Guide to Choose the Right Infrastructure for SAP S/4 HANA

(Both of on Premise and on Cloud)

Boonchai Tungwattanapornchai
Solution Consulting Director
TERABYTE NET SOLUTION PLC

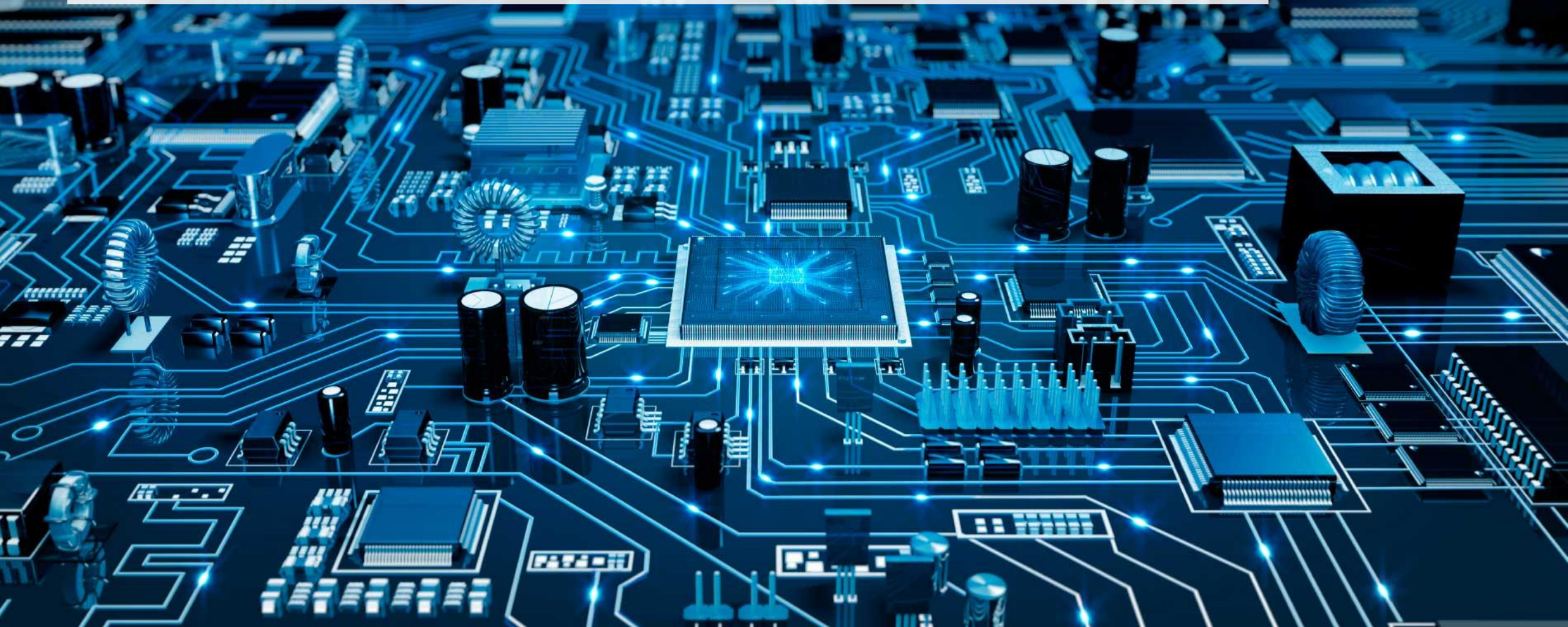Hewlett Packard Enterprise

TERABYTE Net Solution

ZYGEN

SiS

Guide to Choose the Right Infrastructure for SAP S/4 HANA

HPE Solution Certified with SAP S/4HANA

HPE is your trusted partner for SAP HANA

20000+
HPE SAP HANA servers shipped

Innovation
HPE and SAP Co-innovation

Always on
Only vendor offering a fully automated fail-over and DR solution for mission-critical SAP HANA, Serviceguard

#1 Scalability
Unmatched 32 socket / 48TB HANA certified system (pending SAP certification)

#1 SAP Vendor

Winner of 2017 SAP Partner Excellence Award

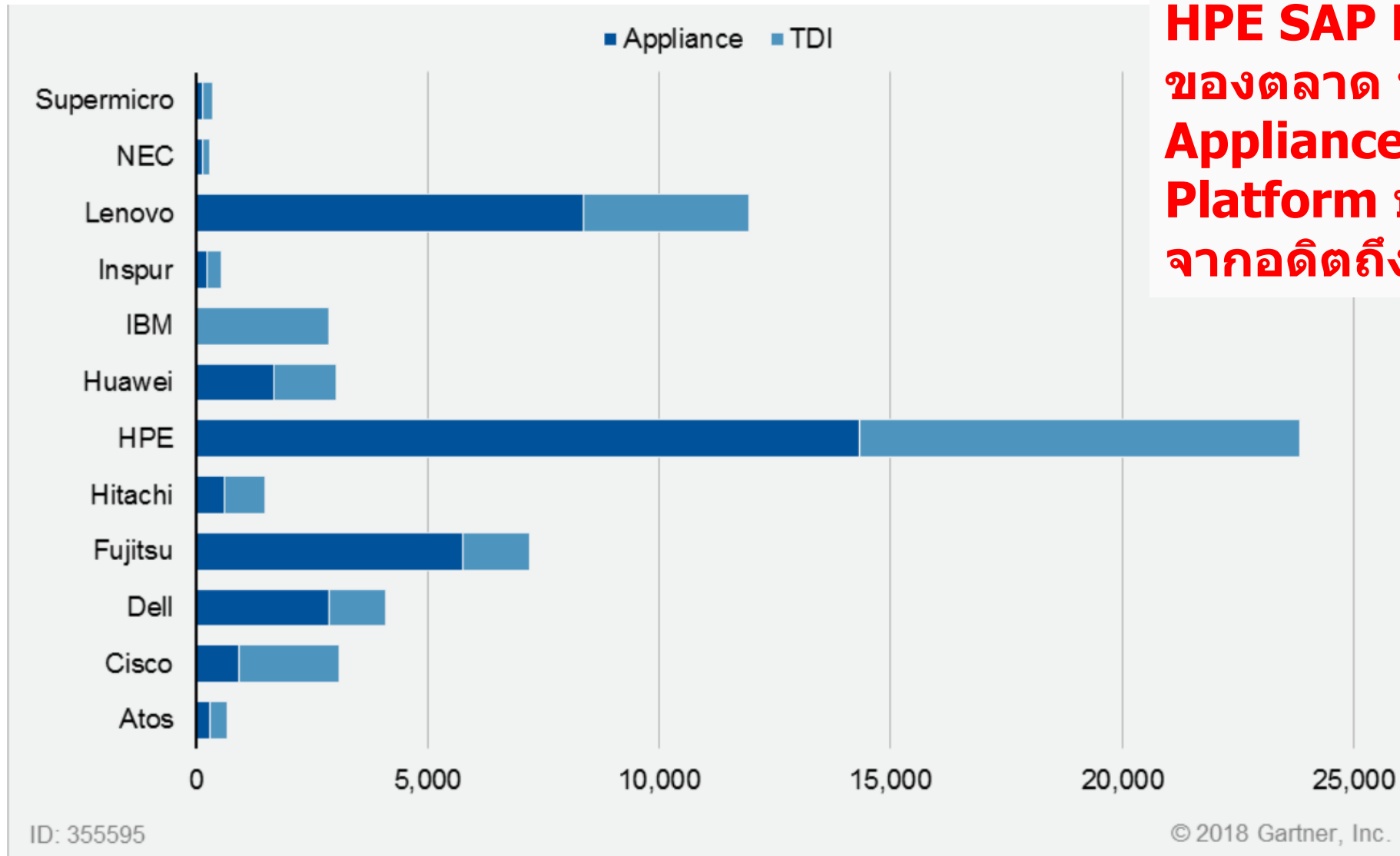**2500+** Customers running SAP HANA on HPE

130 TB
World's largest HANA system in production

HPE runs SAP HANA with nearly **50TB** in production

29 years
of strong partnership

2018 SAP HANA Deployment Total System

HPE SAP HANA เป็นอันดับ 1 ของตลาด ทั้งที่ติดตั้งในรูปแบบ Appliance, TDI, และ Platform บน Cloud Provider จากอดิตถึงปัจจุบัน
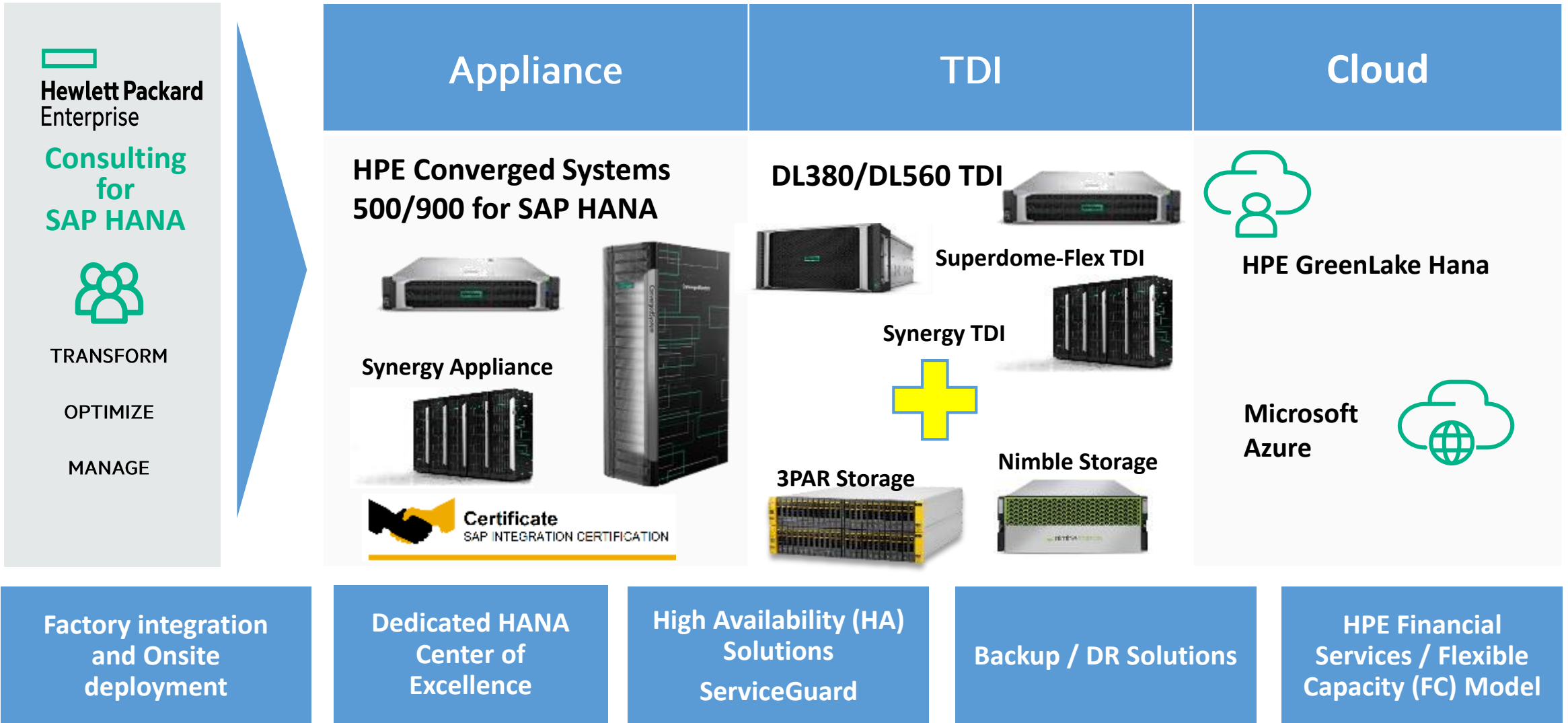
Source: Gartner (May 2018)

Reference: https://www.gartner.com/doc/reprints?id=1-4Q1FS9L&ct=180131&jsp=&ActivityID=NA&AssetID=NA

HPE Portfolio for SAP HANA

HPE gets you to SAP HANA the way you want it

Hewlett Packard Enterprise

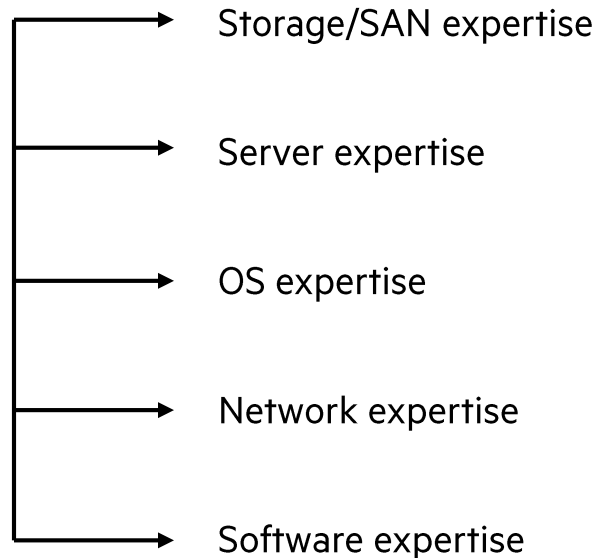**Consulting for SAP HANA**

TRANSFORM

OPTIMIZE

MANAGE

Appliance

HPE Converged Systems 500/900 for SAP HANA

Synergy Appliance

Certificate
SAP INTEGRATION CERTIFICATION

TDI

DL380/DL560 TDI

Superdome-Flex TDI

Synergy TDI

3PAR Storage

Nimble Storage

Cloud

HPE GreenLake Hana

Microsoft Azure

Factory integration and Onsite deployment

Dedicated HANA Center of Excellence

High Availability (HA) Solutions ServiceGuard

Backup / DR Solutions

HPE Financial Services / Flexible Capacity (FC) Model

SAP® Certified
Hardware for SAP HANA®

intel inside XEON

SUSE

redhat

HPE Center of Excellence (CoE) for ConvergedSystems for SAP HANA

One-stop specialized support to resolve issues faster and simplify the experience

99%
of customer issues are resolved within the CoE

→ Storage/SAN expertise

→ Server expertise

→ OS expertise

→ Network expertise

→ Software expertise

– Worldwide team focused exclusively on SAP HANA providing 24X7 coverage

– Co-location with SAP HANA development support at SAP HQ in Waldorf

– Single support interface for entire solution stack with end-to-end case ownership

– 100% Linux certified

– Priority restore, immediate diagnostics, and failure analysis

– Collaborative support with SAP for application and database

– Close linkage with Converged Systems Engineering team for SAP HANA

– Support installed base of more than 1,500 customers worldwide

"Couldn't say enough about the support and how well it worked!"
Global packaged foods leader

"Was perfect, skilled, effective, professional!"
Global Management Consulting

"You guys really saved the day"
Global Beverages Company

HPE Server Appliance Certified with SAP HANA

Scale Up and Scale Out

CS500 (up to 6 TB)
CS900 (up to 16 TB)
MC990 X (up to 20 TB)

;Last update on AUG 2018

HPE Server TDI Certified with SAP HANA

;Last update on AUG 2018

SAP CERTIFIED AND SUPPORTED SAP HANA® HARDWARE DIRECTORY   Feedback

🏠 | Intel® Systems

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

Find Supported Intel® Systems

Narrow your Search

- Vendor
- CPU Type
- Valid for

Search Results

as of 2018-08-08

In addition to certified appliances SAP also supports the following configurations to be used with SAP HANA (please see Details page).
The hardware was tested by the hardware partner with SAP LinuxLab.

7 models found.

Compare

Hewlett Packard Enterprise, Intel Xeon SP (Skylake)
clear selection

Vendor	Model	CPU Type	Valid for	
Hewlett Packard Enterpri...	ProLiant BL460c Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓
Hewlett Packard Enterpri...	ProLiant DL360 Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓
Hewlett Packard Enterpri...	ProLiant DL380 Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓
Hewlett Packard Enterpri...	ProLiant DL560 Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓
Hewlett Packard Enterpri...	Superdome Flex	Intel Xeon SP (Skylake)	SAP HANA 2.0 SPS 03	✓
Hewlett Packard Enterpri...	Synergy 480 Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓
Hewlett Packard Enterpri...	Synergy 660 Gen10	Intel Xeon SP (Skylake)	SAP HANA 1.0 SPS 12, SAP HANA 2.0 SPS 00-03	✓

HPE Storage Certified with SAP HANA

;Lastupdate on AUG 2018

HPE All-Flash Storage Portfolio for SAP HANA

Comprehensive offering for your TDI environment

NEW

| HPE MSA Storage | HPE Nimble Storage | HPE 3PAR StoreServ | HPE XP7 Storage |

Simple & cost-effective

Predictive analytics

"Best AFA for HANA" - Taneja report

Zero customer outages

Online and storage snapshot backup
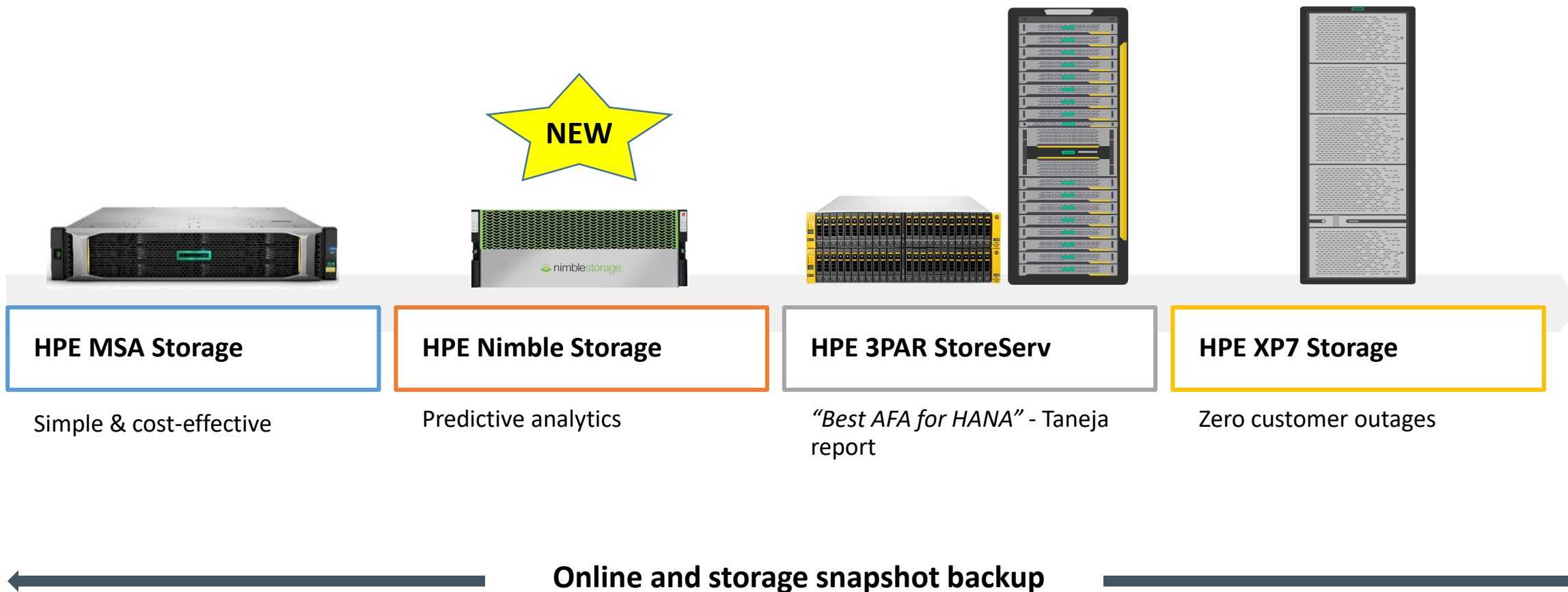
HPE Nimble Storage

- 6-nines availability
- Integrated Data Protection
- Always-on Data Reduction
- Smart QoS

- Application managed and Rapid Provision
- CrossStack Analytics Help find App-Data gaps
- Application Consistency Data Protection
- Reduce operation and complexity

Nimble Storage Best-in-Class Application Integration

vmware®   ORACLE®   Microsoft® SQL Server®   SAP®   docker

Storage Based Snapshot Backup for SAP HANA

Storage snapshots as backups

SAP HANA also supports the creation of storage snapshots, which can later be used for recovery

1. **Prepare the database** for the storage snapshot, using HANA Studio, SQL commands, or the storage tool (if implemented).
   Technically, this creates an internal backup snapshot (same as for a normal data backup)

2. Using the storage tool, **create a storage snapshot** of the SAP HANA data area

3. **Confirm the storage snapshot** as successful, using either HANA studio, SQL commands, or the storage tool (if implemented).
   An entry including the external backup ID is written to the backup catalog.
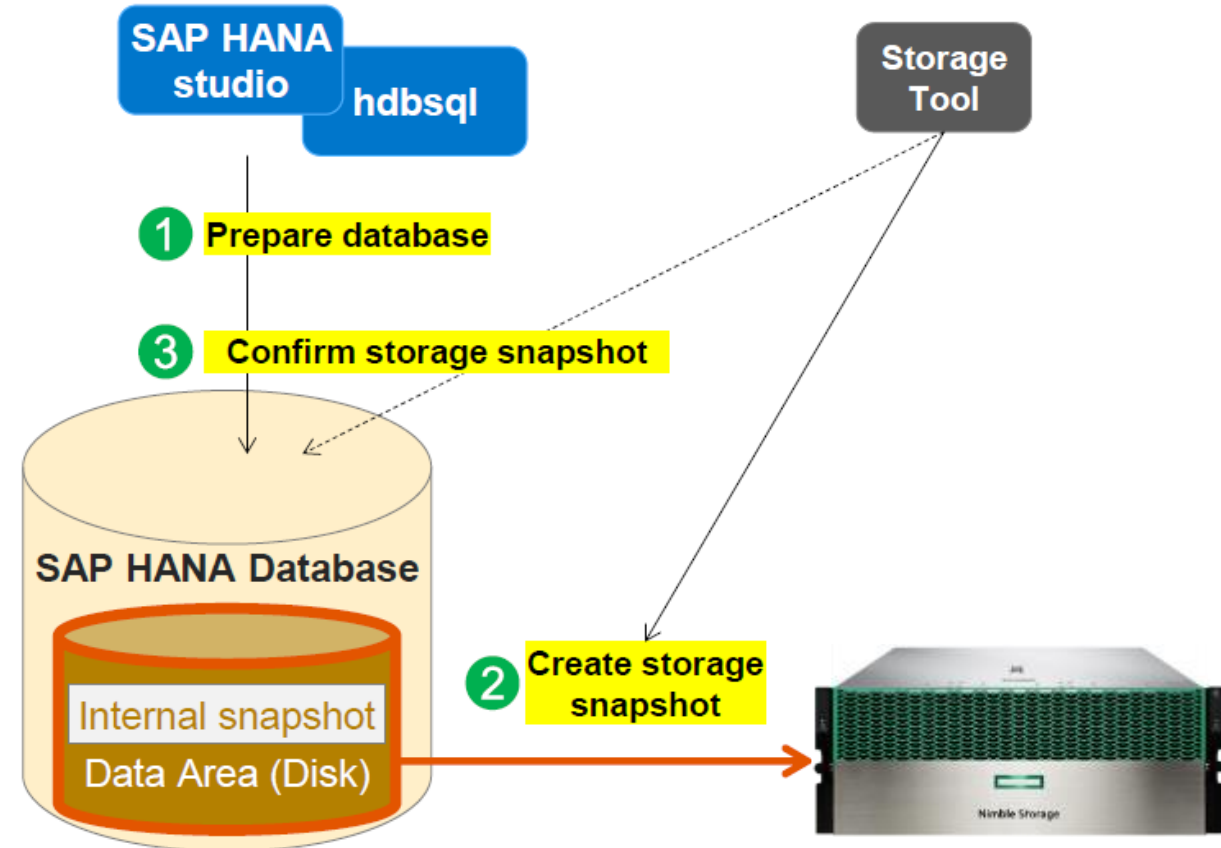
SAP HANA Data Protection

Storage based system replication

- Asynchronous replication supported by Nimble Storage
- Use storage based snapshot to replicate a consistent copy of the SAP HANA database
- Replicate logs to meet RPO target

SAP HANA system replication

- Provided with SAP HANA software
- Supported with Nimble Storage
- Three options with different levels of RPO
  - Synchronous In-memory (default)
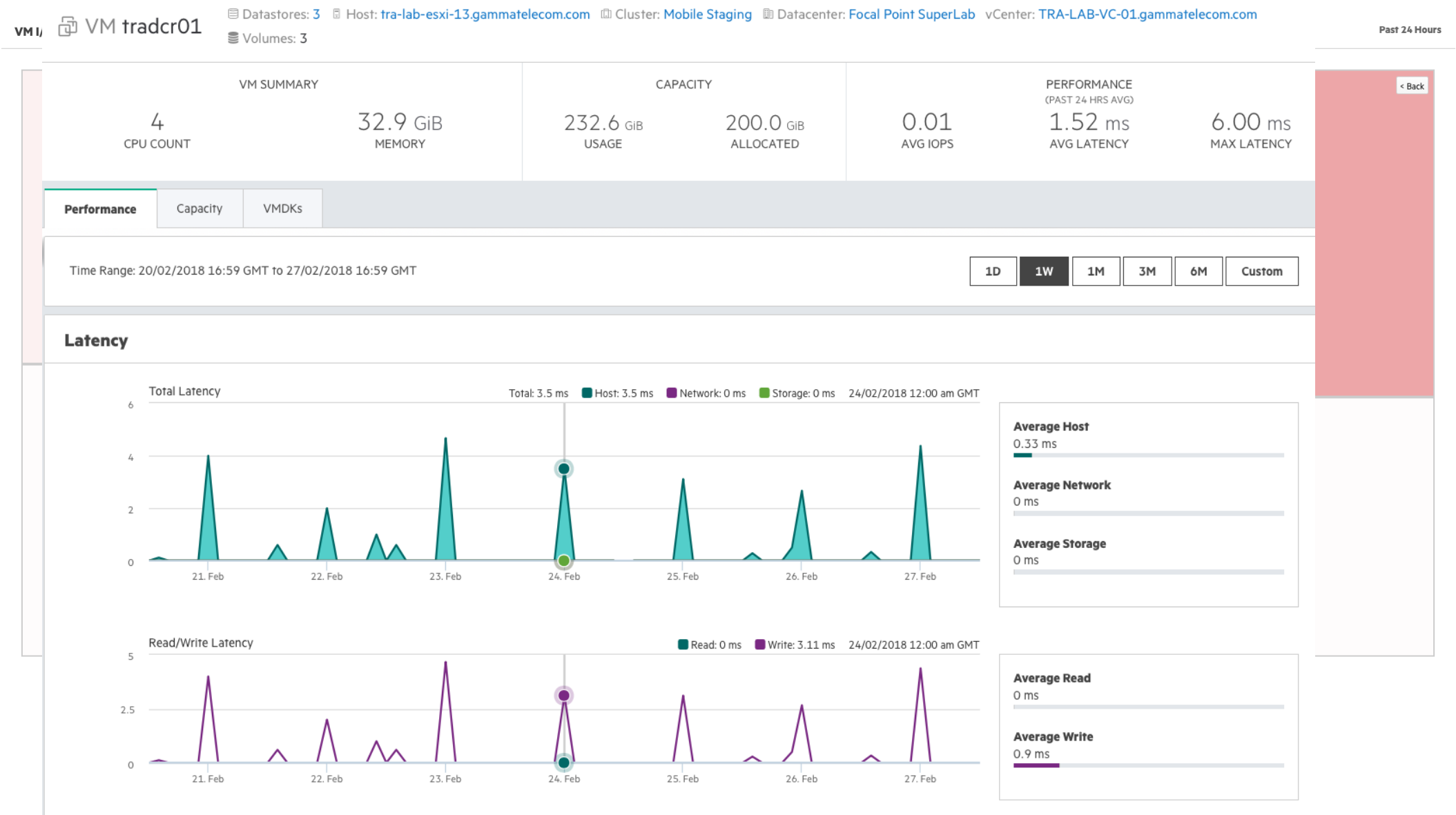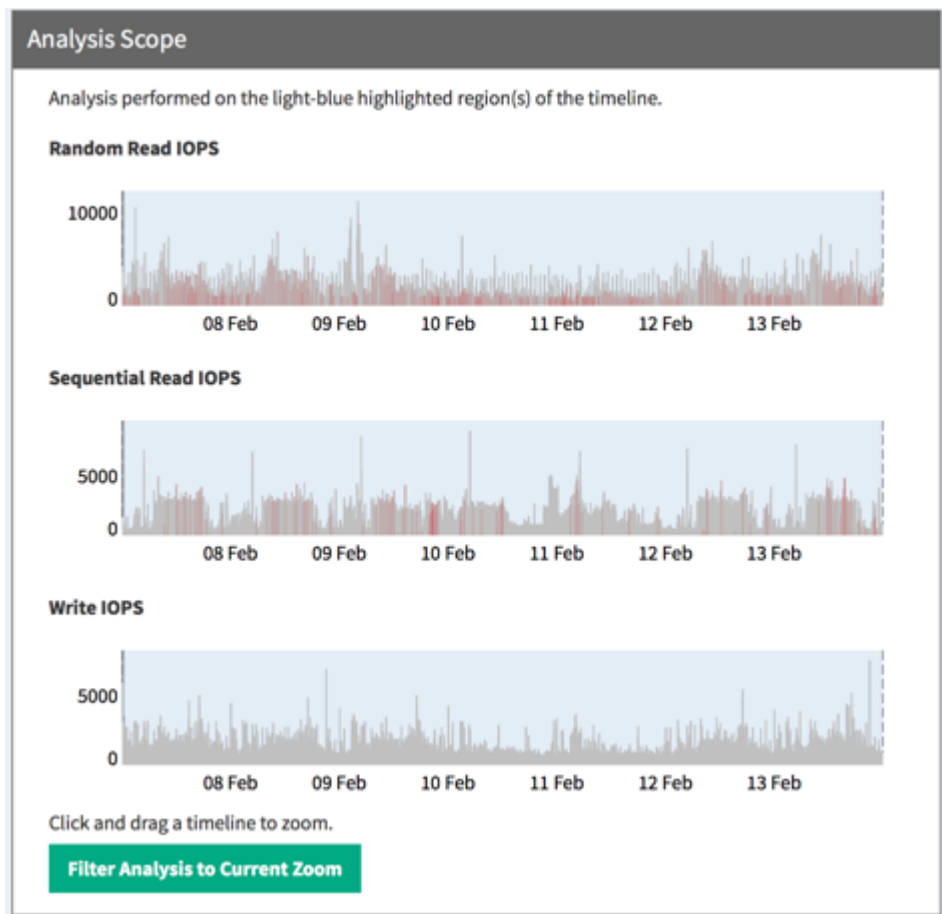 - Synchronous
  - Asynchronous
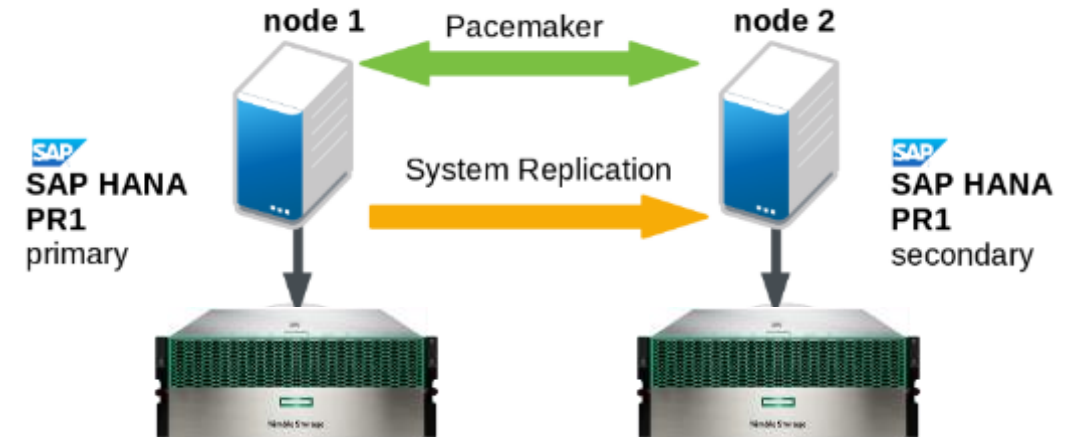
Key Benefit Nimble for SAP HANA

- **Off host Backup** (no impact PRD resources such as CPU, MEM, I/O)
- **Improve RPO** (e.g. can backup every hour/min and point-in-time recovery)
- **Improve RTO** HANA Replication across sites by block change
- **Support various application and database** (e.g. Microsoft SQL/VSS, Oracle, VMware, Hyper-V, etc)
- Compression values range from **1.5x for SAP HANA** and 1.x to over 3.x but average around 3.3x, which is the average for most database environments
- HPE has **several hundred customers** using Nimble Storage for their SAP environments

Nimble Infosight (feature like VMWare vRealized Operation)

AI Recommendation

SAP S4/HANA Hardware Design
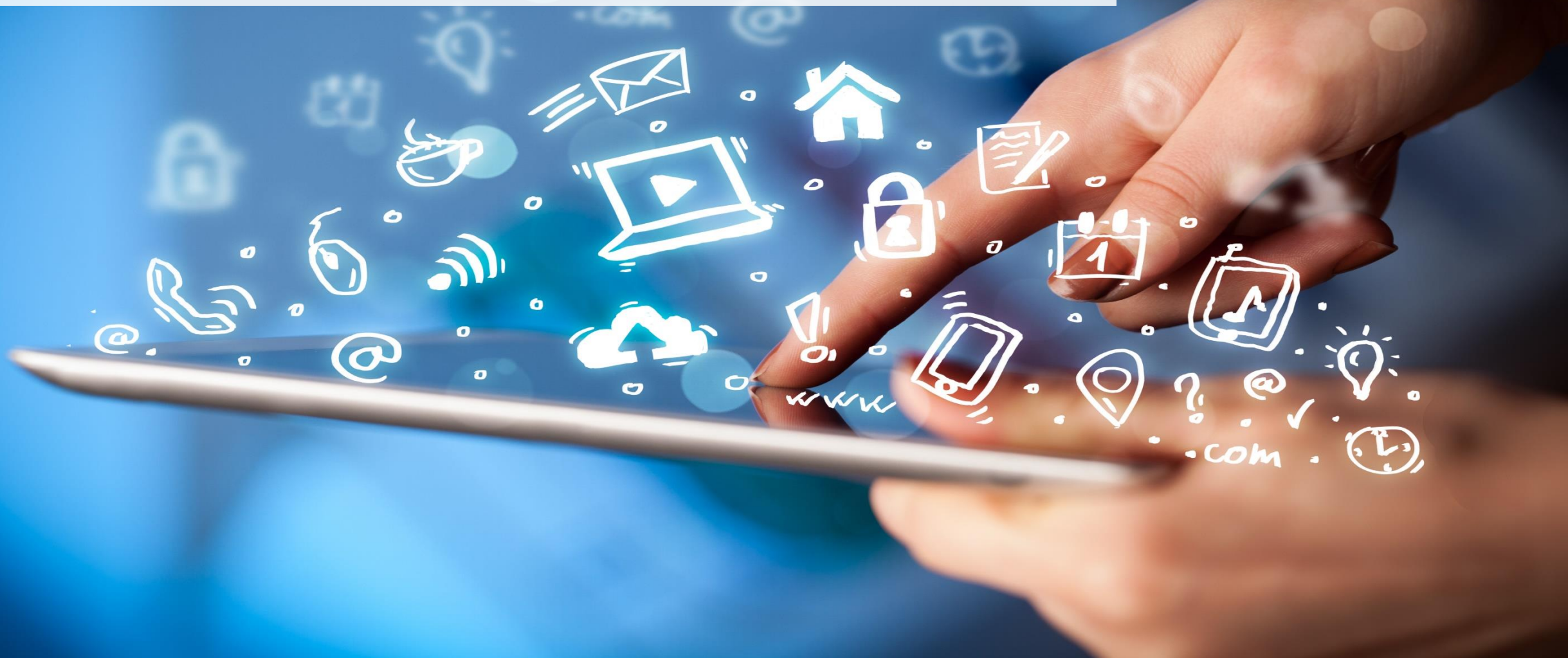
SAP S4/HANA Hardware Architecture Overview

On-Premise

On-Cloud

Your Datacenter Infrastructure

Security & Management

PaaS or SaaS

Hybrid Operations

IaaS

Compute | Storage | Network

VPN Site-to-Site

Physical / VMware / MS Azure Stack
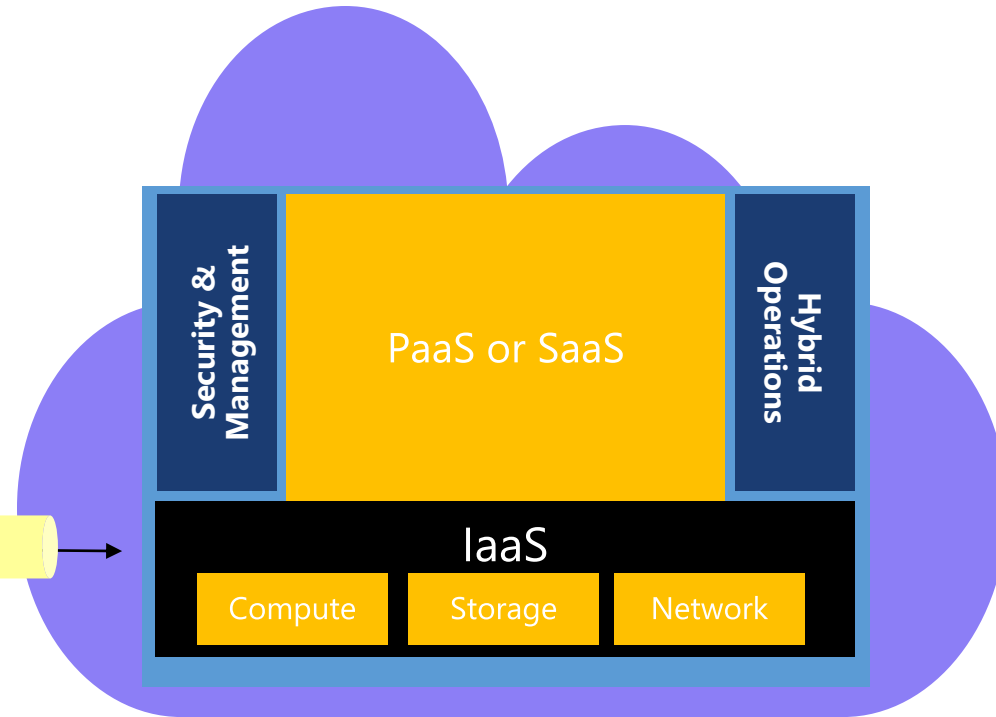
T.Cloud (Private Cloud) MS Azure / AWS

SAP HANA T-Shirt Sizing

SAP Sized

| | S | M | L | A la carte |

SAP HANA Mem

| | 384 GB | 512 GB | 1024 GB | Custom |

Hewlett Packard
Enterprise

TERABYTE
Net
Solution

Thank you!