RISE with SAP S/4HANA with Hybrid Cloud

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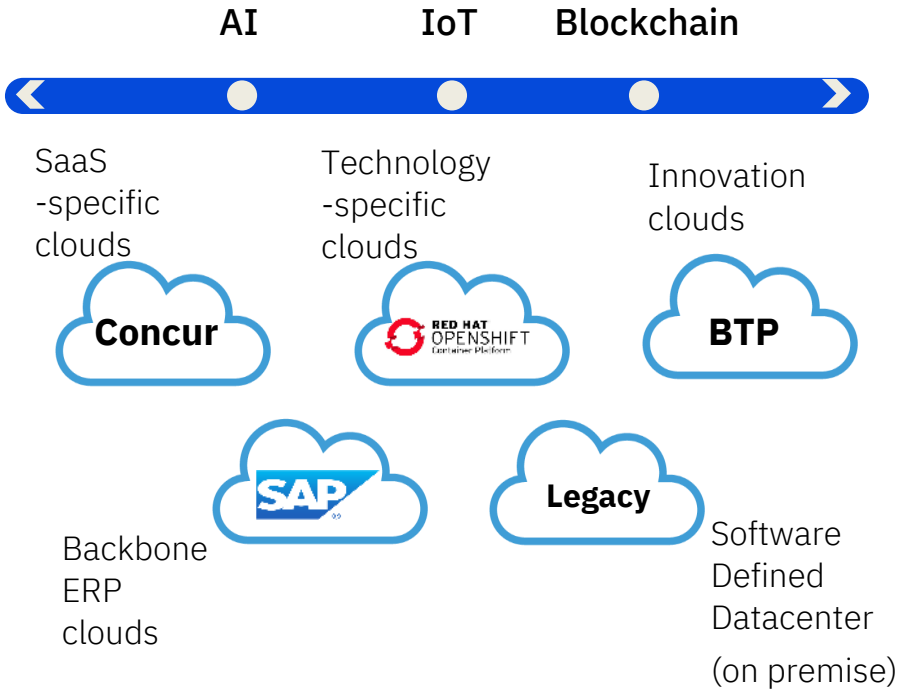
Agenda

- The hybrid multicloud paradigm
- RISE with SAP choices
- RISE with SAP support
- Application customization and extensibility
- Client offerings and success

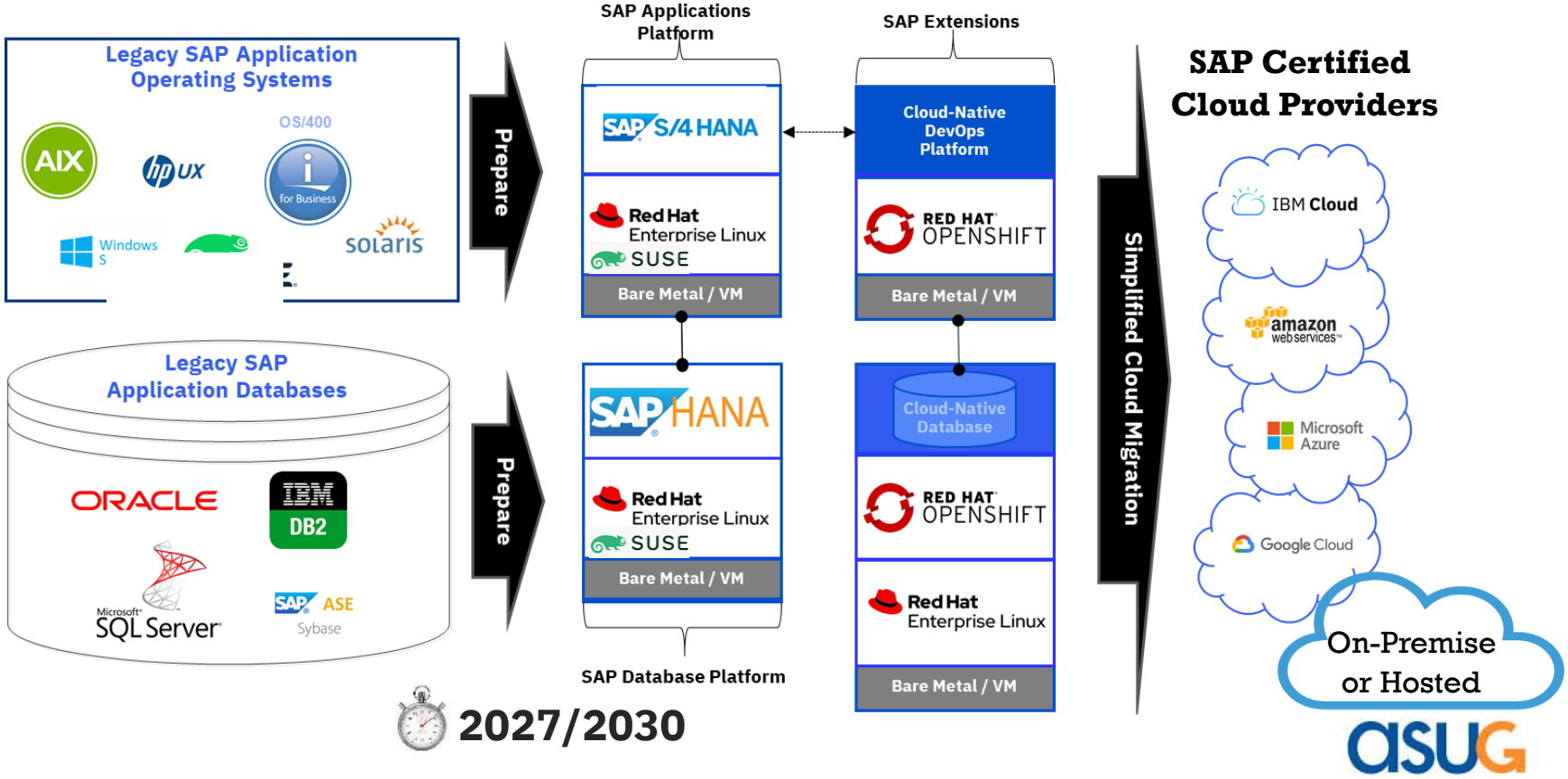
The new normal is hybrid, multicloud, and open

The focus enterprise application use cases for this session will be SAP, as one of the world's largest packaged application providers



The hybrid cloud journey to RISE with SAP

Three options available: Public, Private and CDC (on-premise)



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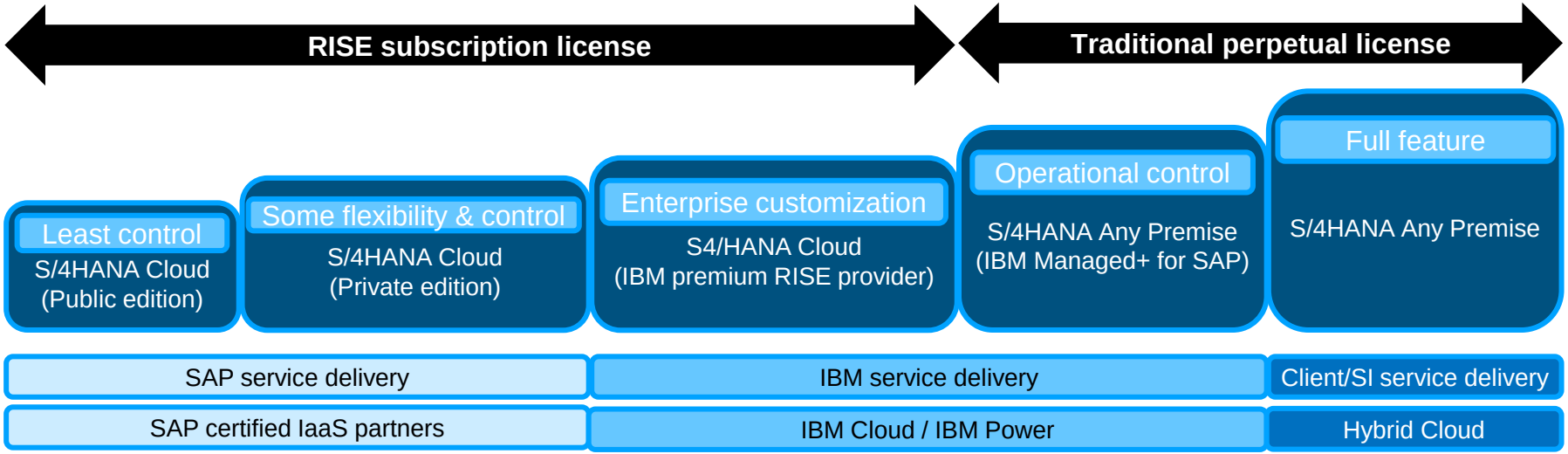
SAP S/4HANA Deployment Options



- Entry level
- No customization
- Grow with SAP

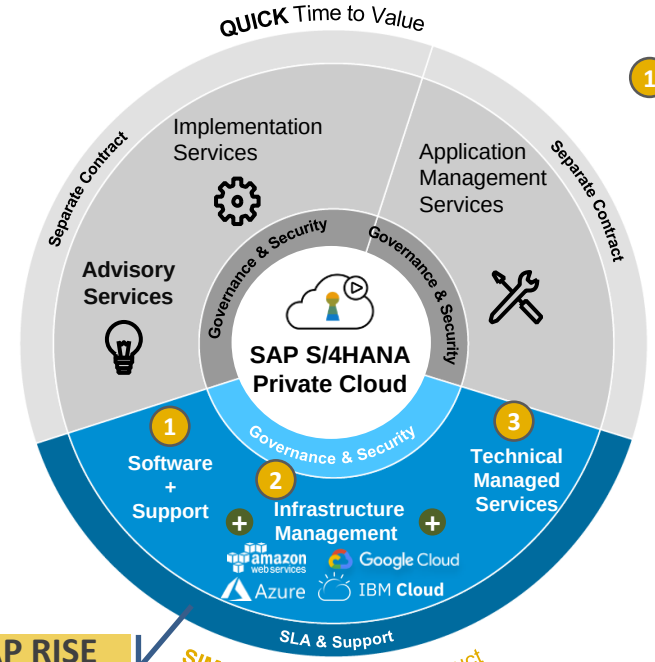
- Limited customization
- Good for SMB and mid-market
- RISE with SAP

- Far more bespoke
- Good for typical enterprise
- Still SAP RISE contract, IBM delivery

- Full operational control & visibility
- Good for enterprises in regulated domains
- IBM contract and delivery

- Full Control
- DIY

RISE with SAP Commercial Construct



1 Software & Support

- SAP Software, Enterprise Support & Maintenance releases
- Cloud Connectors: SAP Ariba, SAP SuccessFactors, SAP Concur, SAP IBP
- SAP Adobe Document Services for printing

2 Cloud Infrastructure

- All compute, storage, & network hardware needed for SAP S/4HANA Dev/Test/Prod
- SAP Certified Cloud Infrastructure
- Highest Flexibility & Scalability
- IBM Cloud running in SDS datacenters

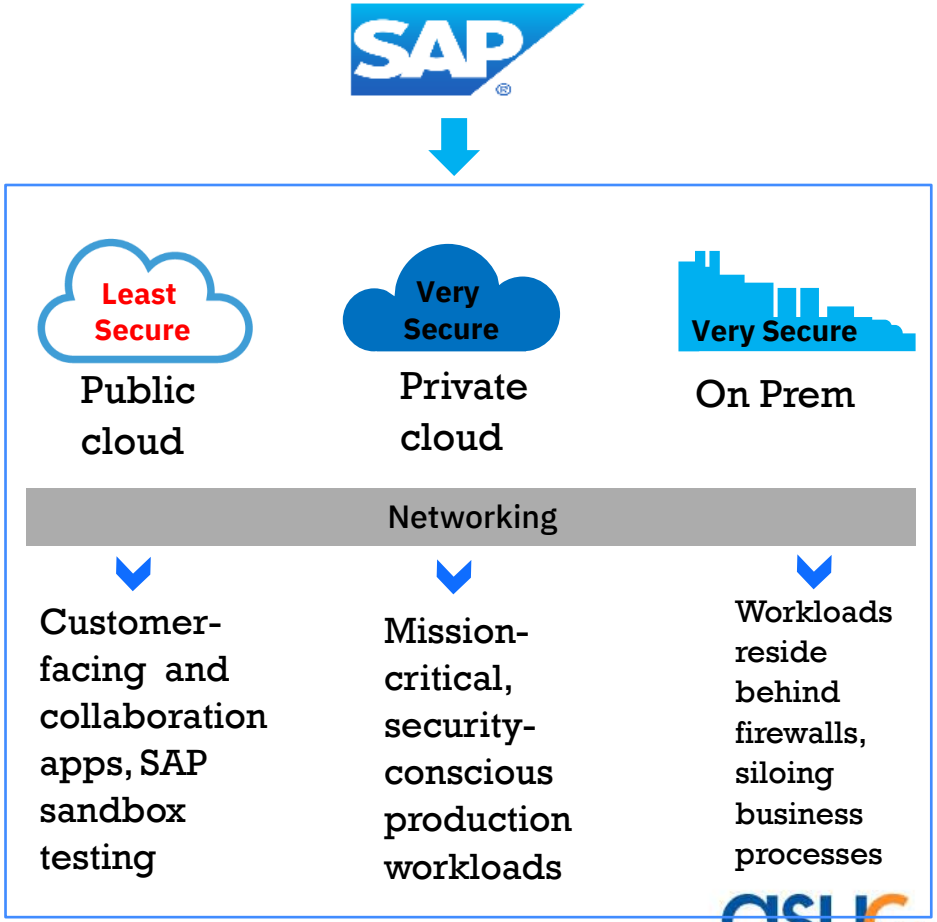
3 Technical Managed Services

- High Availability & Business Continuity
- Application SLA: 99,7% for productive system, 95% for non-productive systems
- Installation & Configuration (Cloud provisioning, Operating system, SAP software, database)
- O/S level patches, etc.
- Security & Intrusion detection services
- Daily backup & recovery
- HA and DR operations (optional)

Hybrid Cloud:
Choose your Cloud Privacy model

A Private Cloud model is typically chosen for SAP production workloads.

A recent ASUG study found that only 8% of SAP customers would consider deploying their production workloads to a Public Cloud. Private Cloud solutions run within a Public Cloud but incorporate physical isolation for each client for increased security and disruption from "noisy neighbors".



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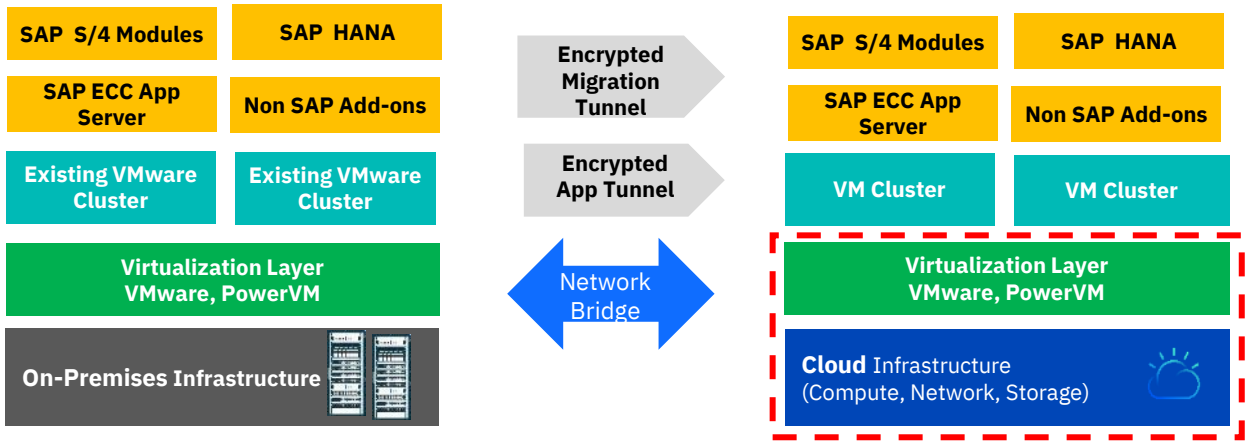
Exploring the Cloud Virtualization model

Client Triggers

- Desired to move SAP workloads to the Cloud
- SAP ECC to S4/HANA migration mandate
- Expanded Capacity Needs
- Disaster Recovery on the Cloud
- Divestitures/Carve outs

Client Values

- Frictionless migration, retain investment, no refactoring
- Reduced cost, greater flexibility, higher resiliency
- Minimal business disruption (keep your IP addresses)
- On-Demand SAP Certified Infrastructure
- Preserve portability and choice



#1 VMware Cloud Partner with over 2,000 clients

100,000+ VMs migrated to IBM Cloud

IBM Cloud is the only cloud provider to offer SAP-certified VMware & Power Systems (PowerVS)

IBM Hybrid Cloud for RISE with SAP

Intel x86 (IBM Cloud)

Hundreds of large-scale SAP Clients

- More than 10K hosts
- More than 1PB of memory
- More than 20PB of storage

Support for Intel Optane* persistent memory for fast HANA shutdown and startup

Largest HANA Database system - **scale up: 12TB, scale out: 60TB**

Largest Virtualized HANA Database system – **scale up: 6TB**

IBM Power Systems

4500+ SAP HANA clients (On-premise & Cloud)

Ranked # 1 for last 14 years in being the most reliable server

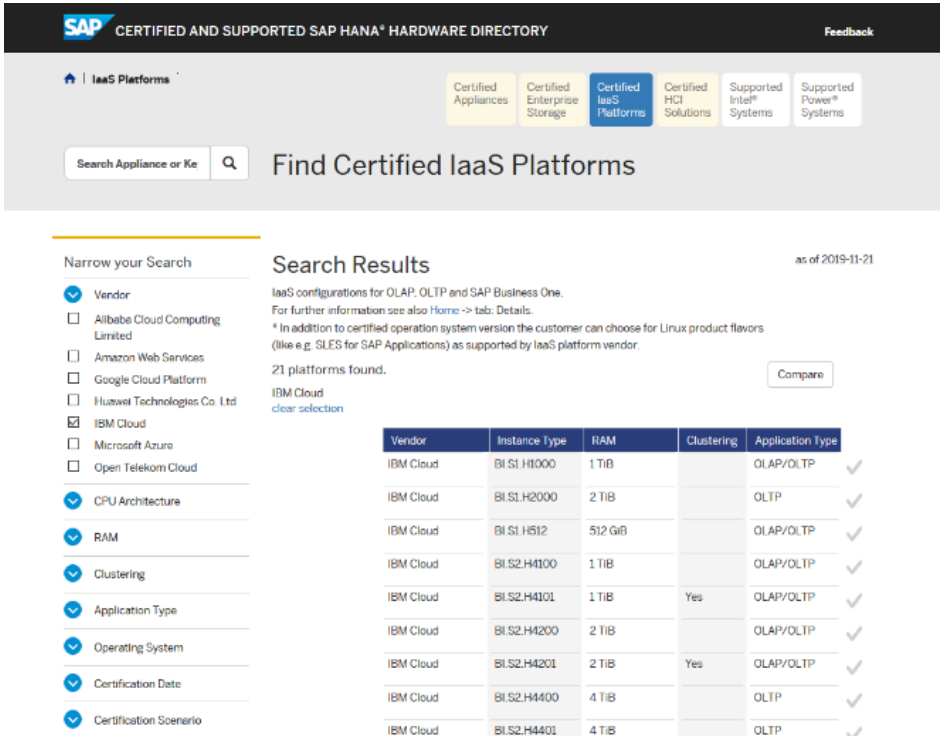
Support for persistent memory for fast HANA shutdown and startup (On-premise)

Largest Virtualized HANA Database System – **scale up: 40TB (22.5 TB in Cloud)**

Scale workload more granular .1 CPU and 1GB memory

Certified and Supported SAP HANA Hardware Directory

Reference: SAP Certified Cloud Provider Options

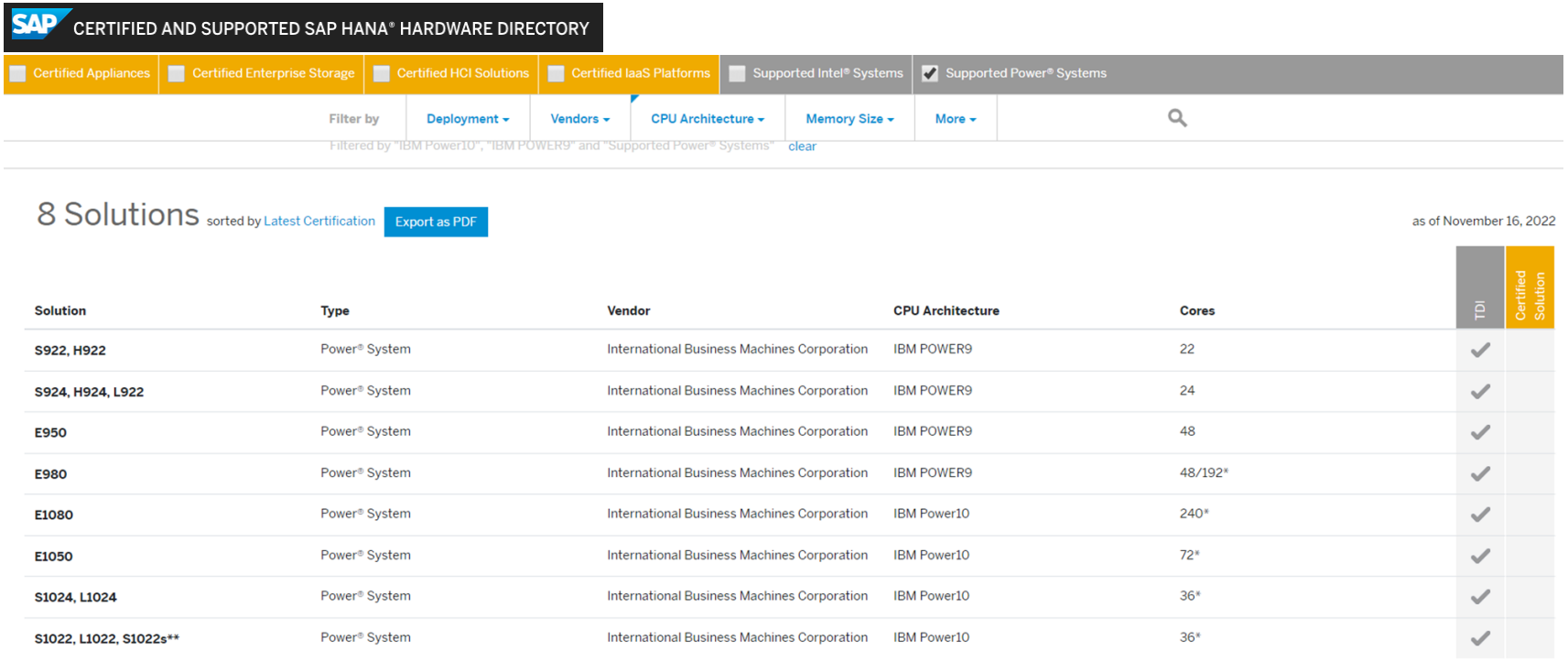


- Most factual and reliable golden reference of SAP Certified IaaS
- Compare and contrast with other SAP IaaS Cloud Providers (Azure, AWS, GCP, IBM Cloud etc…)
- Filter by CPU, Memory, Clustering, Operating System (RHEL/SLES), OLTP/OLAP, etc…

Source: [Certified and Supported SAP HANA® Hardware Directory]

Certified and Supported SAP HANA Hardware Directory

Reference: SAP Supported Power Systems Options



CERTIFIED AND SUPPORTED SAP HANA® HARDWARE DIRECTORY

Certified Appliances | Certified Enterprise Storage | Certified HCI Solutions | Certified IaaS Platforms | Supported Intel® Systems | Supported Power® Systems

Filter by: Deployment | Vendors | CPU Architecture | Memory Size | More

Filtered by "IBM Power10", "IBM POWER9" and "Supported Power® Systems" clear

8 Solutions sorted by Latest Certification — Export as PDF

as of November 16, 2022

Solution	Type	Vendor	CPU Architecture	Cores	TDI	Certified Solution
S922, H922	Power® System	International Business Machines Corporation	IBM POWER9	22	✓	
S924, H924, L922	Power® System	International Business Machines Corporation	IBM POWER9	24	✓	
E950	Power® System	International Business Machines Corporation	IBM POWER9	48	✓	
E980	Power® System	International Business Machines Corporation	IBM POWER9	48/192*	✓	
E1080	Power® System	International Business Machines Corporation	IBM Power10	240*	✓	
E1050	Power® System	International Business Machines Corporation	IBM Power10	72*	✓	
S1024, L1024	Power® System	International Business Machines Corporation	IBM Power10	36*	✓	
S1022, L1022, S1022s**	Power® System	International Business Machines Corporation	IBM Power10	36*	✓	

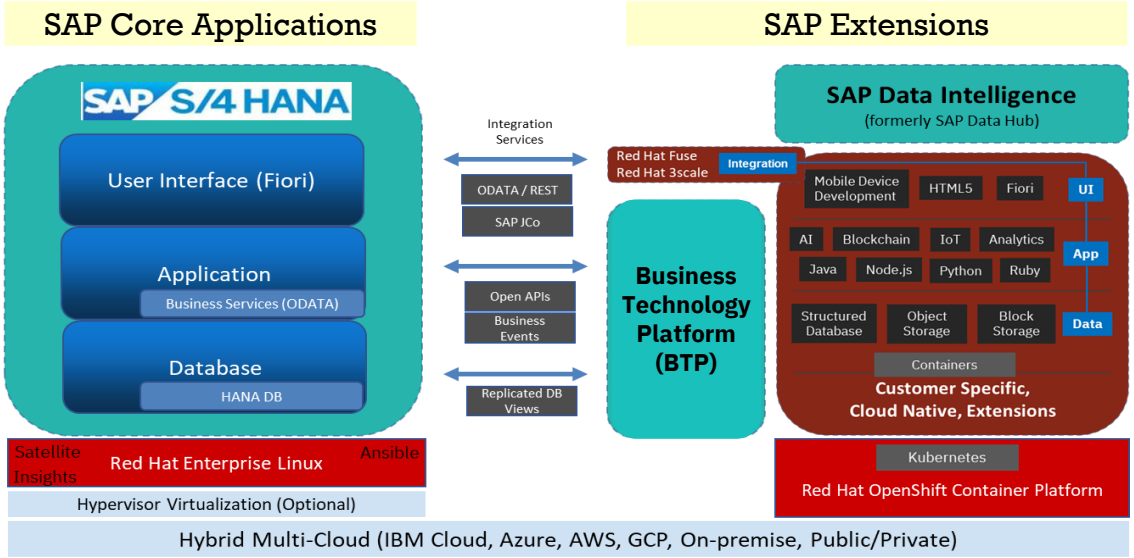
Source: [Certified and Supported SAP HANA® Hardware Directory]

Application Customization & Extension model

SAP Side-by-Side Extensibility with BTP and Red Hat OpenShift Provides on-premise and Cloud Independence BTP starter credits are included with RISE

- The future of extending SAP is to minimize modification of the Digital Core using Cloud-native platforms, such as SAP Business Technology Platform and OpenShift
- Modification of Core application source code breaks the ability to perform functional upgrades of SAP cost effectively
- Key efficiency objective: *Develop once, deploy anywhere.*

Note: BTP does not support on-premise deployments today. OpenShift the only option for on-prem cloud-native extensions.



- OpenShift is an on-prem/Cloud, application-independent, Cloud-native development and runtime environment used by half of the Fortune 500
- Red Hat OpenShift ensures SAP extensions/customizations can be run on-premise or on any major Cloud provider, and are reliable and scalable

SAP HANA supports SUSE and Red Hat only

RHEL now preferred for New Clients with RISE with SAP*

RHEL RELIABILITY in the market:

- 90% of the Fortune 500 trust Red Hat
- Approx 70% Paid Linux market share
- Development Powerhouse
  #2 Kubernetes & Linux contributor
- Completeness of portfolio
  - Virtualization
  - Management & Automation
  - Application Integration
  - OpenShift Container Platform

RHEL SUPPORT:

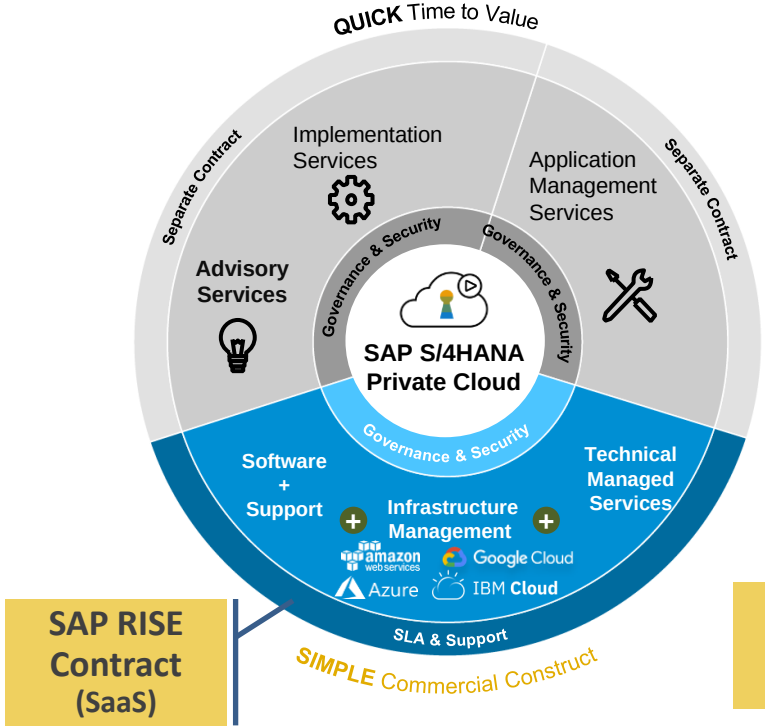
- Pre-sales & Post-sales
- Red Hat SAP Technical Account Managers
- Standard SLA for non-prod / Premium for prod
- Red Hat Global support services engaged via SAP global backbone
- Specialty Based Routing (SBR) model ensures SMEs work the issue
- Application Compatibility Guide

Realize More VALUE while Reducing Costs:

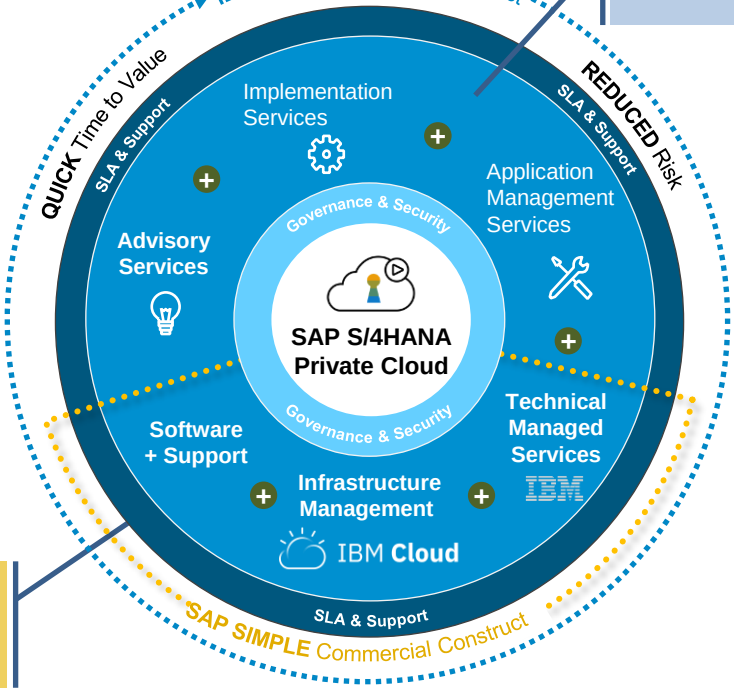
- RHEL for SAP Solutions delivers more capabilities
- Extended Update Support
  - Focuses on SAP applications lifecycle, providing a stable foundation with support for RHEL certain minor releases up to 4 years
- State-of-the-art management and automation into your SAP landscape

Source: * SAP and Red Hat Deepen Partnership to Power SAP Software Workloads with Red Hat Enterprise Linux

BREAKTHROUGH with IBM for RISE with SAP, premium supplier option



SAP RISE Contract (SaaS)



SAP RISE Contract (SaaS)

IBM Added Value

Simplifying the journey, unified accountability

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Ready to support your journey to hybrid cloud

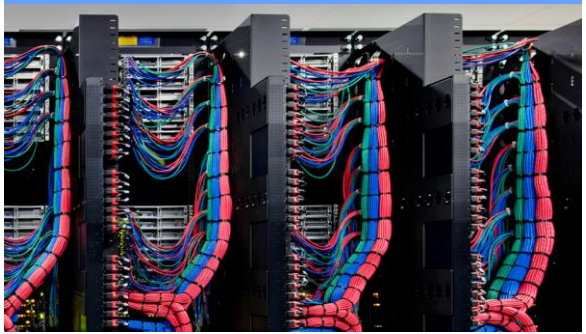
SAP HANA on IBM Power

On premises

IBM Power servers

Public cloud

IBM Power Virtual Server



IaaS

RISE with SAP, premium supplier option on IBM Power

Meeting you where you are

IBM Power

Visit us: https://www.ibm.com/it-infrastructure/power

SAP HANA CLIENT SUCCESS

Flexibility for the Digital Enterprise

- When the COVID-19 pandemic forced Ecogas to suspend in-person services for its 1.4 million natural gas customers in Argentina, the company had to act fast to prepare for a surge in demand for its digital channels.
- By moving to SAP HANA 2.0 on IBM Power10, Ecogas can support its customers with seamless digital services through the pandemic and beyond. The new solution has allowed the organization to reduce IT operational costs by 20% while boosting compute performance by 35%—empowering it to accommodate a massive increase in demand for digital services.
- "Moving to SAP HANA 2.0 on IBM Power10 played a key role in allowing Ecogas to maintain high service levels throughout the pandemic. In fact, around 80% of our customers now use digital channels as their primary touchpoint—all enabled by our IBM and SAP solutions."

Sustainability

- Bosch Group, a leading global engineering, technology, and services company based in Germany, has committed to and achieved an ambitious target: to become the world's first fully carbon-neutral industrial enterprise by 2020.
- Bosch is transitioning to IBM Power10 servers, with up to 75% performance gains while cutting energy consumption by 20%, supporting the company's climate ambitions
- "IBM Power10 enables us to run more workload and deliver results more quickly to our business users. Early experience shows that for jobs with a high degree of parallelization, the move to Power10 is an essential component of the Bosch digital transformation and sustainable operations journey."

Real Time Analytics

- Cutting food waste is a key ingredient in Coop Group's recipe for a more sustainable future, and to help realize this vision the organization is focusing on optimal product assortment and quantities across all stores.
- Coop Group is using high-performance IBM® Power10 servers with SUSE Linux® Enterprise Server for SAP Applications to accelerate SAP S/4HANA® reports by up to 30%—empowering the company to run the business more efficiently with fast, data-driven decisions.
- "SAP S/4HANA running on IBM Power10 with SUSE Linux Enterprise Server for SAP Applications has accelerated some tasks by 30%—a testament to the improved performance of IBM Power10."

Performance

- To address momentous market changes, automaker Audi AG is focusing on electrification and hybridization but also on digitization, including cutting-edge areas such as connected cars and autonomous driving.
- To support this, Audi saw the need to increase innovation, speed and agility. The implementation of IBM Power10 servers provided 100X faster loading for advanced analytics with 66% fewer servers
- "The unmatched scalability and flexibility of IBM Power Systems is a key benefit for us. We can dynamically adjust our resource allocations and prioritizations on the hypervisor level to ensure our applications can always meet our business needs. From my experience, IBM solutions deliver superior business agility, ensuring we have the freedom and capability to innovate, and lead the industry"

Thank you for your time

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