Dell Technologies Solutions Designed for SAP HANA TDI

Modern foundational infrastructure for the SAP HANA powered intelligent enterprise

Dell Technologies Solutions for SAP HANA TDI

Modern IT Foundation
- Comprehensive choice of certified hardware
- Seamless integration into existing data center operations
- Performance at scale for mixed workloads

Run SAP HANA as Part of Shared IT Model
- Use existing multi-site data center designs
- Leverage existing skills of data center personnel
- Maintain existing automation and operational processes

Data Protection and Availability
- Enabling "always on" SAP S/4HANA
- Backup / restore as a service

Deployment and Migration Services
- SAP HANA Appliance
- SAP HANA TDI Storage Validation
- SAP HANA System Replication
- SAP OS/DB Migration
- SAP HANA Migration
- SAP Data Protection Integration

Enabling a data-driven intelligent enterprise

Data is an organization's most critical asset. It is the key to unlocking the insights that can inspire your company's greatest innovations and help differentiate you as a leader in your industry. High-quality, trusted, and readily available data is the foundation of an intelligent enterprise, but achieving that level of data integrity requires a modern, future-ready enterprise resource planning (ERP) suite.
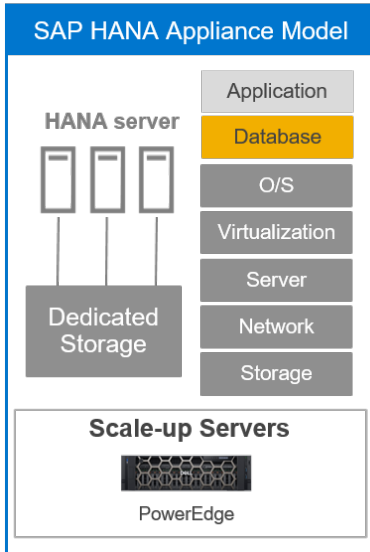
For many organizations a significant part of their intelligent enterprise transformation story is upgrading to SAP® next generation ERP. SAP S/4HANA® running on the SAP HANA® in-memory database, along with intelligent technologies that power the SAP Business Technology Platform, provide the strategic foundation for data-powered innovation that will drive the data-driven intelligent enterprise.

To run this next-generation ERP a digital foundation built with a modern IT infrastructure, designed to enable the performance and functional requirements of SAP HANA, is required. With Dell solutions certified for SAP HANA you gain better control of your data, achieve faster insights and with less risk, anywhere and anytime.
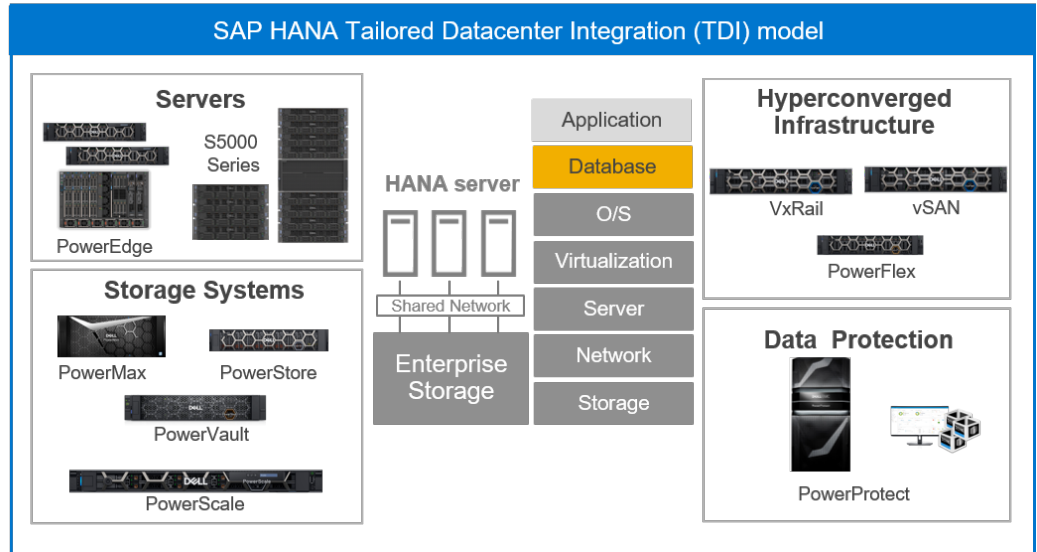
SAP HANA infrastructure deployment scenarios

You can choose between an on-premises or cloud deployment of SAP HANA to align with your business and data center needs. SAP HANA can be deployed on-premises as a standardized and highly optimized appliance that comes with preinstalled SAP software components on certified hardware that is provided by SAP hardware partners. The second on-premises delivery approach, SAP HANA Tailored Data center Integration (TDI), enables you to choose your preferred hardware vendors and infrastructure components from a list of certified SAP HANA hardware and use certain hardware components that are already in your data center. TDI delivery helps reduce hardware and operational costs, shortens implementation cycles, and allows better consumption of hardware innovations.
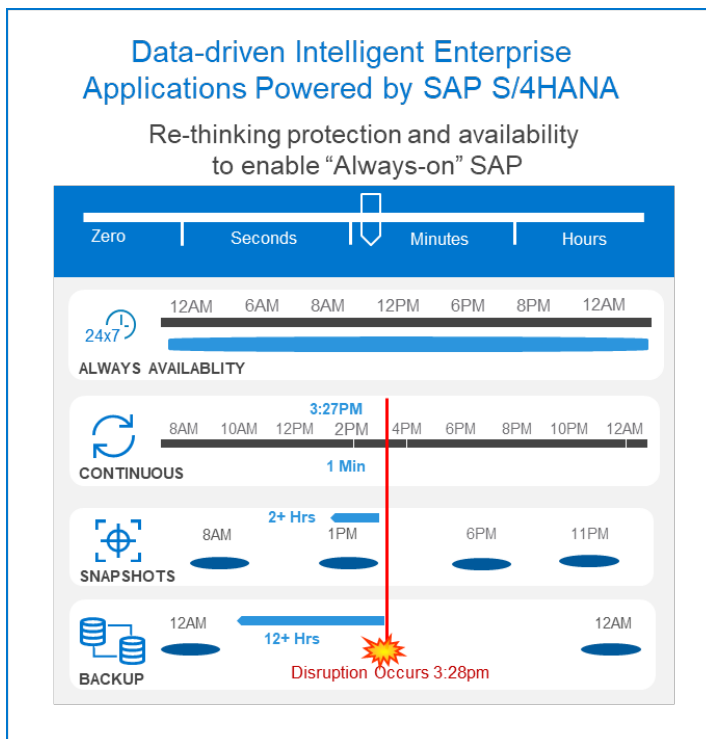
SAP HANA on Dedicated Infrastructure

SAP HANA Appliance Model

HANA server

	Application
	Database
	O/S
	Virtualization
Dedicated Storage	Server
	Network
	Storage

Scale-up Servers

PowerEdge

SAP HANA on Shared Infrastructure

SAP HANA Tailored Datacenter Integration (TDI) model

Servers

S5000 Series

PowerEdge

Storage Systems

PowerMax   PowerStore

PowerVault

PowerScale

HANA server

Shared Network

Enterprise Storage

Application
Database
O/S
Virtualization
Server
Network
Storage

Hyperconverged Infrastructure

VxRail   vSAN

PowerFlex

Data Protection

PowerProtect

Dell solutions optimized for SAP HANA TDI

Dell Technologies supports all SAP paths for deploying SAP HANA infrastructure on-premises but running SAP HANA on shared infrastructure has become the preferred model – it gives you more flexibility with lower total-cost-of-ownership as you scale. SAP HANA TDI approach allows you to:

- Choose from a broad portfolio of SAP HANA-certified Dell servers that can be combined with SAP-certified Dell network and Dell storage components.

- Reduce hardware and operational costs by using your own preferred Dell servers, storage, converged infrastructure and operation processes.

- Benefit from running SAP HANA on hyperconverged infrastructure (HCI) with Dell platforms certified for VMware / vSAN on VxRail, VMware / PowerFlex OS on PowerFlex.

Data-driven Intelligent Enterprise Applications Powered by SAP S/4HANA

Re-thinking protection and availability to enable "Always-on" SAP

Zero	Seconds	Minutes	Hours

24x7
ALWAYS AVAILABLITY

12AM 6AM 8AM 12PM 6PM 8PM 12AM

CONTINUOUS

8AM 10AM 12PM 2PM 4PM 6PM 8PM 10PM 12AM
3:27PM
1 Min

SNAPSHOTS

8AM 1PM 6PM 11PM
2+ Hrs

BACKUP

12AM 12AM
12+ Hrs
Disruption Occurs 3:28pm

Protection and availability

Increasingly, in the digital economy, mission-critical SAP S/4HANA will require 24/7 availability so you can recover from any planned or unplanned events. Now is the time to re-think business continuity, data protection and high availability strategies with Dell solutions to:

- **Deliver continuous availability for mission-critical SAP** with game changing approaches for "always on" SAP protecting and restoring application consistent SAP operations over distances and multiple sites.

- **Perform fast recovery from operational errors** including data corruption during application patching/maintenance by restoring systems and data to the point in time just prior to the disruption.

- **Employ disaster avoidance** enabling your business to stay or get back on-line faster.

- **Implement smarter backup and recovery** including self-service management and control for SAP administrators, faster backups of SAP systems with reduced data footprints, and options for using Backup / Restore as a Service (BRaaS) for long term retention strategies

Planning your path to SAP HANA and SAP S4/HANA

Your journey to transforming IT for SAP is unique. Dell Technologies is ready to support you starting with a modern IT foundation designed to run next generation intelligent enterprise SAP applications from edge to core to cloud.

- Infrastructure providing consistently high performance for mixed SAP workloads (transactional, reporting, analytics, and big data),

- Leveraging SAP Business Technology Platform and emerging technologies including Artificial Intelligence (AI), machine learning (ML) and Internet of Things (IoT),

- Protection and availability solutions enabling IT to re-think new models for "Always-On" SAP, and

- Professional Services for SAP HANA deployment, migration, and re-platforming projects.

Dell infrastructure solutions for SAP HANA Tailored Data Center Integration (TDI)	
Server Solutions	Dell server solutions provide the power, scalability, and reliability that are needed to run mission-critical SAP HANA in-memory databases and applications. • **Dell PowerEdge servers** provide a scalable business architecture, intelligent automation and integrated security for your high value SAP workloads. Dell offers a broad selection of 2- and 4-socket servers with up to 6TB of RAM, incorporating Intel® Xeon® Scalable processors (Ice Lake and Cascade Lake), enabling you to be more flexible in hardware choices and to cost-optimize for your specific workloads. See SAP HANA TDI Deployments on Dell EMC PowerEdge Servers • **Dell S5000 Series server** provide exceptional real-time performance, unique modular architecture, and the security and reliability needed for the largest, most demanding SAP environments. Powered by Intel® Xeon® Scalable processors (Cascade Lake) and scalable from 6- to 16-socket in 2-socket increments, with up to 24TB or RAM, the servers allow a huge memory capacity for better workload consolidation and in-memory computing application performance. See Dell Validated Design for SAP HANA TDI with Dell S5000 Series Servers
Storage Solutions	Dell storage solutions provide unprecedented power and scale for consolidation, automation, and intelligent operations of SAP deployments to unlock the value of your data and lower the overall cost of ownership. • **Dell PowerMax** enterprise platform delivers end-to-end NVMe storage class memory (SCM), mission-critical availability, and proven data services. See Dell Validated Design for SAP HANA TDI with Dell PowerMax 2500 and 8500 Arrays • **Dell PowerStore** all-flash, container-based enterprise storage system provides data-centric, intelligent, and adaptable architecture while simplifying operations. See SAP HANA TDI Deployments on Dell EMC PowerStore Storage Systems • **Dell PowerStore Metro Node** offers true active-active locations with metro capabilities with zero performance impact, autonomouse decision-making, and enterprise infrastructure automation for maximum application uptime and availability. See Dell Validated Solution for SAP HANA TDI Deployments with Dell Metro Node • **Dell PowerScale** (Isilon) scale-out NAS solution that can seamlessly scale performance, capacity and efficiency to handle any unstructured data workload. See Dell Validated Design for SAP HANA TDI with Dell Isilon All-Flash Scale-Out NAS • **Dell PowerVault ME5**, optimized for SAN/DAS, delivers performance, capacity and operational simplicity for price-sensitive small to medium-sized businesses. See Dell Validated Design for SAP HANA TDI Deployments on Dell PowerVault ME5 Storage
Hyperconverged Infrastructure Solutions	Dell hyperconverged preconfigured, and pre-tested infrastructure solutions provide a building block that improves operational efficiency and reduces the time Basis administrators spend managing, tuning, and monitoring applications. • **Dell PowerFlex** software-defined platform combines compute and high-performance storage resources to deliver flexibility, elasticity, and simplicity with predictable performance and resiliency at scale. See Configuration and Deployment Best Practices for SAP HANA on Dell EMC PowerFlex Infrastructure • **Dell VxRail** provides a simple, cost-effective solution that solves virtualization infrastructure challenges and offers the performance, capacity, and graphics capabilities that are needed to meet the requirements of a small or mid-size enterprise. See SAP HANA on Dell EMC VxRail Hyperconverged Infrastructure • **Dell vSAN Ready Nodes** combine a wide range of SAP certified PowerEdge servers with VMware vSAN™ in a jointly certified, pre-configured solution that reduces risk and expedites deployment. See SAP HANA on Dell EMC PowerEdge for VMware vSAN Hyperconverged Infrastructure

Dell infrastructure solutions for SAP HANA Tailored Data Center Integration (TDI)

Data Protection and Backup Solutions

Dell data protection solutions make it easy to support SAP mission-critical workloads with self-service solutions that leverage direct data paths and eliminate the need for expensive enterprise backup software.

- **PowerProtect DD (Data Domain) Series Appliances** are target systems that are capable of advanced deduplication, to reduce unnecessary storage capacity, while performing at scale, providing consolidated backup, archive, and disaster recovery functionality at petabyte scale. See Dell PowerProtect Appliances
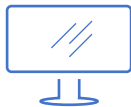
For a complete list of Dell Certified and Supported Hardware for SAP HANA® see Certified and Supported SAP HANA(R) Hardware Directory and SAP-Certified Dell Solutions. See Dell Technologies InfoHub for design/validation guides, solution guides and other technical guides that describe solutions for SAP HANA. If you have questions about specific configurations and/or upgrades, consult with your Dell Technologies sales representative.

Recommended support and services

Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support for your Dell hardware solutions for SAP HANA. Consulting and deployment offerings are also available. Contact your Dell representative today for more information. Availability and terms of Dell Services vary by region. For more information, visit Dell.com/Services.

Dell Technologies on demand

Consume technology, infrastructure, and services any way you want with Dell APEX, the industry's broadest end-to-end portfolio of flexible consumption and as-a-Service solutions. For more information, visit Dell.com/APEX.

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