

3 Technical automations for the tech and non-tech teams



Introductions

Tyler Constable, Global Head Solutions Engineering

Avantra, AIOps platform that enables hyperautomation

Agenda

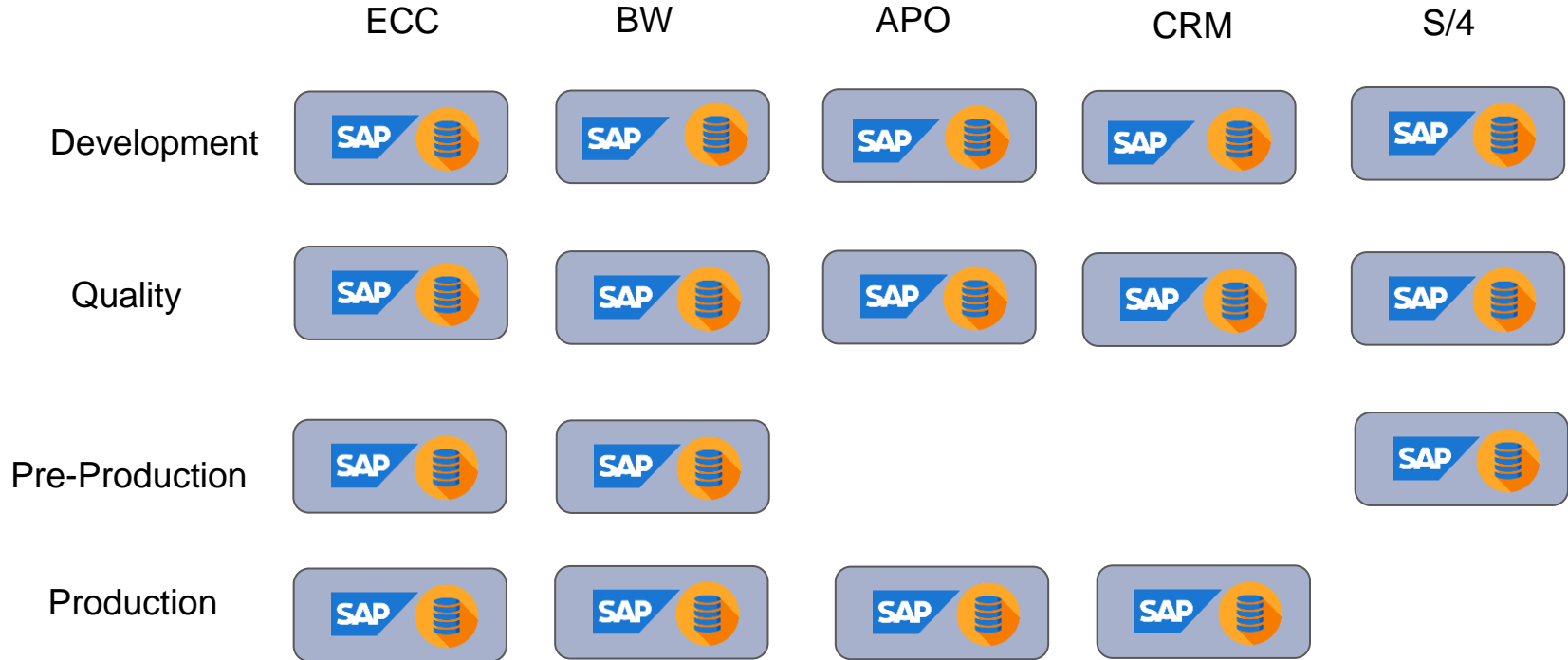
- Meet Sam
 - Sam's Workload
- Three automations to help Sam
 - Cloud Automation
 - HotNews Identification
 - System Refreshes
- Sam's New Life

Who is Sam?

- Technical Basis/IT Ops Engineer
- Works with a small team of other engineers
- Works at least 2-3 nights per week and every other weekend
- Very little time available for personal growth
- Day to day activities include:
 - Researching technical issues
 - Architectural designs
 - Planned projects
 - Planning sessions/meetings
 - Kernel upgrades
 - System refreshes
 - System security and audit controls
- Management given initiatives
 - System stability
 - Finding ways to control costs
 - System security



Complexity of SAP landscape



SAP in the cloud

Private Cloud

Various Private
Cloud Providers
&
Managed Service
Providers

IaaS

Infrastructure as a Service
Hyperscalers



PaaS

Platform as a Service



SaaS

Software as a Service



Friday!!!

Time	Planned Day
7:00 am	
8:00 am	
9:00 am	Change Control Meeting
10:00 am	
11:00 am	Weekly Basis Meeting
12:00 pm	Lunch
1:00 pm	S/4 Planning Meeting
2:00 pm	
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5:00 pm	Shut down Non-PRD
6:00 pm	

Controlling Cloud Costs



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SAP Software Components

Name	Release	Patch L...	Type
SAP_ABA	75G	2	S
SAP_GWFND	756	2	S
UIBAS001	700	2	W
ST-A/PI	01V_731	0	C
DW4CORE	300	3	W
BW4CONT	200	11	W
SAP_BASIS	756	2	S

SAP_UI	756	Name	Type	S...	Server	SAP ...	Kernel Release	Kernel L...
ST-PI	740	hyila_BWL_00	CENTRAL	00	hyila	ABC_BWL	7.85	200
BW4CONTB	200	hyila_BWL_01	ABAP_SCS	01	hyila	ABC_BWL	7.85	200



2031037 - Upgrade to SAP_BASIS 740 or NetWeaver Kernel 74x

Version 14 from 14.01.2023 in English

Description

Software Components

References



Languages

Software Component	From	To
KRNL32NUC	7.20	7.20
	7.20EXT	7.20EXT
	7.21	7.21
	7.21EXT	7.21EXT
KRNL32UC	7.20	7.20
	7.20EXT	7.20EXT
	7.21	7.21
	7.21EXT	7.21EXT
KRNL64NUC	7.20	7.20
	7.20EXT	7.20EXT
	7.21	7.21
	7.21EXT	7.21EXT
	7.40	7.40
	7.41	7.41



AVANTRA

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Saturday: Kernel Updates

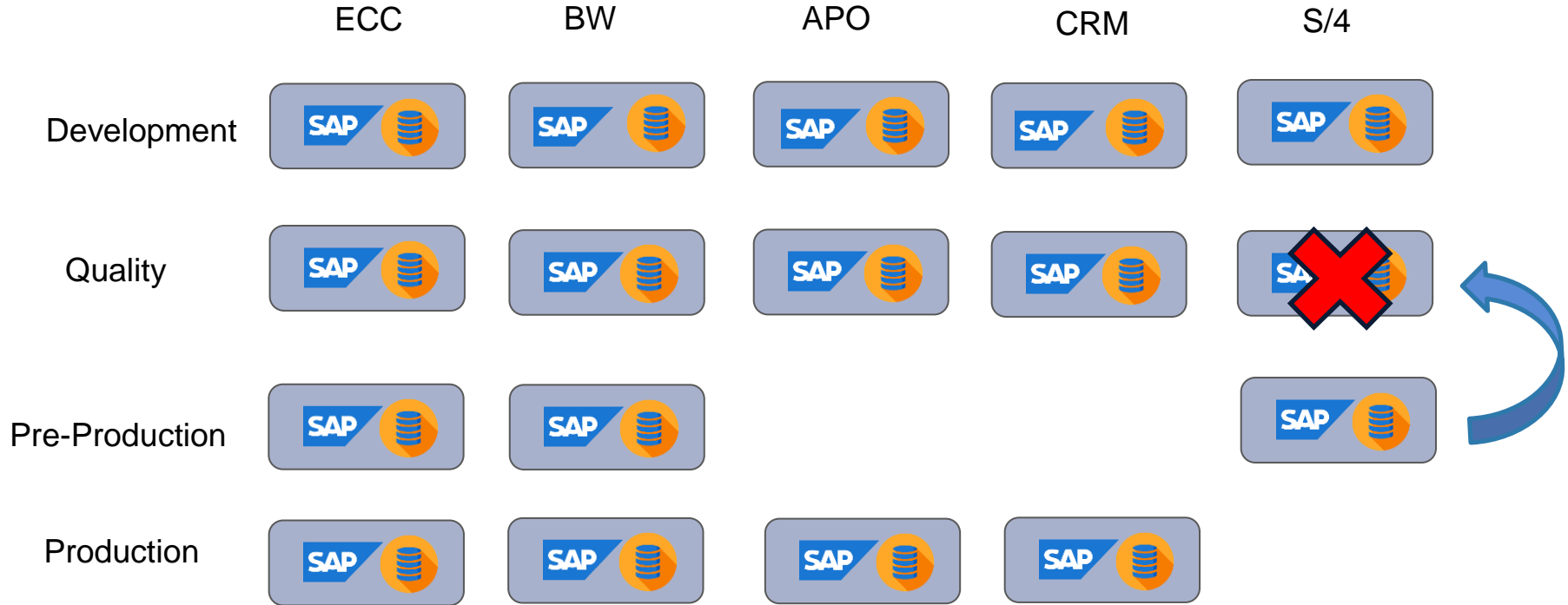
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Complexity of SAP landscape



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Saturday: Kernel Updates & Refreshes
Sunday: Refreshes

Let's Help Sam

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Controlling Cloud Costs



Planned cloud automation



Bring down SAP instances and databases correctly

Customized to Sam's environment

- Systems coming down in a specific order

- Scripts to stop 3rd party software

Scheduled – no contact automation

Planned cloud automation



Significant cloud savings

Consistent shutdown / startup processes

No data inconsistencies

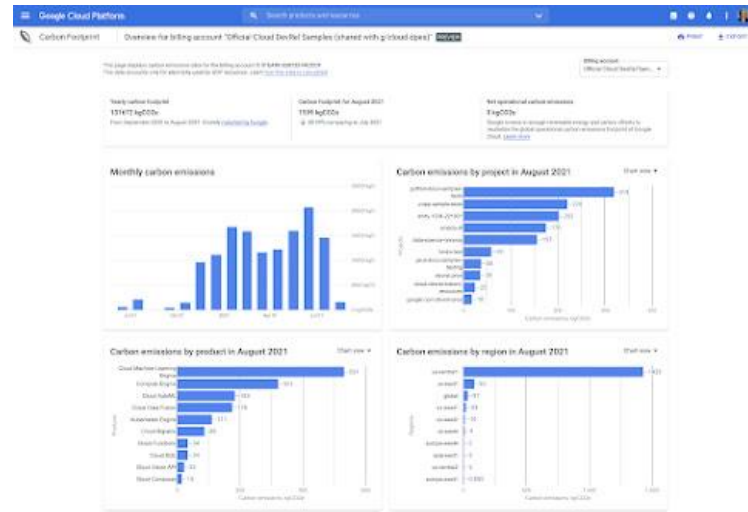
Happy employees – No recurring off hours work

Sustainability

Sustainability

Google's Carbon Sense Suite - Aim to reduce your cloud carbon emissions

- Accurately measure your gross carbon footprint
- Visualize carbon insights via dashboards and charts
- Breakdown by
 - Region
 - Project
 - Product
 - Month



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HotNews System Identification Automation



Note	Ve...	Title	Status	Date	Component	Cate...	Sec ...	Prio...	Related Software	Impl. Syste...	Relevant for
2031037	14	Upgrade to SAP_BASIS 740 or NetWeaver Kernel 74x	New	2023-01-14	BC-CST	B		Very High (HotNews)	KERNEL [7.20;7.21];7.40;7.41;7.45;7.49 KRNL32NUC 7.20;7.20EXT;7.21;7.21EXT KRNL32UC 7.20;7.20EXT;7.21;7.21EXT KRNL64NUC 7.20;7.20EXT;7.21;7.21EXT;7.40;7.41;7.49 KRNL64UC 7.20;7.20EXT;7.21;7.21EXT;7.40;7.41;7.49 SAP_BASIS 740	3 New	SMA Validity/ABAP: SAP_BASIS V19 Validity:KERNEL;Validity:KRNL64NUC;Validity:KRNL64UC ASM Validity/ABAP: SAP_BASIS
3168562	4	Important correction of note 3035700	New	2023-01-12	FI-SL-SL	A		Very High (HotNews)	S4CORE 100;101;102;103;104;105;106 SAP_APPL 600;602;603;604;605;606;616 SAP_FIN 617;618;700;720;730	1 New	ISL corr - SAP_FIN/618.8
3268093	9	[CVE-2023-0017] Improper access control in SAP NetWeaver AS for Java	New	2023-01-10	BC-MID-CON-JCO	A	P	Very High (HotNews)	J2EE-FRMW 7.50	1 To be implemented 2 Not relevant 2 In progress	PIP PL: J2EE-FRMW 7.50 SP22,PL3 MII PL: J2EE-FRMW 7.50 SP17,PL1 REM_PIP PL: J2EE-FRMW 7.50 SP22,PL3
3089413	11	[CVE-2023-0014] Capture-replay vulnerability in SAP NetWeaver AS for ABAP and ABAP Platform	New	2023-01-10	BC-MID-RFC	A	P	Very High (HotNews)	KERNEL 7.22;7.53;7.77;7.81;7.85;7.89 KRNL64NUC 7.22;7.22EXT KRNL64UC 7.22;7.22EXT;7.53 SAP_BASIS [700;702];[710;711];730;731;740;[750;757]	13 New	PRD corr - SAP_BASIS/750.22 SMA corr - SAP_BASIS/740.25 ASM corr - SAP_BASIS/740.25 SR2 corr - SAP_BASIS/750.22 9 more...

HotNews System Identification Automation



Integrate into the SAP support backbone

Immediately identify new security notes

Cross reference against all SAP system information for SAM

Immediately alert Sam on which systems need patching

HotNews System Identification Automation



Ensure correct systems are identified

Reduce time to patching – keeping system secure

Ensure landscape is in sync

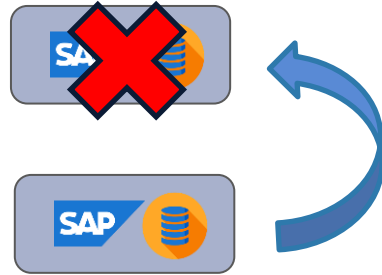
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System Refresh Automation



Preparation Steps

- Locking Users
- Pausing Batch Jobs
- etc...

Restore of the database

Post Processing Steps

- BDLS
- Unlocking users
- etc...

System Refresh Automation



Automate all steps

Customized steps for Sam's specific requirements

Post automation system health analysis

Alert if any step fails

System Refresh Automation



Driving consistency

Significantly reducing the amount of hands-on time

More frequent refreshes = better testing data

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What does Sam do now?

More time spent on S/4 preparation

Personal growth

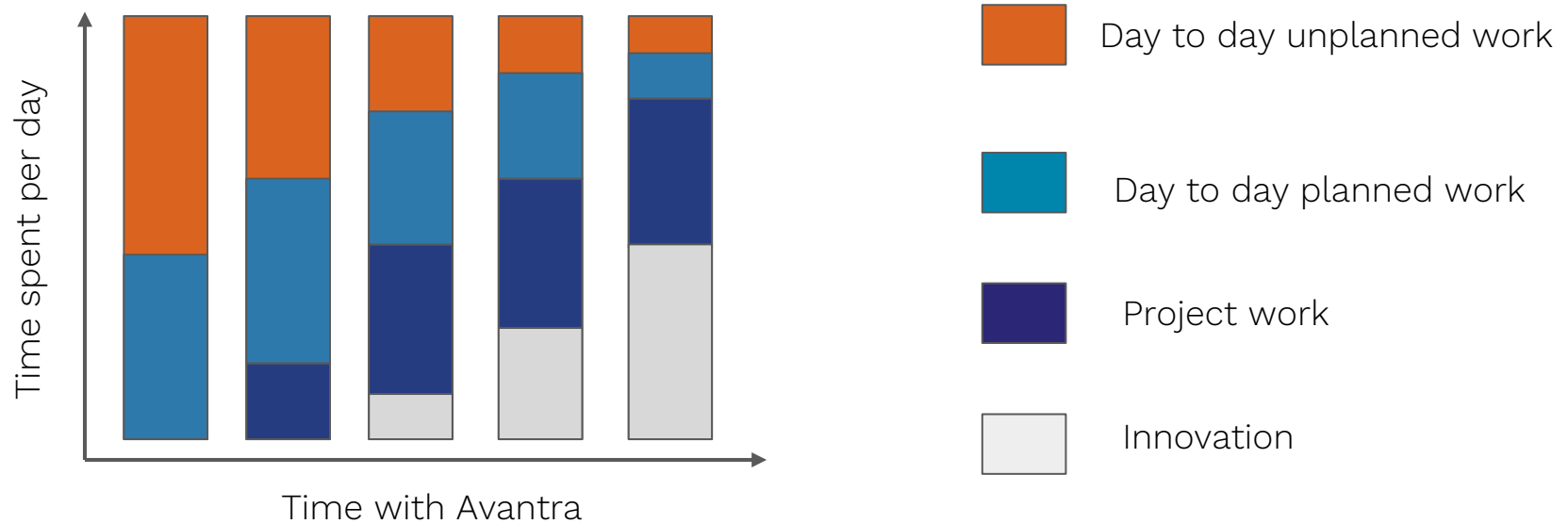
Better work/life balance

Begins an innovation journey

Continues to build additional technical automation

Works with ABAP & functional teams for business data automation

Driving an Innovative Culture



Automation Across the Technical Stack

**With correct authorizations



SAP

Start/Stop SAP
Start/Stop Instances
System Refreshes
Kernel Upgrades
Profile Parameter Maintenance
SAP Job
Create/Release/Delete

SPAM Updates
ST-PI, ST-A/PI Updates
Import Transports
Call BAPIs
Trigger ABAP Events
HotNews Analysis

Database

Run SQL Scripts
Start/Stop SAP database

Operating System

OS Patching
OS Hardening Check Automation
Run Scripts
Start/Stop Public Cloud and VMWare

Push Flat Files
SSH

IaaS Public Cloud and VMWare

Start/Stop - Scheduled and Triggered

**Combine and Orchestrate Order

Avantra at a glance



Observe

Understand everything happening in your SAP world automatically

End to end automated landscape observation powered by machine learning

Automated impact analysis of critical security alerts from SAP (HotNews)

Real time visibility into the total health of your SAP landscape

System specific best practice applied out of the box

Flexibility to design and deploy your own landscape specific checks

Engage

Engage the right way at the right time with reduced false positives

Intelligent notification engine supporting all notification endpoints

Native ServiceNow Service Graph connector to enrich your CMDB

Advanced business logic within notifications including alert deescalation and more

Trigger automations immediately when alerts are raised allowing for self healing scenarios

Native integrations to all cloud hyperscalers and VMware

Act

Automate your activities to drive quality, speed and consistency

Business process based workflow automation engine

Ready to use SAP automation templates

Keep control by seamlessly linking automations to approvals

Automated SAP Kernel upgrades

Trigger hyperscaler and VMware actions within automations

Automation Platform



Observability automation

Reduce time to resolution

Full Stack

Reduce the amount of point solutions

71%

Reduction in manual daily
repetitive tasks

45%

Reduction in support requests after only one year with an automation-first approach





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