SUSE

April 20, 2022

Accelerate the Migration to SAP S/4HANA in the Cloud
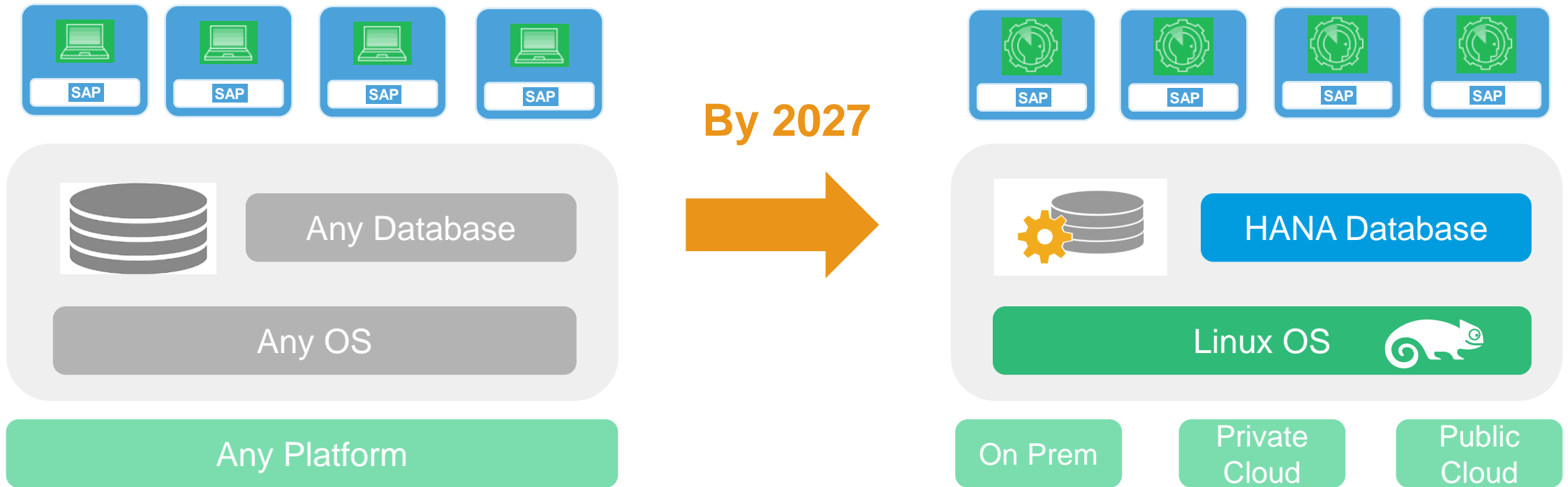
Today's Speaker

Cari Rockwell
Senior AWS Alliance
Manager
SUSE
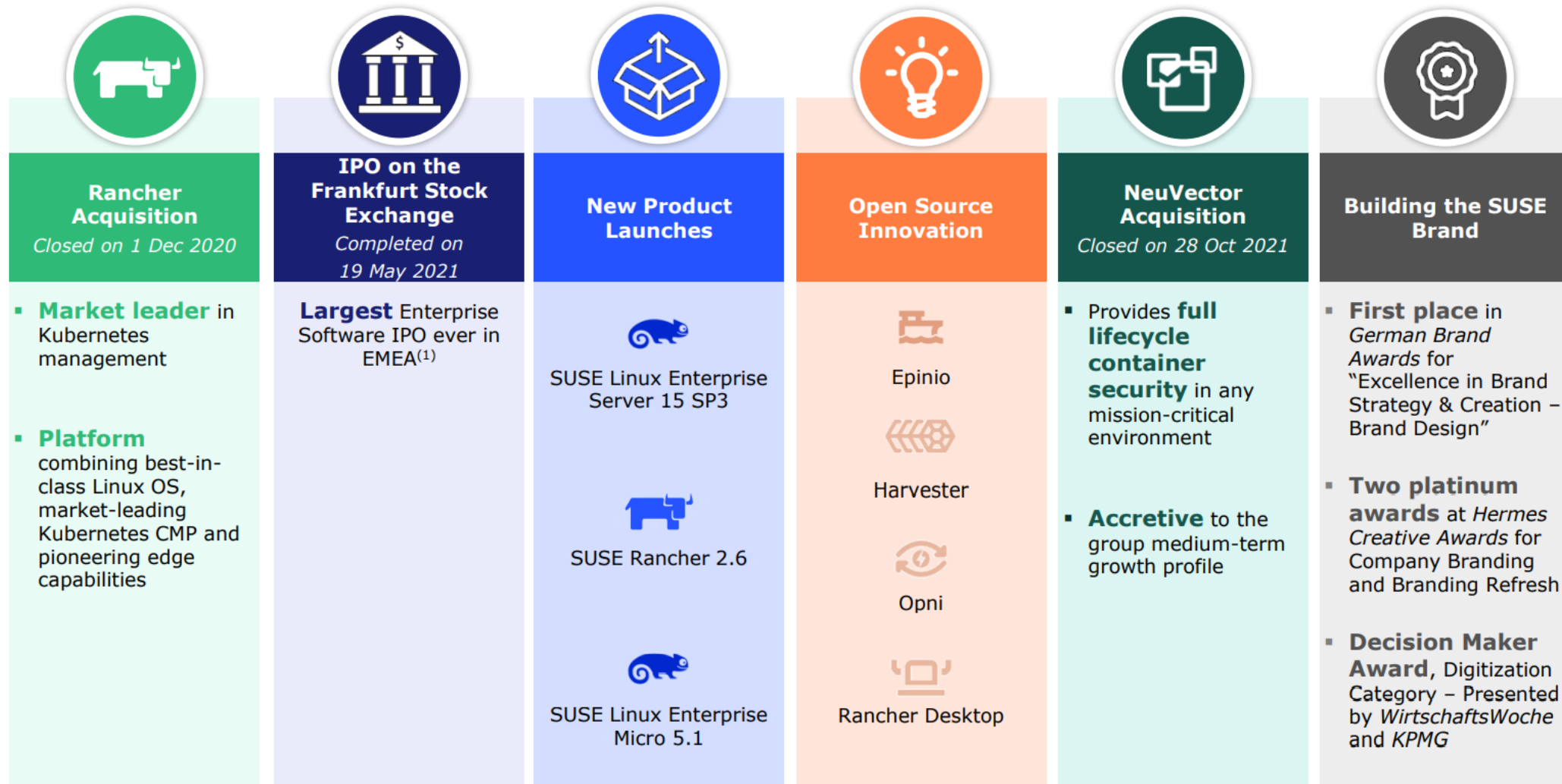Cari.rockwell@suse.com

SUSE

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

By 2027

SAP	SAP	SAP	SAP

Any Database

Any OS

Any Platform

SAP	SAP	SAP	SAP

HANA Database

Linux OS

On Prem   Private Cloud   Public Cloud

* Based on an ASUG survey in Feb 2022: 31% are live, 13% have started to move, 42% have plans to move, 12% have plans on hold, 3% currently have no plans to move

SUSE Today

World's Largest Independent Open-Source Company

Rancher Acquisition
Closed on 1 Dec 2020

- **Market leader** in Kubernetes management

- **Platform** combining best-in-class Linux OS, market-leading Kubernetes CMP and pioneering edge capabilities

IPO on the Frankfurt Stock Exchange
Completed on 19 May 2021

Largest Enterprise Software IPO ever in EMEA[1]

New Product Launches

SUSE Linux Enterprise Server 15 SP3

SUSE Rancher 2.6

SUSE Linux Enterprise Micro 5.1

Open Source Innovation

Epinio

Harvester

Opni

Rancher Desktop

NeuVector Acquisition
Closed on 28 Oct 2021

- Provides **full lifecycle container security** in any mission-critical environment

- **Accretive** to the group medium-term growth profile

Building the SUSE Brand

- **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

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SAP HANA and NetWeaver Certification in the Cloud

SUSE

Certification Process for SAP HANA and NetWeaver

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

SUSE
BUILDS NEW IMAGES
- BYOS
- PAYG

SUSE
WORKS WITH SAP TO GET CERTIFIED *

CLOUD or IHV
WORKS WITH SAP TO GET CERTIFIED
- IMAGES WITH THE NEW SLES FOR SAP RELEASE
- TARGET INSTANCE TYPES
- HYPERVISORS
- HARDWARE APPLIANCES

* CERTIFICATION:
- SERVICE PACK FOR SAP HANA
- MAIN-STREAM FOR S/4HANA AND NETWEAVER
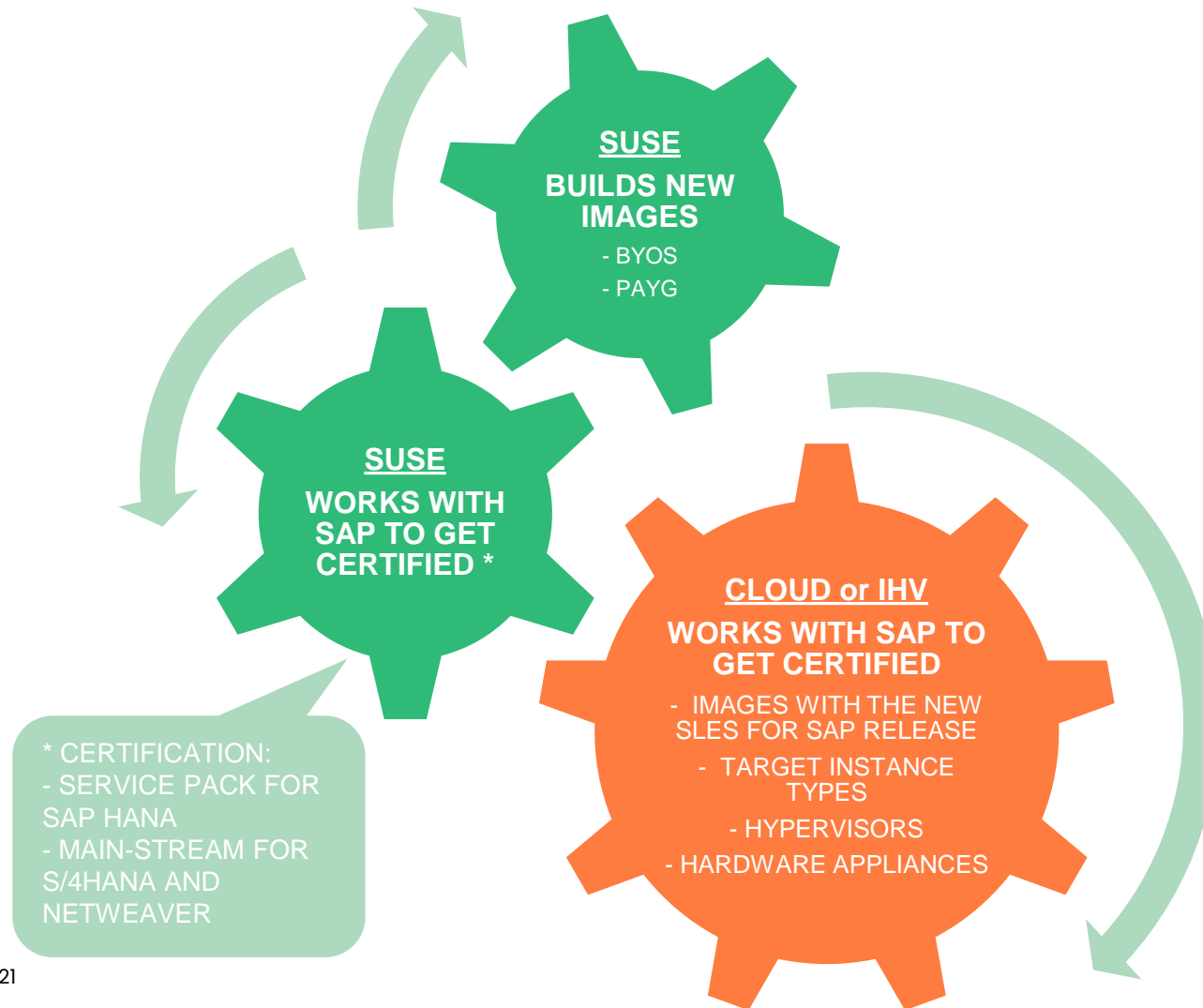
Integrated Support Process with SAP, Cloud Vendors & SUSE

CUSTOMER
- Identify Issues
- Open Support Ticket

SAP
- First line triage
- Collaboration with SUSE and Cloud Vendors

SUSE & Cloud
- Part of the Integrated Support process
- SUSE Premium Support Services
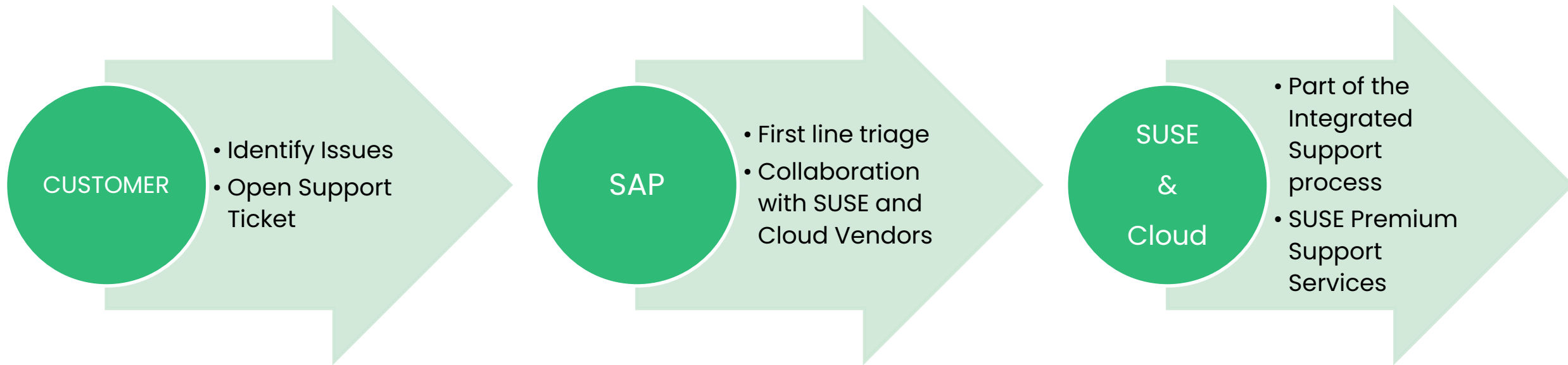
SUSE Solutions for SAP

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
AMERICAN EXPRESS	CISCO	AMC	Cerner	BAE SYSTEMS	Carrefour SA	Bell	AIRBUS	Schneider Electric
AVIVA	intel	CNN	CVS Health	LOCKHEED MARTIN	Office DEPOT OfficeMax	COMCAST	DAIMLER	SIEMENS
BAILLIE GIFFORD	NVIDIA	Genentech	Genentech	AIRBUS	carhartt	COX	BMW	Schlumberger
Deutsche Bank	QUALCOMM	Disney	illumina	DB BAHN	SHOPPERS DRUG MART	DXC.technology	Audi Vorsprung durch Technik	Honeywell
Fidelity INVESTMENTS	SAMSUNG	NBC	imagia		Kroger	ERICSSON	Elektrobit	RioTinto
HSBC	SAP	nielsen	invisalign	Ministry of Children, Community & Social Services	M&S EST. 1884	OPTUS	Continental	tyco
MIZUHO	servicenow	UBISOFT	Johnson&Johnson	Raytheon Technologies	WING ON Founded 1907	orange	BOSCH	BURTON
RAYMOND JAMES	SOPHOS	MERCK	Merck	United States Air Force	Walgreens Boots Alliance	Telstra	SAIC	BASF We create chemistry
TD Bank	teradata.	ZIFF DAVIS	Pfizer		Walmart	T Mobile		DUPONT
us bank	Zillow				Hasbro	verizon		
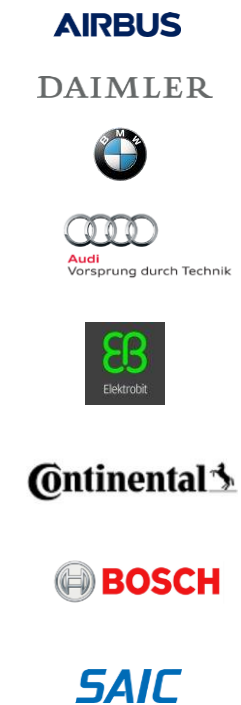
SUSE's Innovations for SAP S/4HANA and Cloud Migration

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
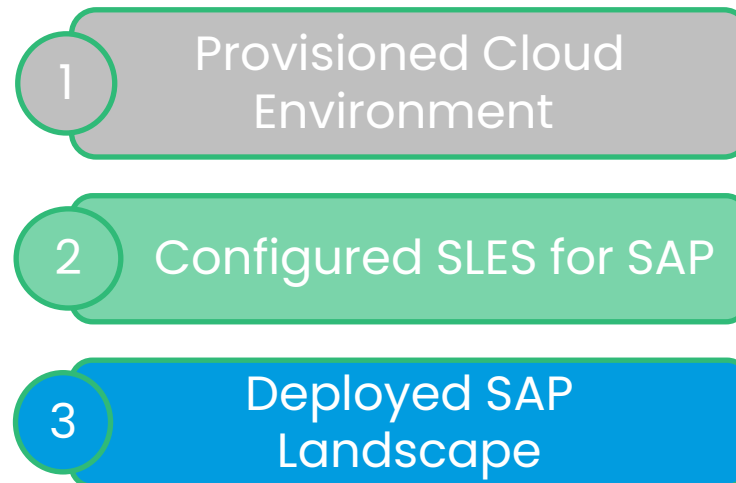
MONITORING

- 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

SLES FOR SAP

SAP

SALTSTACK

Terraform

SUSE

Pacemaker

Copy

1 Provisioned Cloud Environment

2 Configured SLES for SAP

3 Deployed SAP Landscape

aws   Azure   Google Cloud   IBM Cloud

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.

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.
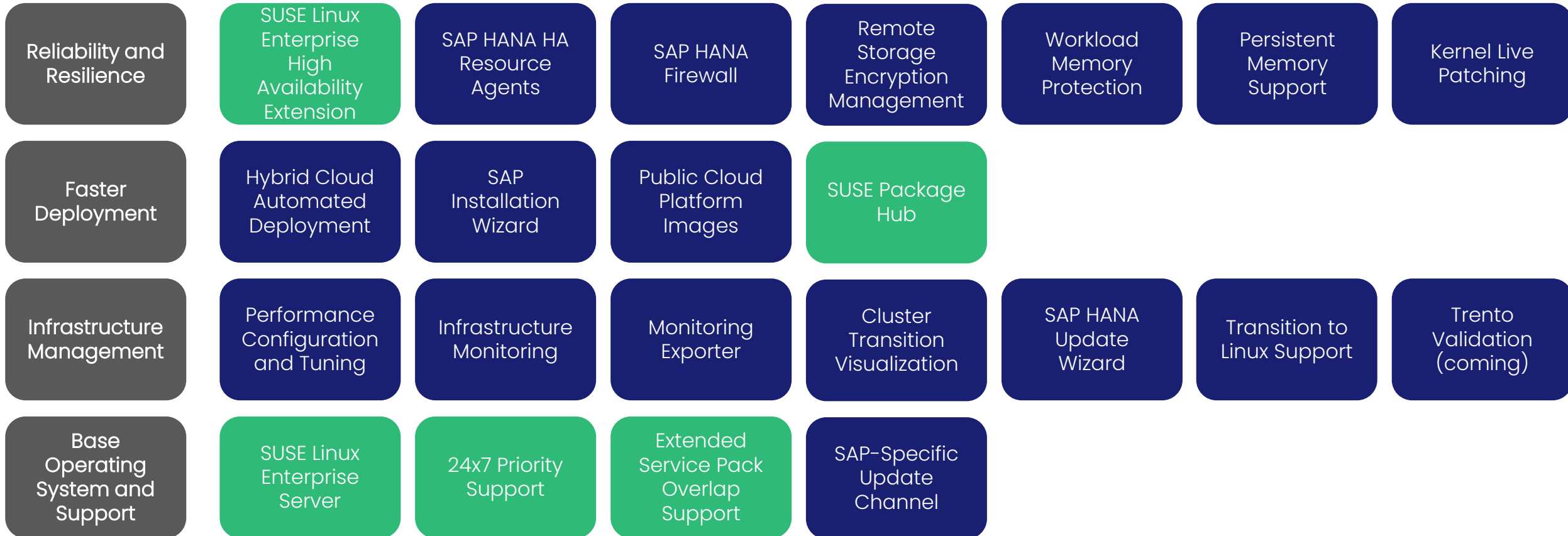
Can be deployed anywhere

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

Reliability and Resilience	SUSE Linux Enterprise High Availability Extension	SAP HANA HA Resource Agents	SAP HANA Firewall	Remote Storage Encryption Management	Workload Memory Protection	Persistent Memory Support	Kernel Live Patching
Faster Deployment	Hybrid Cloud Automated Deployment	SAP Installation Wizard	Public Cloud Platform Images	SUSE Package Hub			
Infrastructure Management	Performance Configuration and Tuning	Infrastructure Monitoring	Monitoring Exporter	Cluster Transition Visualization	SAP HANA Update Wizard	Transition to Linux Support	Trento Validation (coming)
Base Operating System and Support	SUSE Linux Enterprise Server	24x7 Priority Support	Extended Service Pack Overlap Support	SAP-Specific Update Channel			

■ SUSE Product and Services   ■ SUSE features for SAP systems

Say Goodbye to Downtime

# Solutions to Reduce <u>Unplanned</u> 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

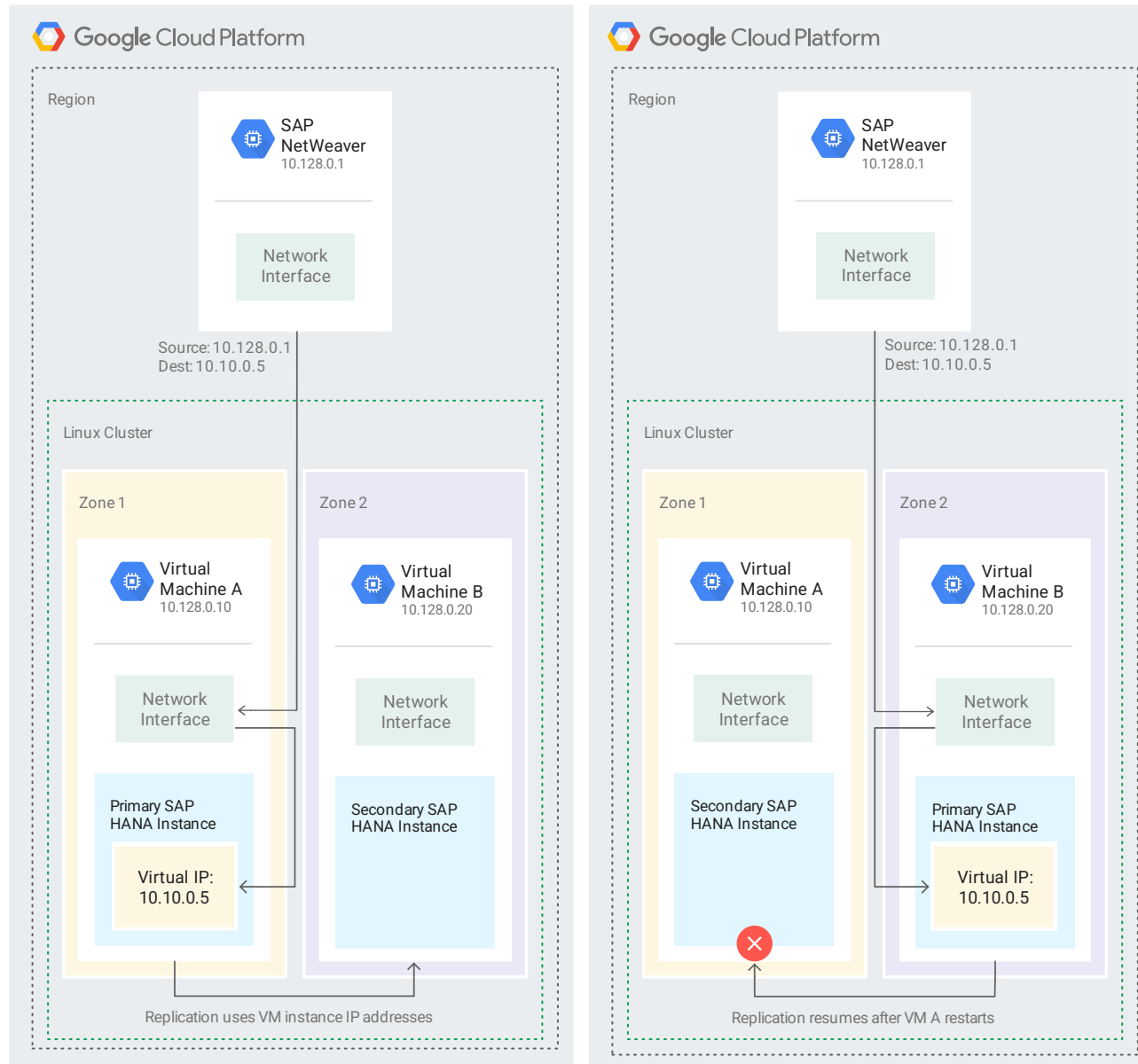- Insights to the entire SAP landscape

AWS

Azure

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GCP
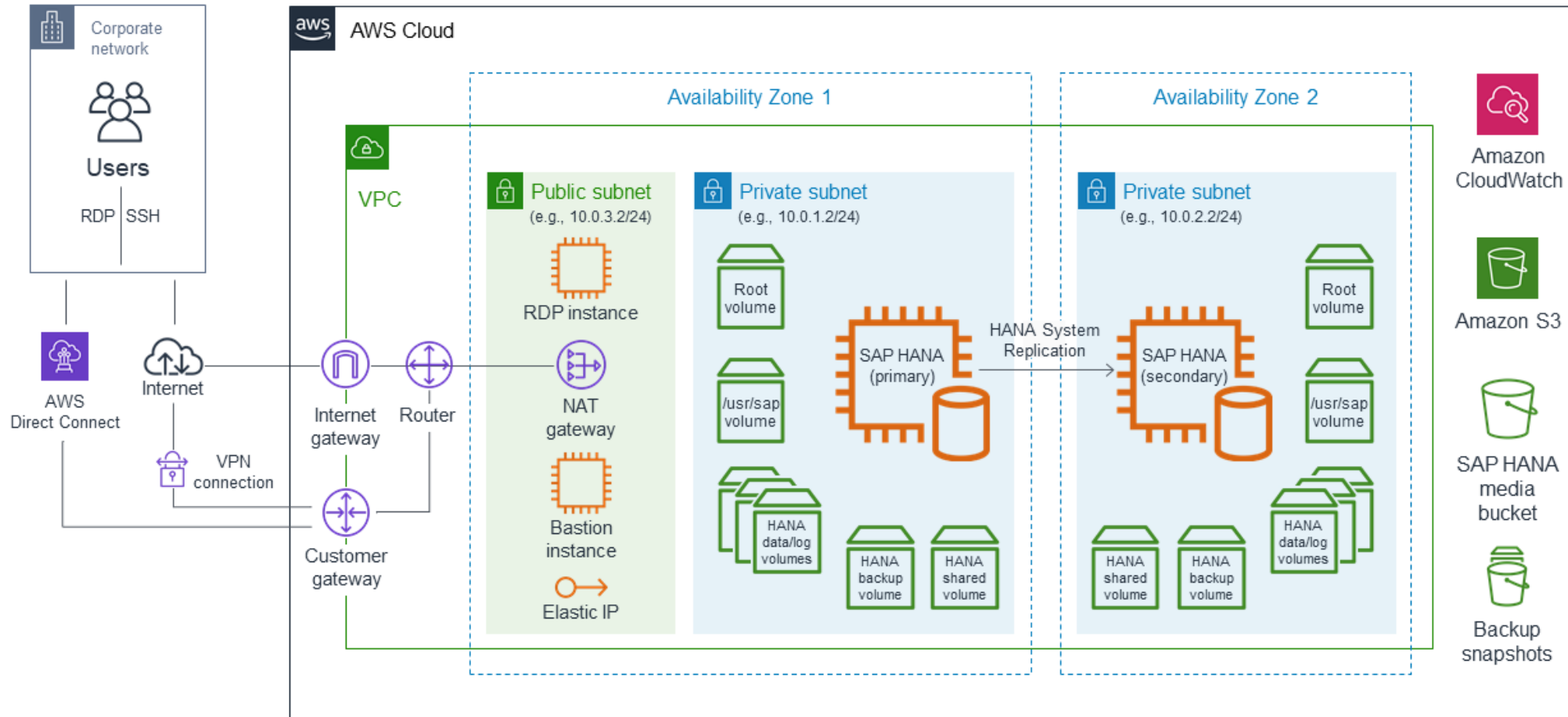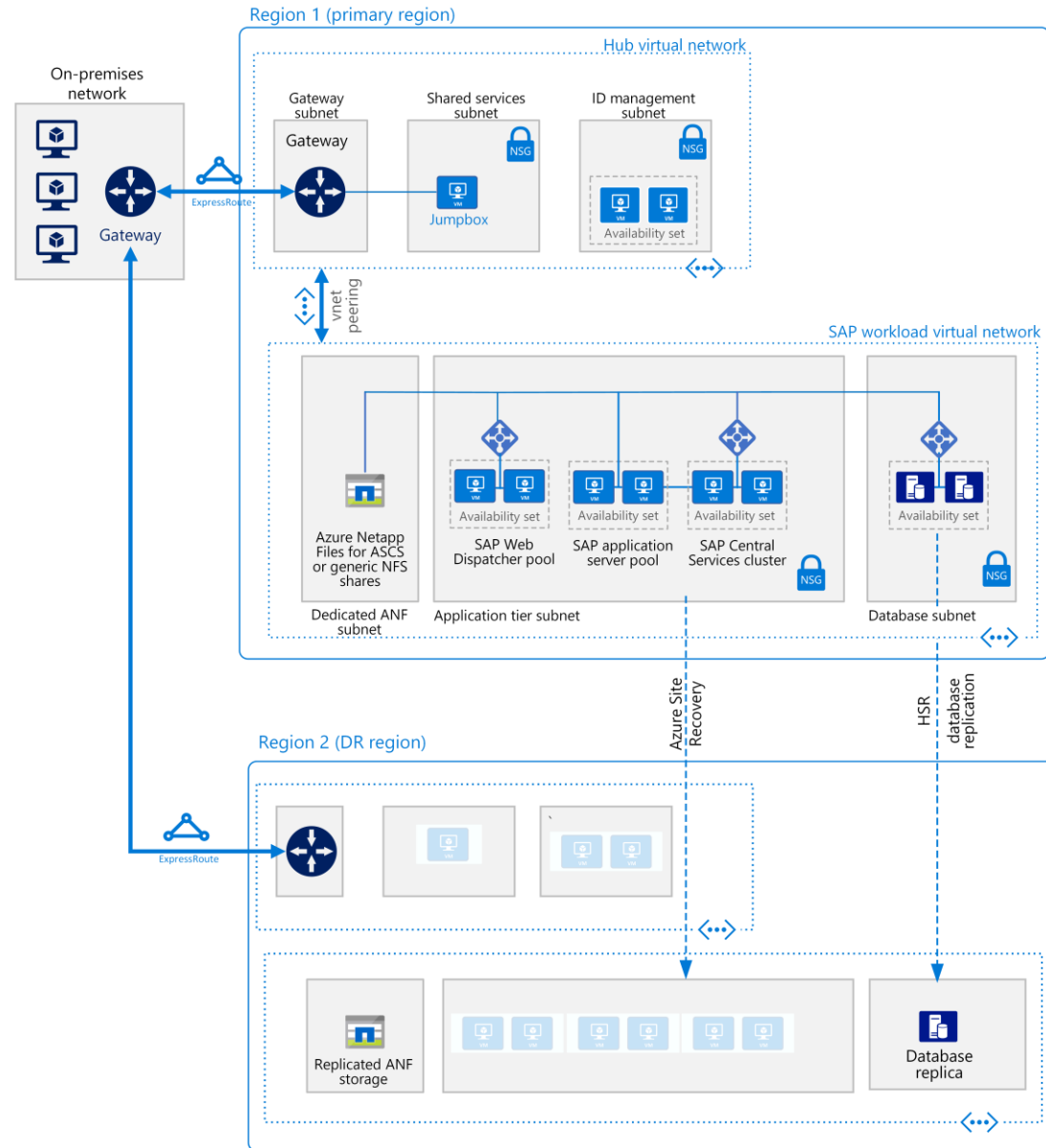
Lessons Learned

- 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 <u>Planned</u> 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

SUSE

Thank you

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