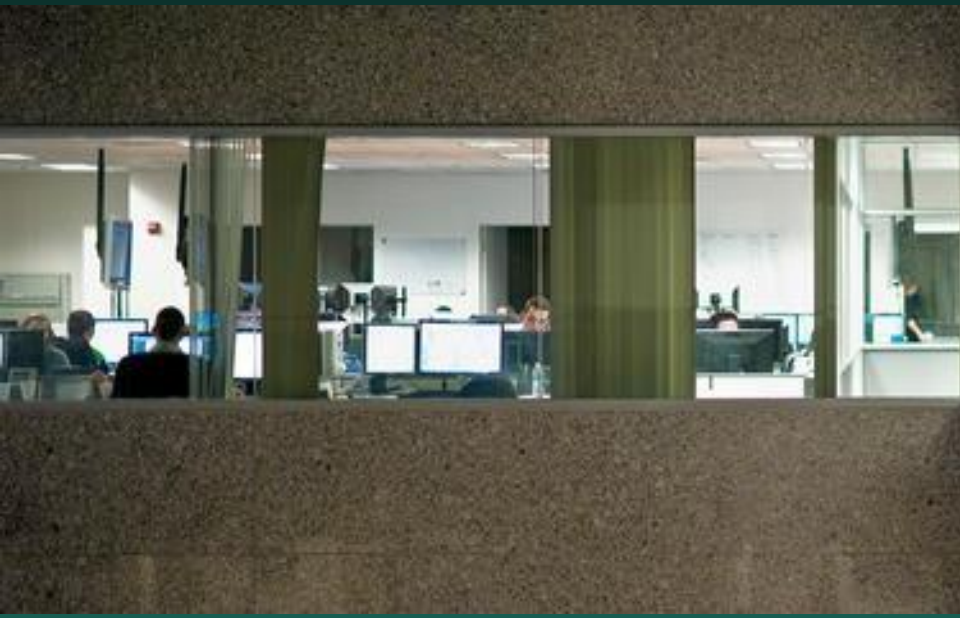




April 20, 2022

Accelerate the Migration to SAP S/4HANA in the Cloud



Today's Speaker



Sherry Yu
Global Director of
SAP Success
Architect, SUSE
sherry.yu@suse.com



Accelerate Your Cloud Vision

JOIN SUSE at SAP SAPHIRE Orlando

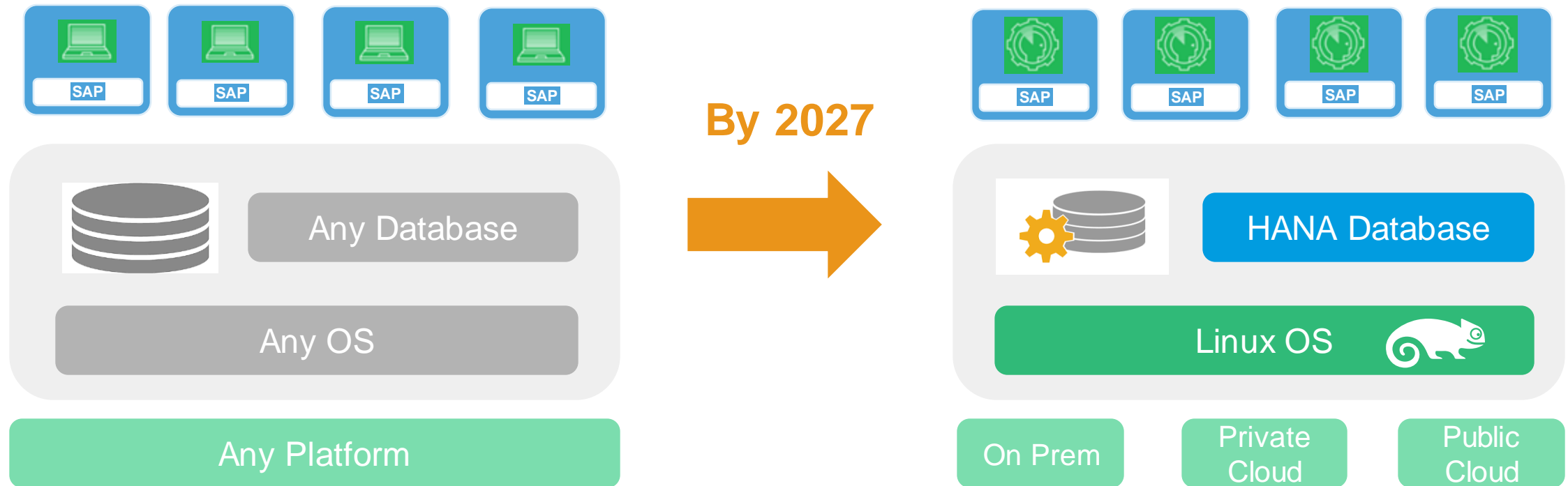
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May 10–12, 2022 (Booth PA215)



The Journey to SAP HANA














- SAP requires migration to SAP HANA by 2027
- SAP HANA is only certified on Linux, SUSE first, then IBM-RedHat
- Roughly 40,000 customers running SAP ERP need to migrate, 31% are live, 13% have started to move *
- Customers need help with the imminent deadline





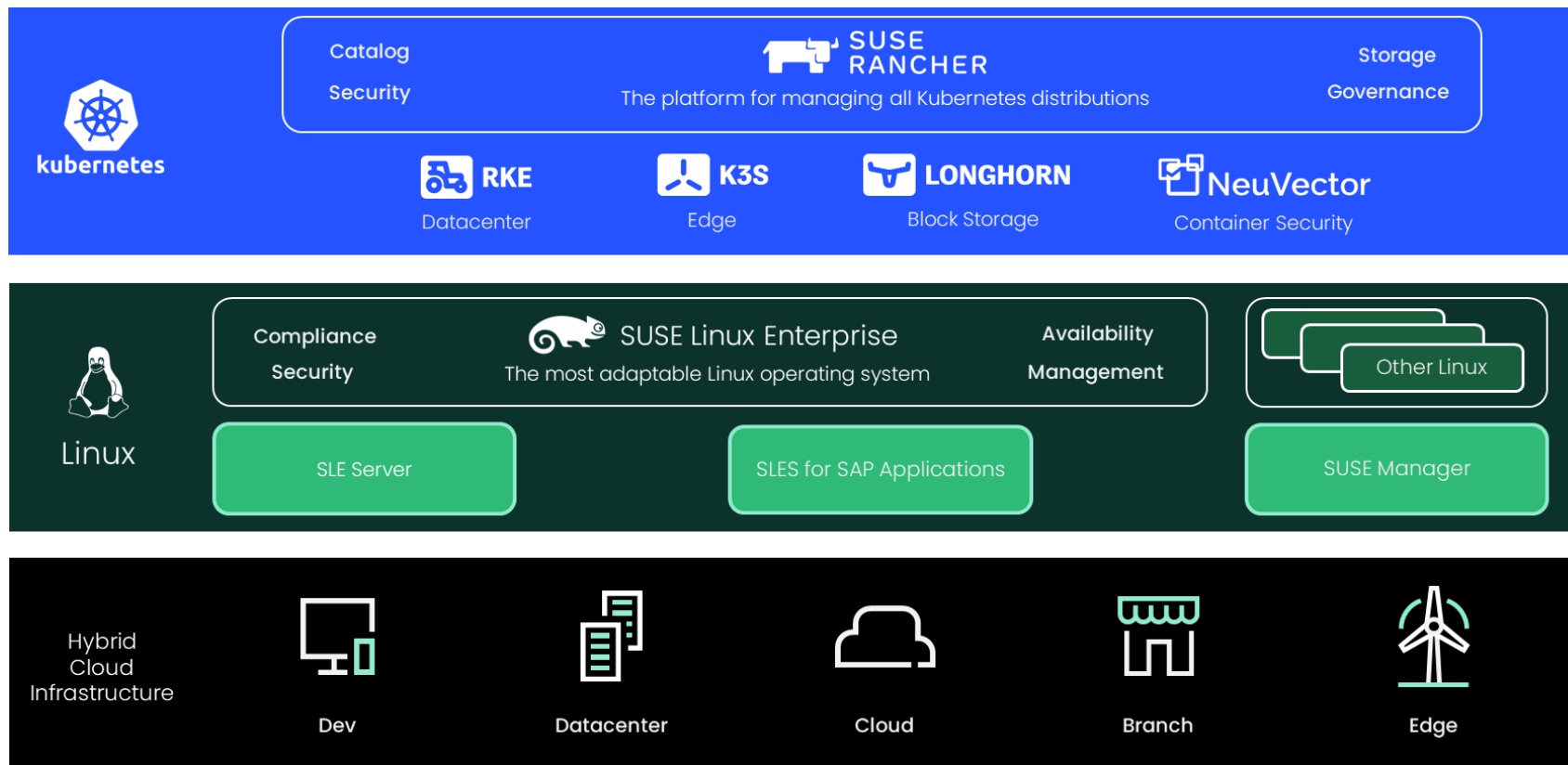
SUSE Today

World's Largest Independent Open-Source Company

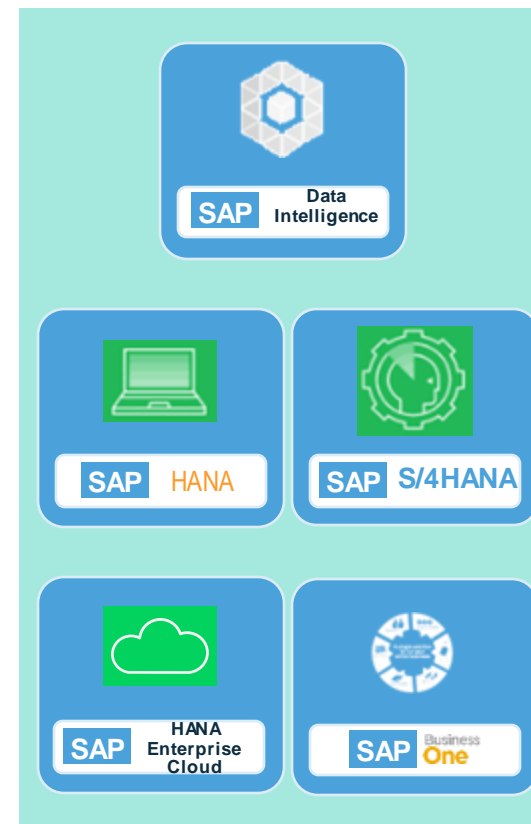
					
Rancher Acquisition <i>Closed on 1 Dec 2020</i>	IPO on the Frankfurt Stock Exchange <i>Completed on 19 May 2021</i>	New Product Launches	Open Source Innovation	NeuVector Acquisition <i>Closed on 28 Oct 2021</i>	Building the SUSE Brand
<ul style="list-style-type: none">▪ Market leader in Kubernetes management▪ Platform combining best-in-class Linux OS, market-leading Kubernetes CMP and pioneering edge capabilities	Largest Enterprise Software IPO ever in EMEA ⁽¹⁾	 SUSE Linux Enterprise Server 15 SP3  SUSE Rancher 2.6  SUSE Linux Enterprise Micro 5.1	 Epinio  Harvester  Opni  Rancher Desktop	<ul style="list-style-type: none">▪ Provides full lifecycle container security in any mission-critical environment▪ Accretive to the group medium-term growth profile	<ul style="list-style-type: none">▪ First place in German Brand Awards for "Excellence in Brand Strategy & Creation – Brand Design"▪ Two platinum awards at Hermes Creative Awards for Company Branding and Branding Refresh▪ Decision Maker Award, Digitization Category – Presented by WirtschaftsWoche and KPMG



SUSE – Enterprise Linux Leader for SAP Infrastructures



Support & Services



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SAP
Endorsed
App

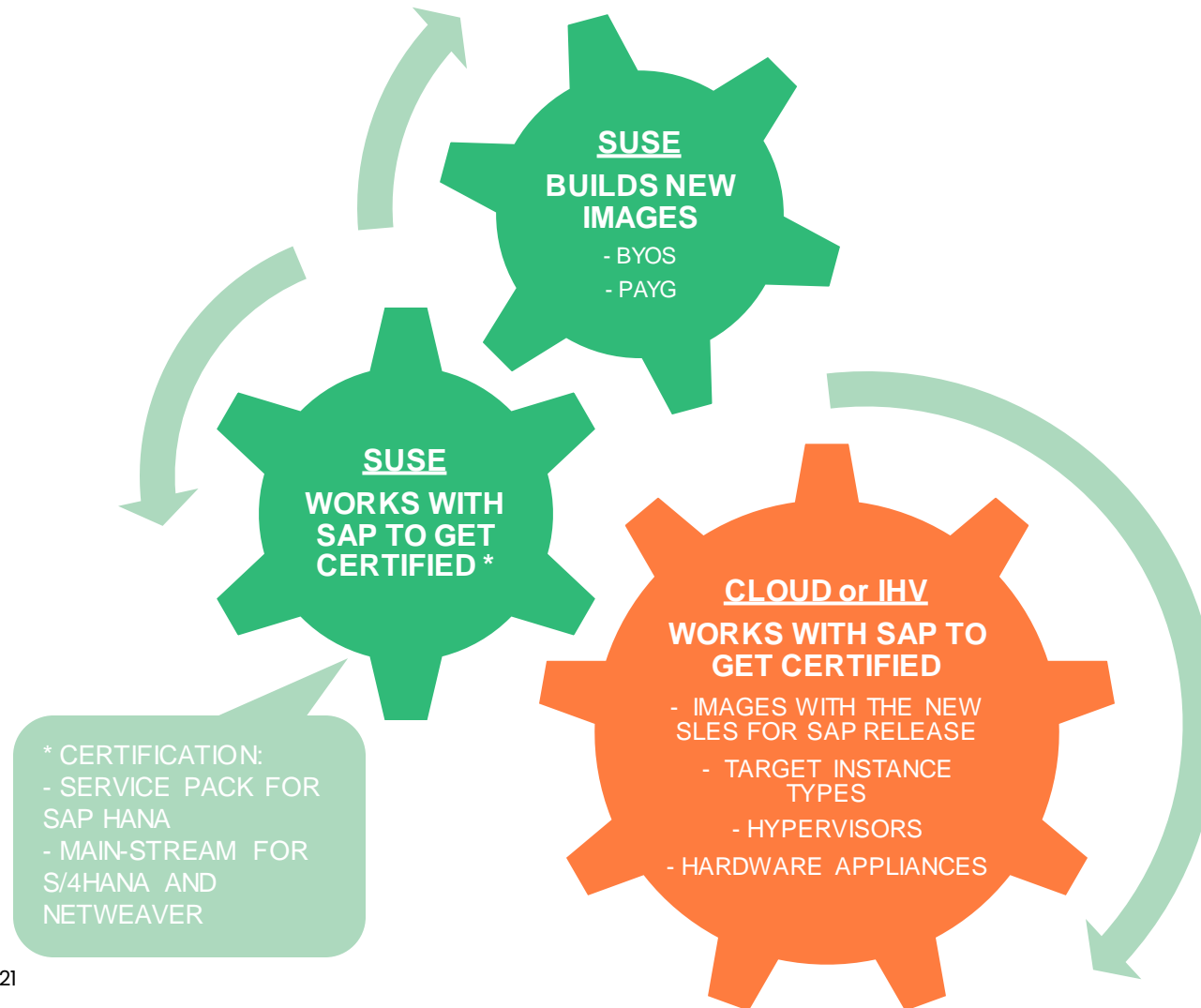
Available on
SAP Store



SAP HANA and NetWeaver Certification in the Cloud

Certification Process for SAP HANA and NetWeaver

Every new HANA release and SLES for SAP release follows this process



Certified IaaS Platforms for SAP HANA Deployment

Certified and Supported SAP HANA® Hardware Directory

All certified hardware supporting IaaS configurations for OLAP, OLTP workloads on SAP HANA scale-up and scale-out models



SAP HANA Support Limit

- Scale-Up vs Scale-Out
- Bare-metal vs Virtual Machines
- Instance Availability in Regions, Availability Zones
- Support of Persistent Memory



Supported IaaS Products for SAP Applications

- 1656099 – SAP Applications on AWS: Supported DB/OS and AWS EC2 products
- 1928533 – SAP Applications on Azure: Supported Products and Azure VM types
- 2456432 – SAP Applications on Google Cloud: Supported Products and GCP VM types





Cloud Management and Support

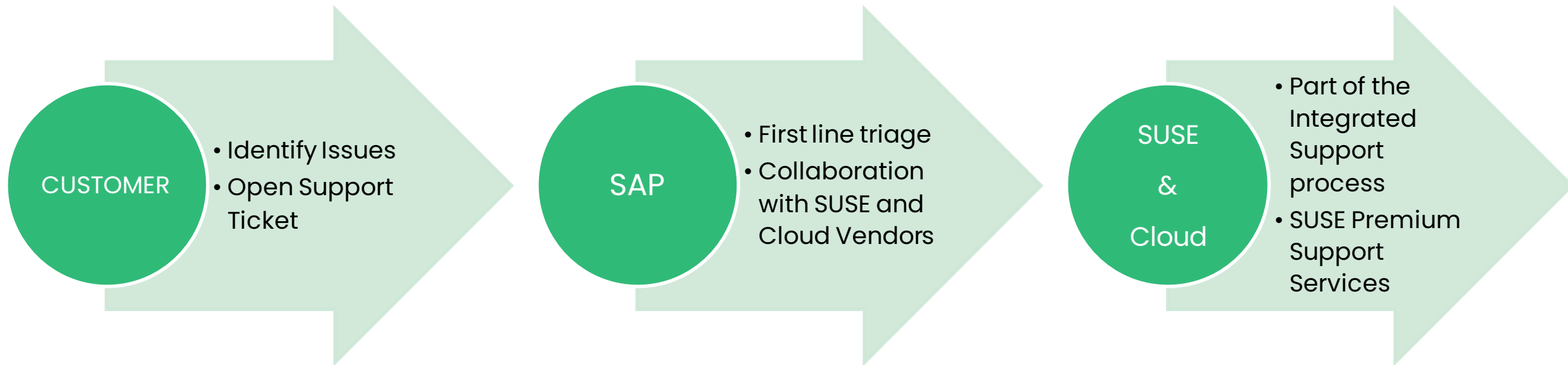
Process – Support

- Seamless collaborative process between CSPs and SUSE
- Strong governance model and shared goals
- Long-term vision to completely integrate and automate the support experience
- Continuous Cross Training and knowledge transfer

Usage Model	Level 1 & 2	Level 3
BYOS		
PAYG	CSP	 to CSP



Integrated Support Process with SAP, Cloud Vendors & SUSE



Support Tools Specifically Developed for the Cloud

- Layers of support in the cloud often result in delay in resolution
 - e.g. SUSE ⇔ CSP ⇔ Service Provider ⇔ Customer
- SUSE Support has developed customized tools to:
 - Increase Data Collection Accuracy
 - Increase Efficiency
 - Increase Sanity
 - Decrease Unnecessary Meetings
 - Decrease Time to Resolution



Increased
Customer
Satisfaction



Google Cloud



Cost Optimization

Recommended Process

- Estimate cost using the Pricing Calculator
- Tune your environment
- Wait for things to Settle
- Apply SUSE Discount for Long Term Commitment

Don't Make These Mistakes

Wait too long to optimize, get frustrated by the highly hourly rate

Think you can guess everything in advance and get locked into wrong commitment





SUSE Solutions for SAP

Market Leadership, Innovation & Agility

SAP HANA, SAP Data Intelligence, SAP Business One developed on SUSE

SUSE always the 1st to market with SAP:

- **SAP Deployment Validation and Monitoring (2022)**
- **Azure Automation Framework for SAP (co-dev, 2021)**
- **SAP Data Intelligence Validated on Rancher RKE (2021)**
- **Full SAP Automation & Monitoring (2020)**
- **Azure Monitor for SAP (co-dev, 2020)**
- **GCP SUSE High Availability Extension (HAE) (2020)**
- **IBM PMEM for SAP HANA (2019)**
- **IBM Power VM for SAP HANA (2019)**
- **Azure VM HA SBD Fencing (2018)**
- **Azure HANA Large Instance (HLI) (2018)**
- Intel Optane™ for SAP HANA (2018)
- Certified KVM for SAP HANA (2018)
- Live kernel patching for SAP (2017)
- First AWS EC2 OS for SAP (2015)
- SAP HANA System Replication HA (2014)
- Open-Source HA for NetWeaver (2012)
- OS for SAP HANA (2011)

SUSE's Market Leadership

- **70%** of all SAP applications on Linux
- **85%** of SAP HANA installations
- **99%** of IBM Power Platform
- **100%** of SAP Business One deployments
- **Reference Platform** of "RISE with SAP"
- SUSE powers **SAP's Internal and External systems**
- **300+** Success Stories and Case Studies
- **20+** years of collaborative innovation with SAP
- **SAP's** Reference Development Platform

Trusted By Customers Across All Industries

Finance



Information Technology



Media and Entertainment



Healthcare



Government / Defense



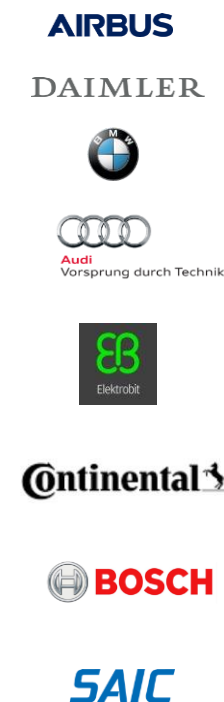
Retail



Telecom



Manufacturing & Automotive



Technology and other industries



SUSE's Innovations for SAP S/4HANA and Cloud Migration



AUTOMATION

- Automated SAP landscape deployment in the cloud
- Built-in best practices to speed up provisioning and reduce errors
- Reduce deployment from months or weeks to days



VALIDATION

- Rule based auto detection of SAP HA configuration issues
- Powerful pre-go-live validation to ensure quality
- Continuous check in production to avoid deviation and outage

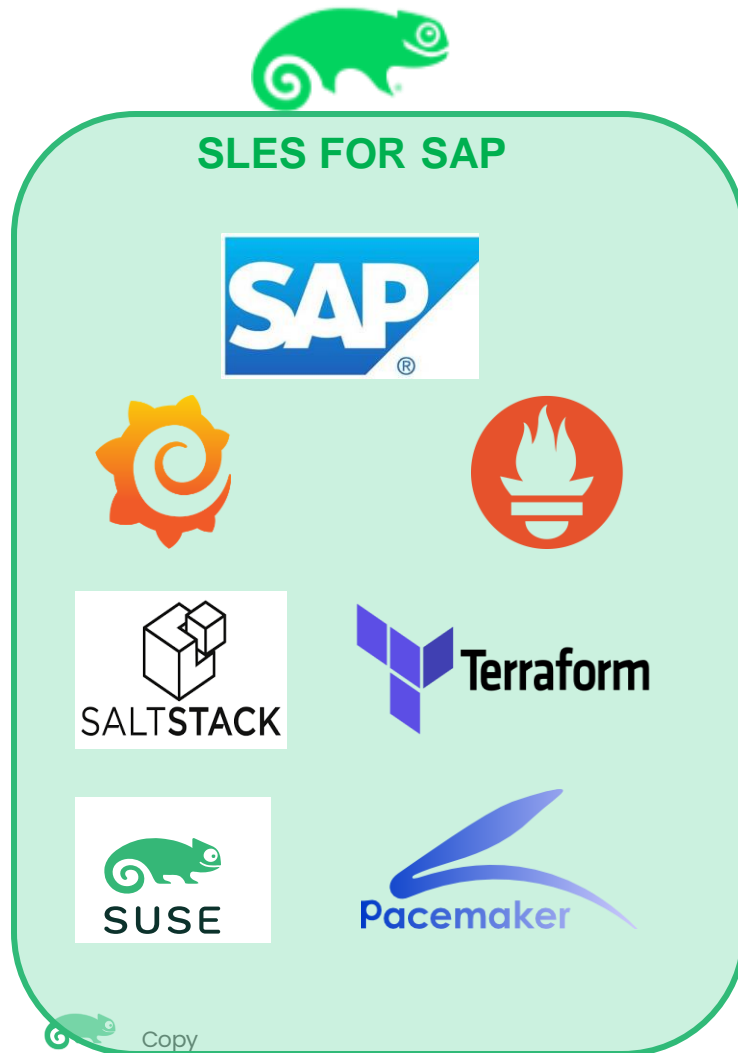


MONITORING

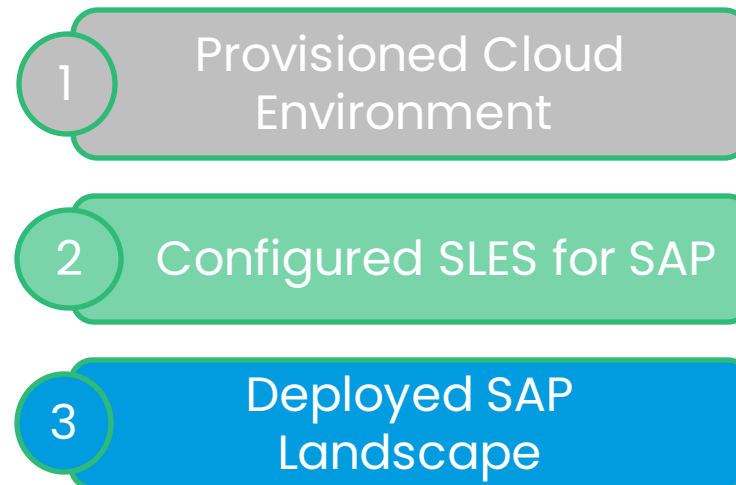
- Gain insights into SAP HA clusters - unique in the market
- Proactive monitoring on the healthiness of the SAP landscape, fix issues before outage happens



End to End Automation of SAP Landscape



- Best practice driven
- Substantial reduction in man-hours
- Reduced probability of errors
- Minimum manual intervention
 - SAP HANA, S/4HANA, and NetWeaver
 - Single node and clusters
 - On-premise and cloud
 - Implement monitoring



SAP Validation & Monitoring – Trento

(planned shipment as part of SLES for SAP)

Trento is the Day 2 Operations Manager for customers' HANA and S/4HANA deployments

Configuration checks

Check system configurations against best practices and visualize problems;
Provide recommendations.

Monitoring of SAP Landscape

Provide key metrics for SAP systems with alerting; include cluster resources to avoid outage

Visualization of complete SAP environment

Presents complete SAP environment, clusters, systems and their relations in a familiar way.



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AI based system checks and recommendations

AI based analysis of log files and systems to detect errors and bottlenecks – and provide recommendations .based on industries' best practices.

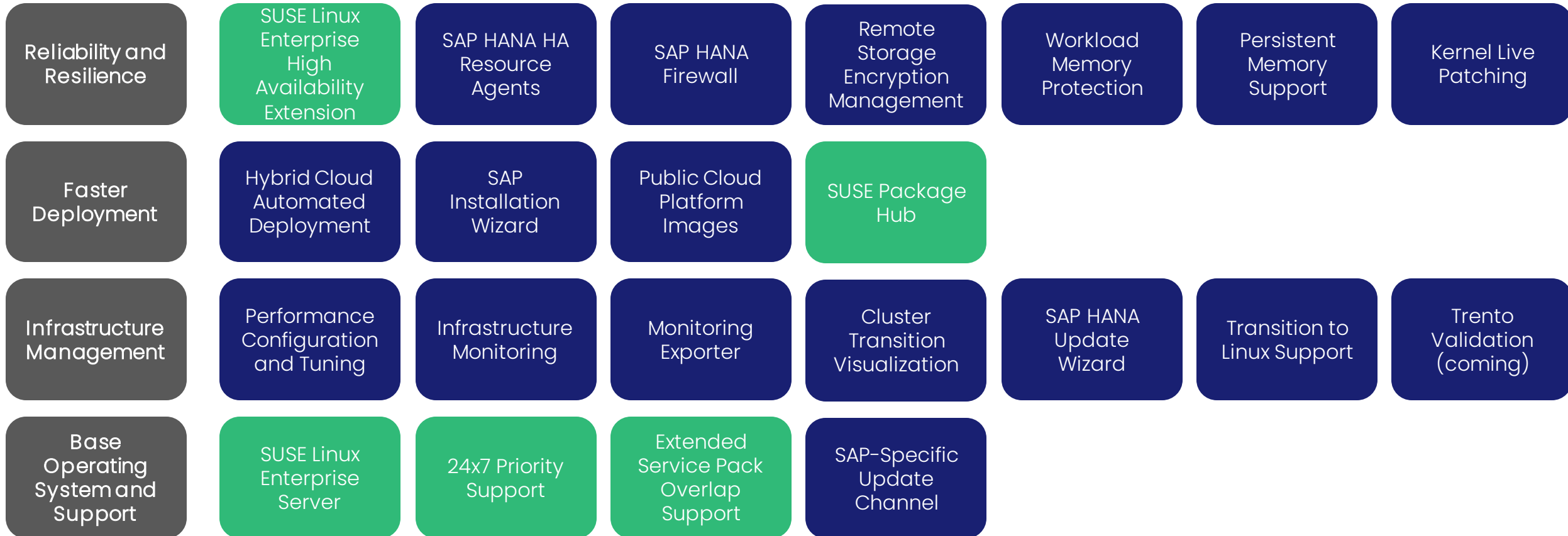
Can be deployed anywhere

Containerized Application that can be deployed wherever customers' SAP landscapes exist – on-prem or in the cloud

Ease of use

Single click install; easy to use web UI.
Discovers servers, clusters, systems and full landscapes.

SUSE Linux Enterprise Server for SAP Applications



SUSE Product and Services



SUSE features for SAP systems



SLES vs SLES4SAP PAYG Images

SLES
PAYG

BOTH ARE
CERTIFIED
FOR SAP

SLES4SAP
PAYG



LINUX
KERNEL

OTHER SAP
TOOLINGS

LCM

KERNEL LIVE
PATCHING

SAP HA
SOLUTIONS

HAE

ESPOS

LINUX
KERNEL

- Need to make the right choice at the beginning
- There is no in-place switch from SLES PAYG to SLES4SAP PAYG
- If a customer deploys on SLES but needs HA later, the only option is to re-deploy on SLES4SAP then migrate the applications





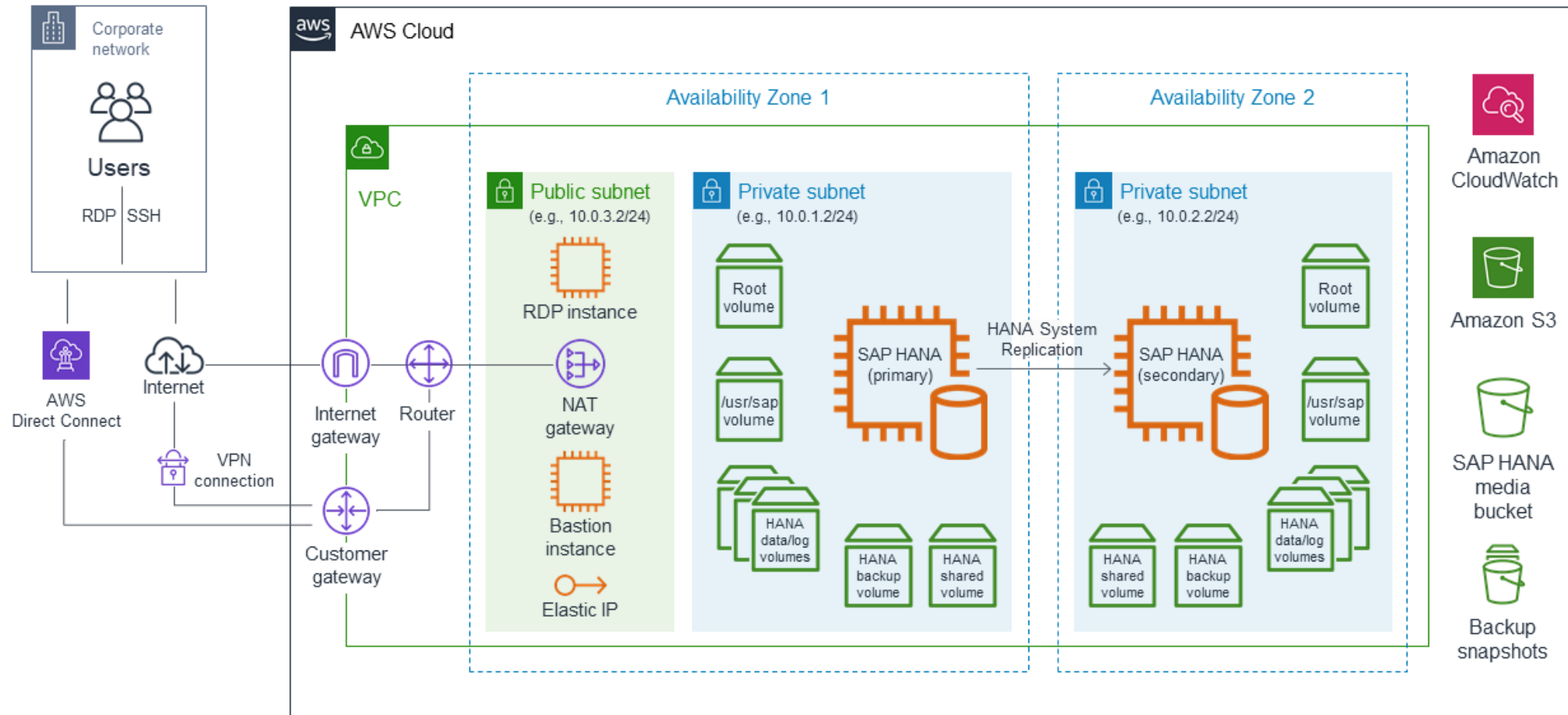
Say Goodbye to Downtime

Solutions to Reduce Unplanned Downtime

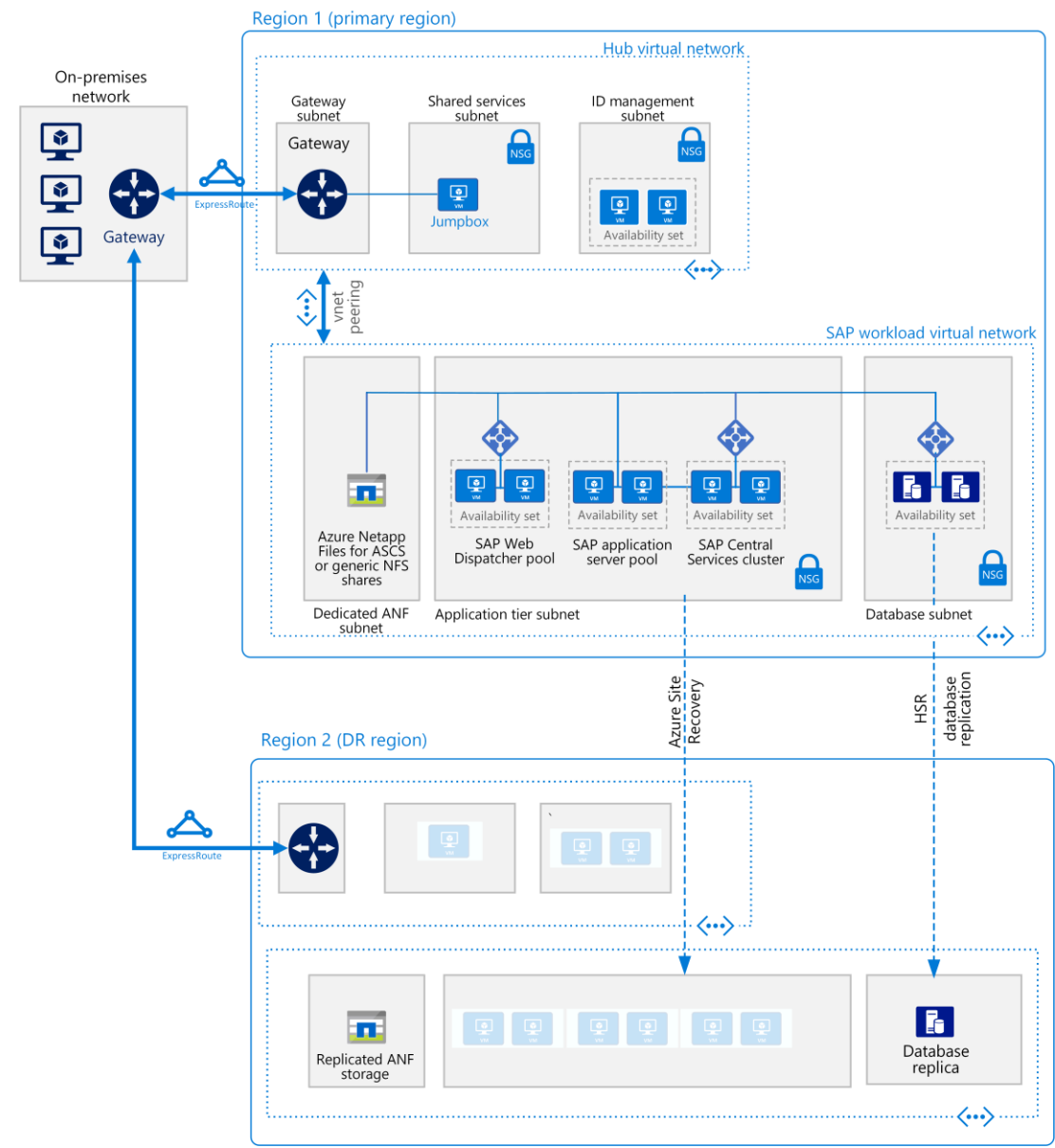
- **High Availability for 24/7 Systems**
 - Automated failover for HANA, NetWeaver & S/4HANA
 - HANA System Replication based HA solutions
 - HANA System Replication Scale-Up in Pacemaker, various scenarios
 - HANA System Replication Scale-Out in Pacemaker, various scenarios
 - NetWeaver & S/4HANA HA solutions
 - ENSA1 certified ASCS/ERS HA
 - ENSA2 certified ASCS/ERS HA
- **Proactive Monitoring**
 - SUSE SAP Monitoring Solutions
 - Insights to the entire SAP landscape

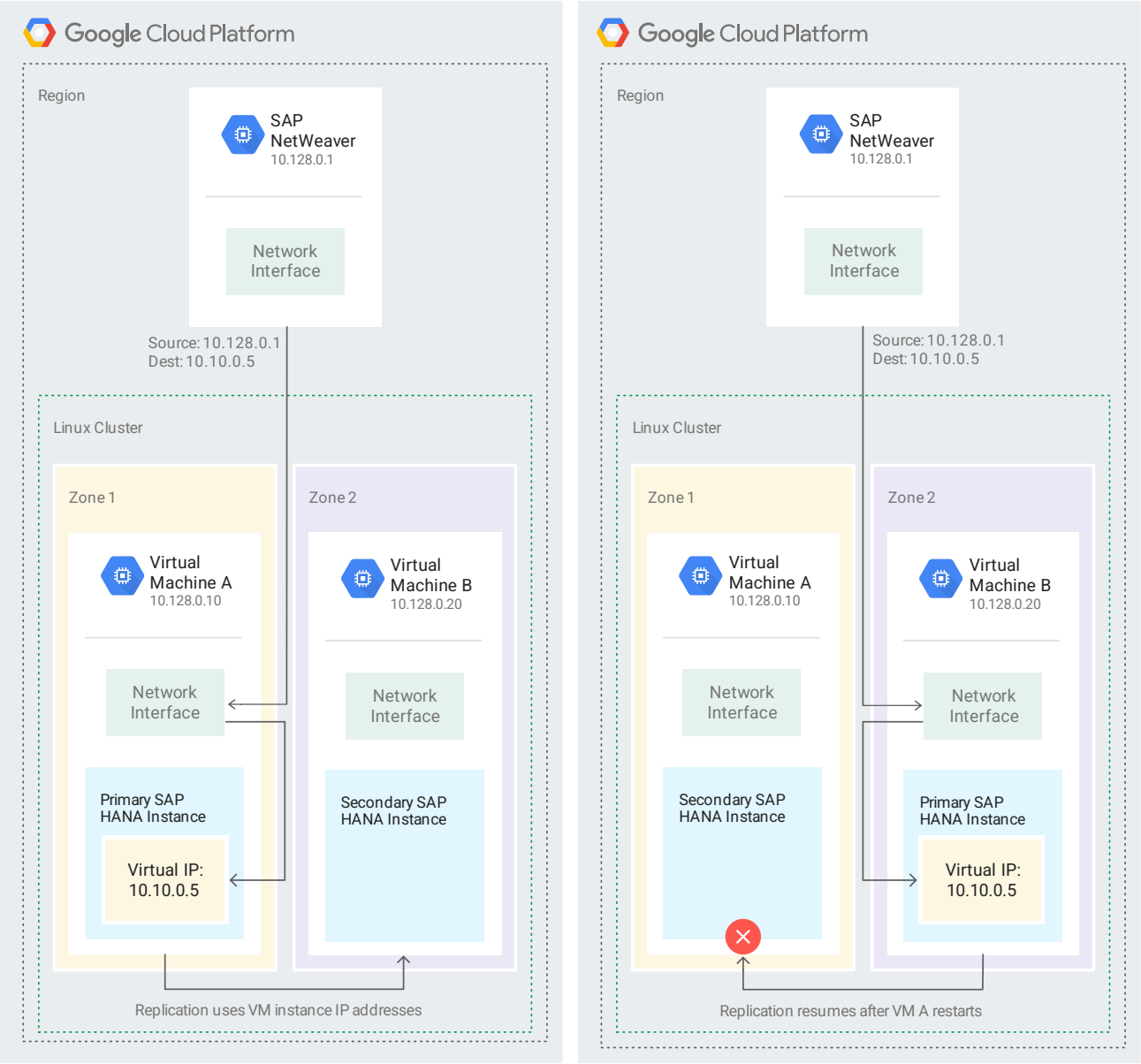


AWS



Azure





Lessons Learned

- High Availability configuration is the most challenging part of SAP deployment
- Follow SUSE's Best Practices
- Automate the Cluster Installation and Configuration
- Engage SUSE as early as possible, better from Design Phase
- Engage SUSE Services when needed



Solutions to Reduce Planned Downtime

- **High Availability for 24/7 systems**
 - SAP HANA rolling update in a cluster
- **Reduce Downtime After HANA Reboot (supported on selected Cloud)**
 - SAP HANA on Persistent Memory
 - Intel Optane® DC NVDIMMs / IBM pMEM
- **Keep SAP Systems Secure**
 - Live Linux kernel patching
- **Maintain a Cluster & Avoid Split-brain**
 - SAP Application Server HA-Interface Certified



SUSE Helps Accelerate SAP S/4HANA and Cloud Migration



AGILITY & RELIABILITY & SECURITY

- Timely HANA certification; No gap
- Robust cloud images and update infrastructure
- Developer of solutions for planned and unplanned downtime
- Federal security standard certified



DEPLOY SAP SERVICES FASTER

- Automated SAP landscape deployment in on-prem, hybrid, and public cloud environment
- Built-in best practices to speed up provisioning and avoid errors



STRENGTHEN OPERATIONS

- Proactive validation & monitoring to avoid outage
- Real time insights and perf optimization
- Best practice driven patching and upgrade
- Integrated support with SAP; Fast response with purpose-built tools; Developer expertise to quick resolution



COST OPTIMIZATION OPTIONS

- Flexible Cloud Pricing
- BYOS
- PAYG
- Long Term Commitment Discount
- Azure Hybrid Benefits





Thank you

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