

RED HAT FORUM 2018 ZURICH



HANA AUTOMATED A TALE WITH PENGUINS AND PYTHONS

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WHO WE ARE

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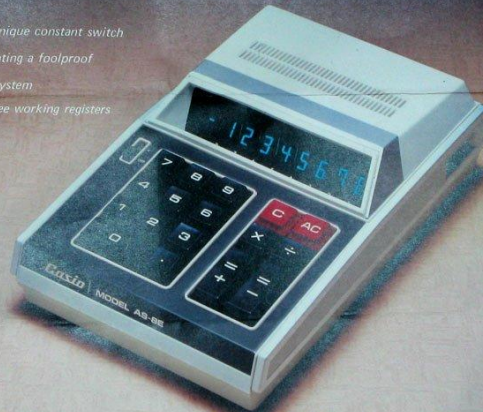


A BIT OF HISTORY - 70s

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

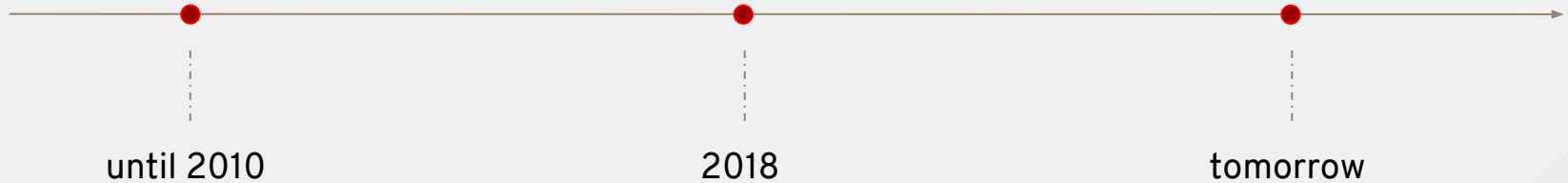
IT becomes a commodity

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
- Container 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!

HHHHHSSSSSHSSS

<Sonium> someone speak python here?

<lucky> HHHHHSSSSSSHSSS

<lucky> SSSSS

<Sonium> the programming language



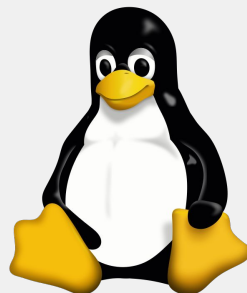
AN AUTOMATION FAIRY TALE

ANSIBLE IN THE RED HAT / HANA SPACE



RED HAT®
ANSIBLE®
Automation

+



+



ANSIBLE?

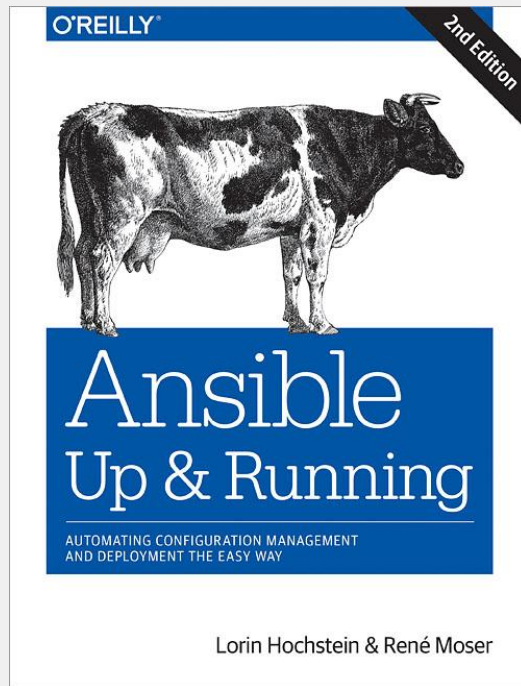
THE VERSATILE AUTOMATION TOOL

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>

AUTOMATION IS KING!

ON YOUR MARK, GET SET, GO! ROUND TWO

HANA on RHEL - The cool way

- \$ ansible-playbook hana.yml -i hosts
- 🍹 🧠 🚀

Done

```
< TASK [preconfigure : setting kernel tunables] >
```



```
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.tcp_slow_start_after_idle', u'value': 0})
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.conf.all.rp_filter', u'value': 0})
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.ip_local_port_range', u'value': u'40000 61000'})
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.neigh.default.gc_thresh1', u'value': 256})
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.neigh.default.gc_thresh2', u'value': 1024})
ok: [40.91.215.189] => (item={u'name': u'net.ipv4.neigh.default.gc_thresh3', u'value': 4096})
ok: [40.91.215.189] => (item={u'name': u'net.ipv6.neigh.default.gc_thresh1', u'value': 256})
ok: [40.91.215.189] => (item={u'name': u'net.ipv6.neigh.default.gc_thresh2', u'value': 1024})
ok: [40.91.215.189] => (item={u'name': u'net.ipv6.neigh.default.gc_thresh3', u'value': 4096})
ok: [40.91.215.189] => (item={u'name': u'kernel.shmmni', u'value': 65536})
ok: [40.91.215.189] => (item={u'name': u'kernel.msgmni', u'value': 32768})
ok: [40.91.215.189] => (item={u'name': u'kernel.sem', u'value': u'1250 256000 100 1024'})
ok: [40.91.215.189] => (item={u'name': u'kernel.sysrq', u'value': 1})
ok: [40.91.215.189] => (item={u'name': u'vm.swappiness', u'value': 60})
ok: [40.91.215.189] => (item={u'name': u'vm.max_map_count', u'value': 2000000})
ok: [40.91.215.189] => (item={u'name': u'vm.memory_failure_early_kill', u'value': 1})
ok: [40.91.215.189] => (item={u'name': u'fs.file-max', u'value': 20000000})
ok: [40.91.215.189] => (item={u'name': u'fs.aio-max-nr', u'value': 458752})
```

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

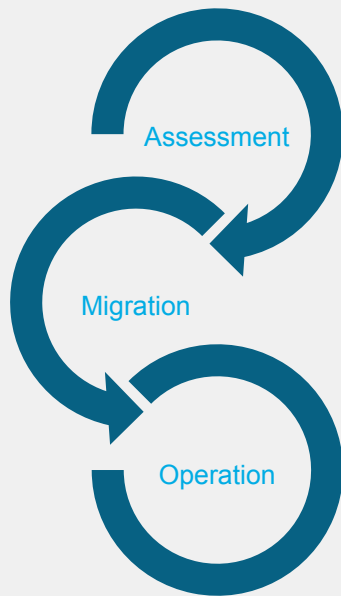


Single Solution Provider

- >  + 
- > SAP Technical
- > SAP Functional



SOLHANA STEPS

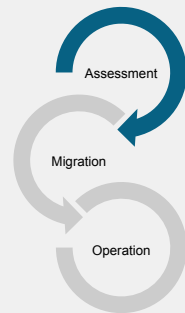


Plans and evaluates the optimal pathway to S/4HANA from a functional and technical perspective

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

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

SOLHANA ASSESSMENT

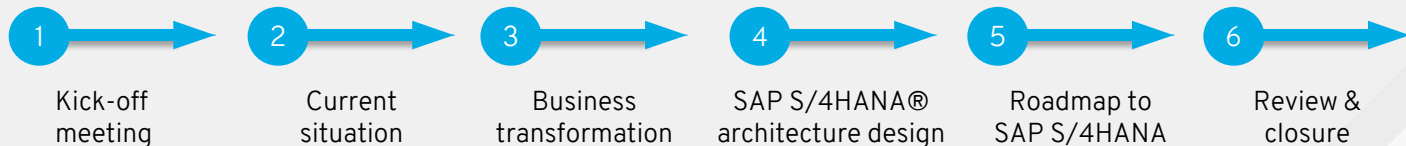


Goal | Evaluate the optimal pathway for moving the SAP landscape to S/4HANA

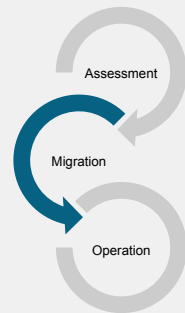
Outcomes

- > 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



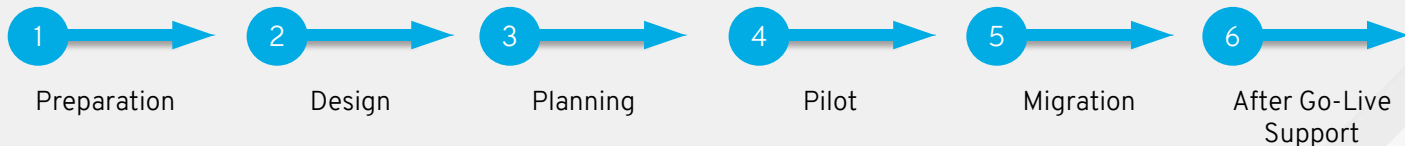
Goal

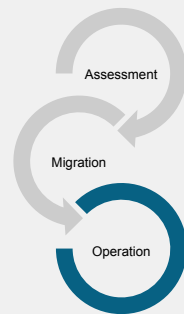
Update current SAP ERP landscape to S/4, convert to HANA database and adapt the needed business processes

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:



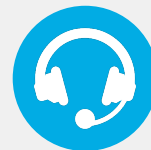
24/7/365



Monitoring



Maintenance

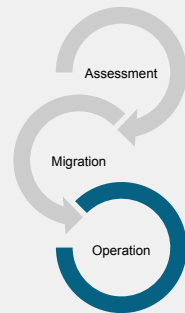


Support

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

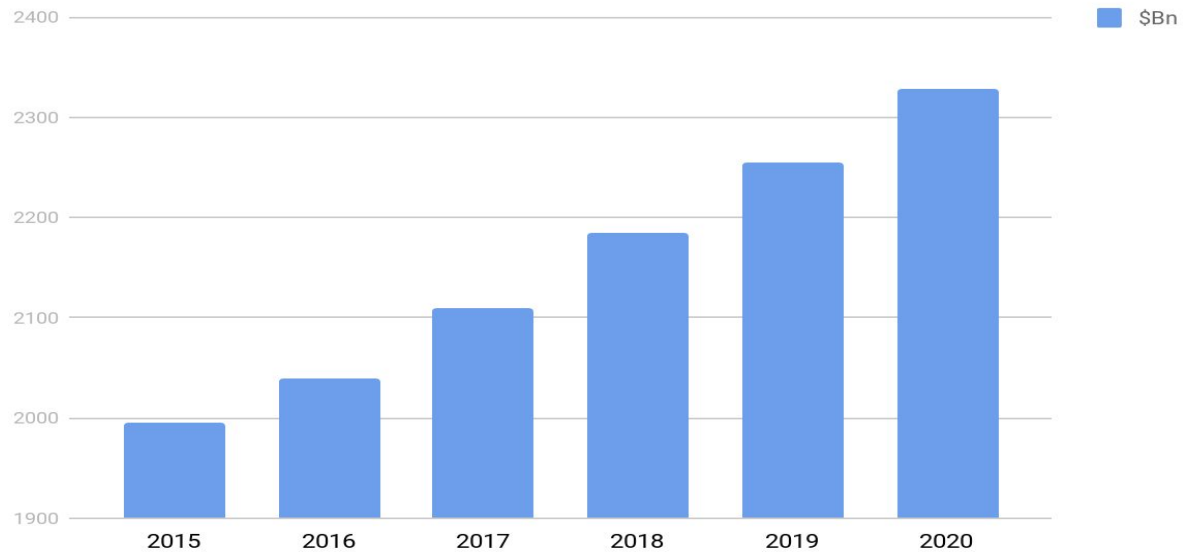
- > Level 1: max. 12h reaction time, suitable for non-critical business processes
- > Level 2: max. 4h reaction time, suitable for not fully mission-critical business processes
- > Level 3: 30min reaction time, suitable for mission-critical business processes

SoftwareONE AG

SOFTWAREONE AT A GLANCE

GLOBAL FOOTPRINT, LOCAL PRESENCE AND SCALE & STABILITY





GLOBAL IT SPEND



MANAGE THE COMPLEXITY



SOFTWARE ASSET
MANAGEMENT IN THE PAST

SOFTWARE LIFECYCLE MANAGEMENT

FROM REQUIREMENT TO RETIREMENT



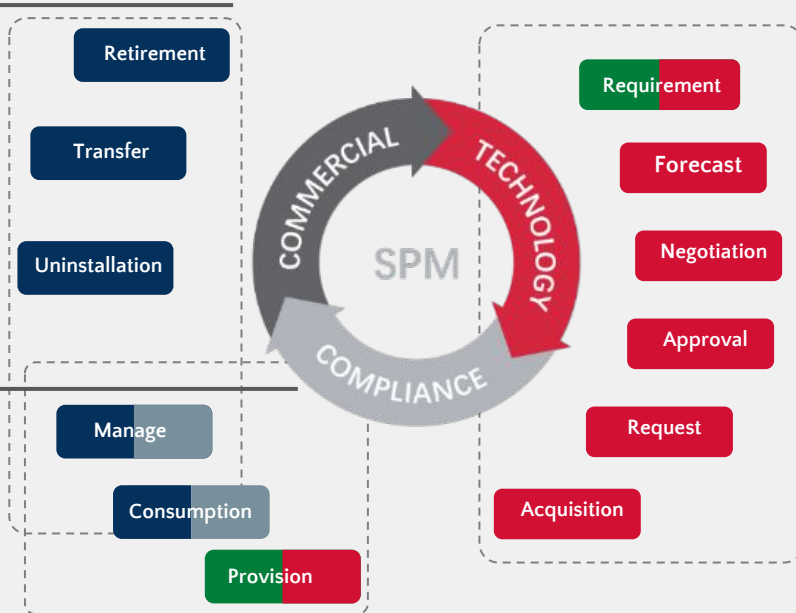
Software Asset Management

- 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



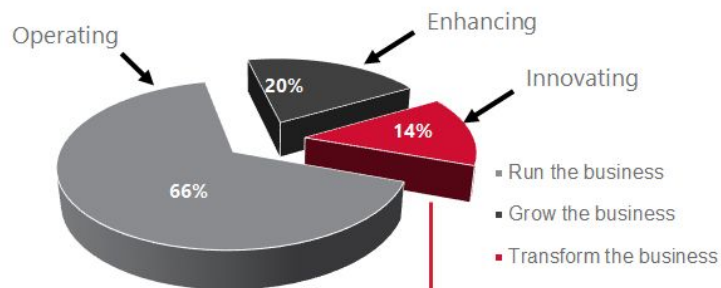
Global License Solution Partner

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

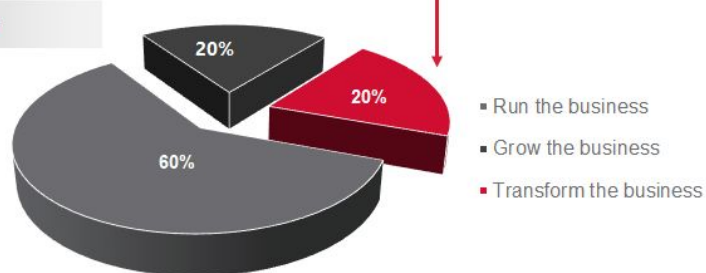
DRIVE SAVINGS TO INNOVATION

OPTIMIZATION IN SOFTWARE LICENSE MANAGEMENT AND INNOVATE MORE!

Before



After

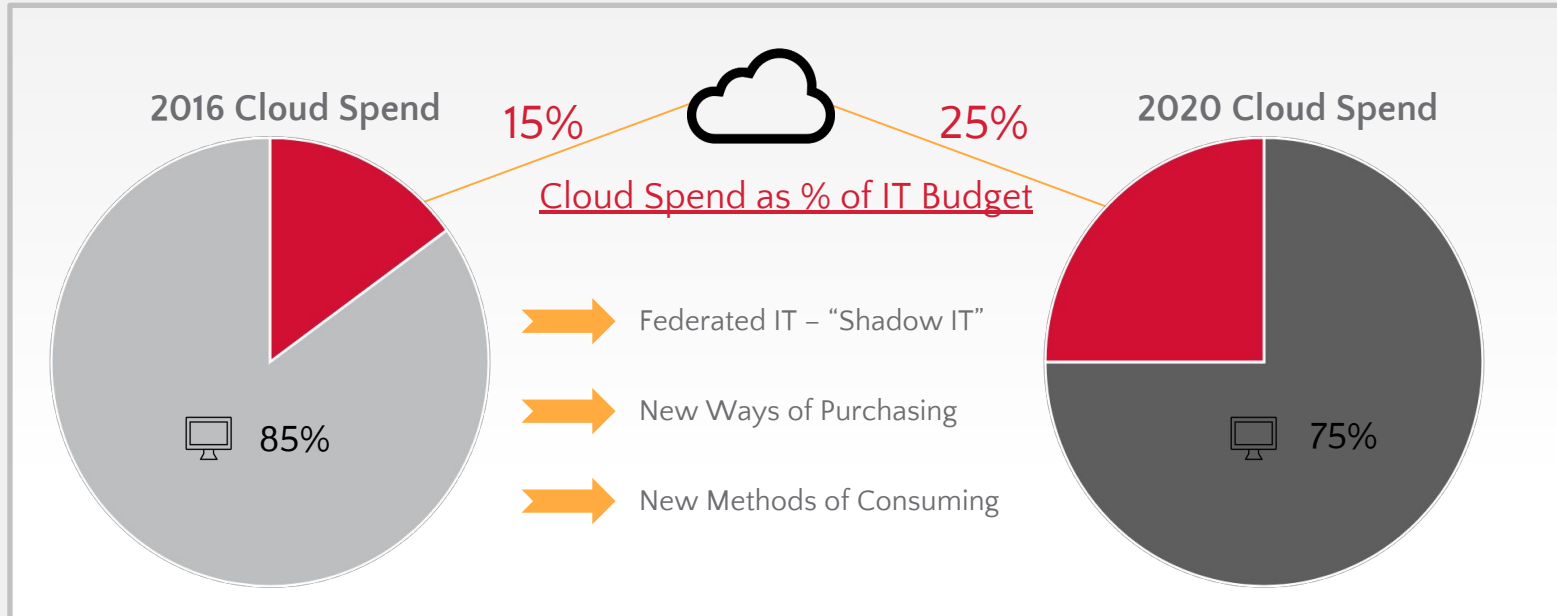


Customer Example

- \$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

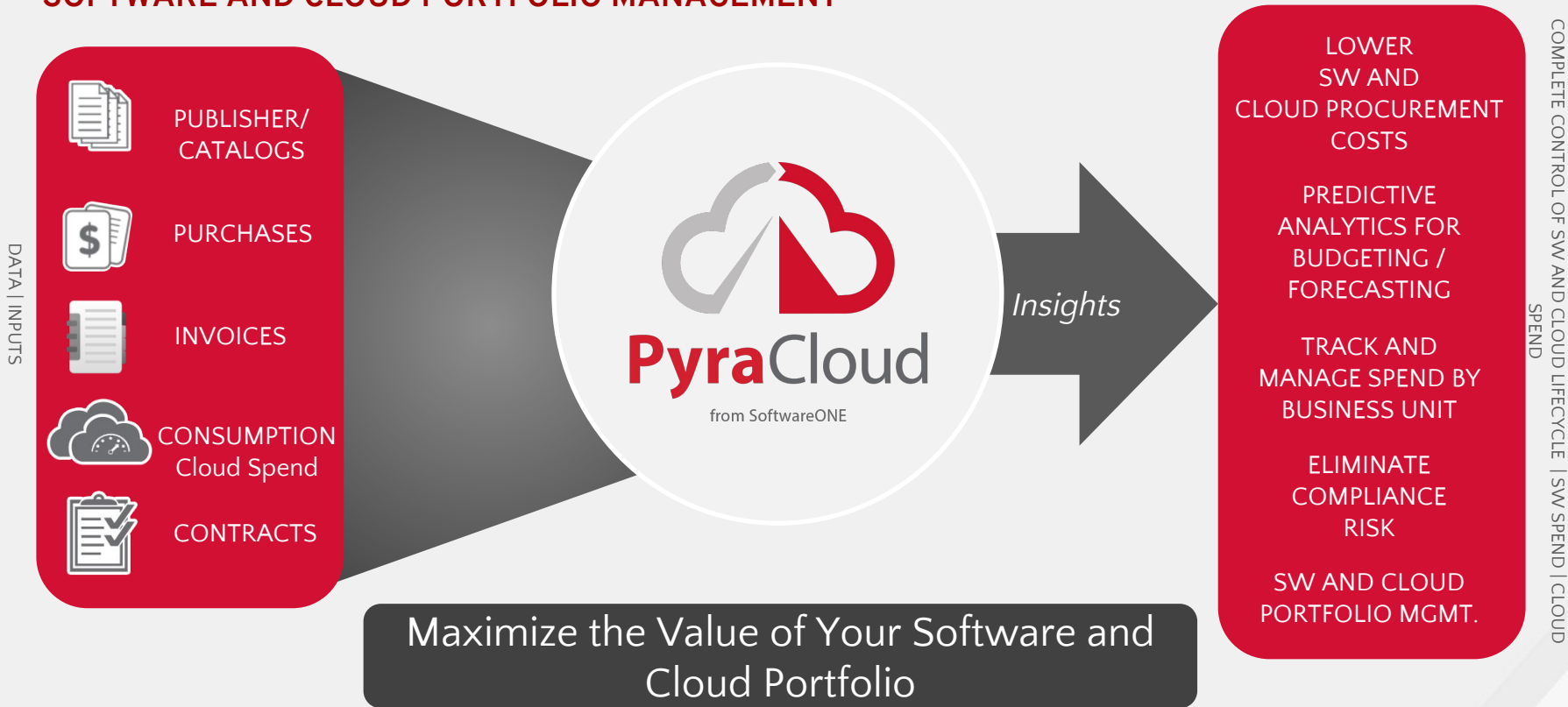
ORGANIZATIONS ARE SHIFTING TO THE CLOUD



Requires a Comprehensive Approach to Managing Software Spend

PYRACLOUD PLATFORM

SOFTWARE AND CLOUD PORTFOLIO MANAGEMENT



Dashboard

[New Dashboard](#) [Customize](#)AdAstra
Your Flexible Star Center

Notifications

3 Active Agreements

1 Expiring Agreements

1 Recent Quotes

7 Recent Orders

Software Downloads



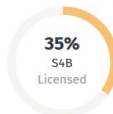
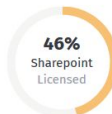
Decision Calculator



Risk Profiler

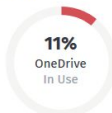


Office 365 – Licensed



Updated: an hour ago

Office 365 – In Use



Updated: an hour ago

Resource Stats



Total resources

Tagged

✓ 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



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

01/01/2018 - 12/31/2018

Edit

Utilized 778,799 of 1,200,000 USD

Tracked

Untracked

Predicted 986,600 USD

112 days left

Currency

USD

Alerts

Edit

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

+ Add Budget

Expand All

Collapse All

Customize

Export

Name	Budget Am...	Consumpti...	Utilized %	Predicted ...	Predicted ...	Start	End	Budget Owner	Actions
▼ APAC	122,000	43,284	35%	72,722	60%	01/01/2018	12/31/2018	ramon.mueller@sof...	Q View
▼ IT	50,000	29,505	59%	53,193	106%	01/01/2018	12/31/2018	ramon.mueller@sof...	Q View
Robotics_project	15,000	1,679	11%	10,632	71%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
▼ Marketing	20,000	607	3%	607	3%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
IOT_Deployment	8,000	0	0%	0	0%	01/01/2018	12/31/2018	will.smith@adastraf...	Q View
finance	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 

INNOVATIVE SOLUTIONS
BY OPEN SOURCE EXPERTS

Sources

- <https://thebiglead.com/2014/06/11/this-is-a-90s-aol-ad-featuring-bret-hart-holding-a-floppy-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>