueller@sof...	Q View
	50,000	29,505	59%	53,193	106%	01/01/2018	12/31/2018	ramon.mueller@sof...	Q View
	15,000	1,679	11%	10,632	71%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
	20,000	607	3%	607	3%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
	8,000	0	0%	0	0%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
	50,000	13,100	26%	20,379	41%	01/01/2018	12/31/2018	david.greve@softwa...	Q View

Almost done...

# KEY TAKEAWAYS

## WE'RE READY, ARE YOU?

### Retrospect & Outlook

- IT is changing at a rapid speed
- Red Hat offers a wide range of solutions in the SAP area
- Automation is key - also in the SAP area
- SOLHANA helps to migrate/run your SAP workloads
- SoftwareONE is your partner for software asset and cloud management

Questions?

Thanks!

# RED HAT FORUM 2018

NEXT PRESENTATION

14:20

EVERYTHING AS CODE

A JOURNEY INTO IT AUTOMATION AND STANDARDIZATION

RAPHAEL PINSON | INFRASTRUCTURE DEVELOPER CAMPTOCAMP  
PETER MUMENTHALER | SOLUTION ARCHITECT RED HAT

**camptocamp**<sup>™</sup>

INNOVATIVE SOLUTIONS  
BY OPEN SOURCE EXPERTS

# Sources

- <https://thebiglead.com/2014/06/11/this-is-a-90s-aol-ad-featuring-bret-hart-holding-a-flippy-disk/>
- <https://twitter.com/sap/status/995033808893292544>
- <https://twitter.com/PulpLibrarian/status/1030831571719401473>
- <https://www.sap.com/developer/tutorials/hxe-rhel-server-core-local.html>