

Dell EMC Solutions Designed for SAP HANA

Build a modern foundational infrastructure to power the Intelligent Enterprise running mission-critical SAP S/4HANA.

Dell EMC Solutions for SAP HANA

SAP HANA Deployment Options

- SAP HANA Data Mart
- SAP Business Suite on HANA (SoH)
- SAP Business Warehouse (BWoH)
- SAP S/4 HANA
- SAP BW/4 HANA

Transformation Guidelines

Modern IT Foundation

- SAP HANA certified
- Performance at scale for mixed SAP 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

Instantaneous access to business insights and intelligence at scale provide a competitive advantage in today’s increasingly fast-paced and data-intensive world. This new era of enterprise computing, the intelligent enterprise, will accelerate value creation by combining automation and integrated business processes with real-time analytics.

For many organizations a significant part of their intelligent enterprise transformation story is upgrading to SAP® next-generation enterprise resource planning (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 intelligent enterprise.

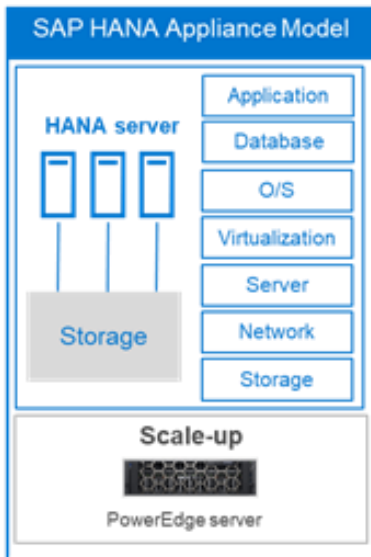
To run this next-generation ERP a digital core built on a modern IT infrastructure, designed to enable the performance and functional requirements of SAP HANA, is required. With Dell EMC’s solutions certified for SAP HANA you can gain better control of your data, achieve faster insights and with less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

SAP HANA infrastructure deployment scenarios

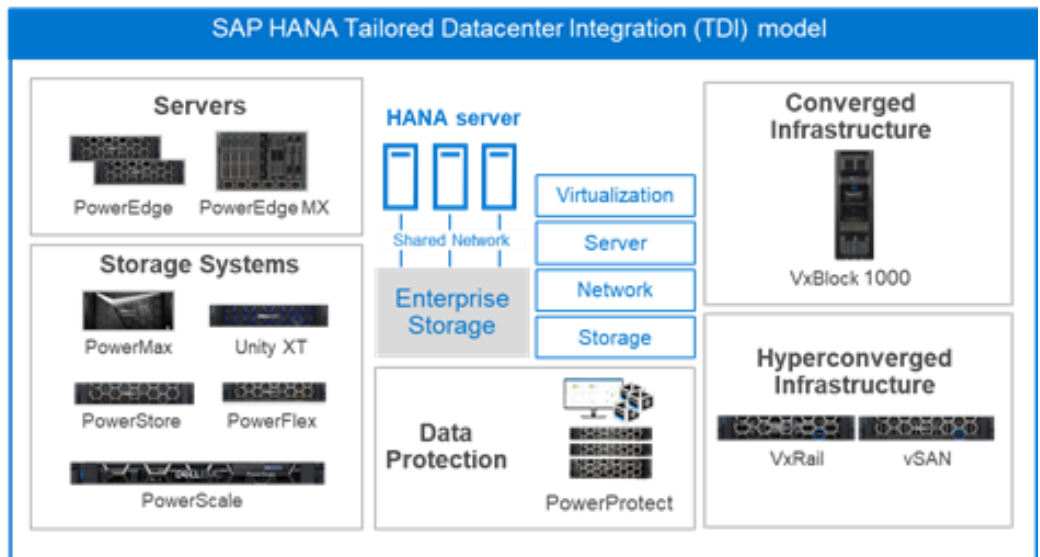
Dell Technologies has partnered with SAP since the release of SAP HANA in 2011, when they first introduced SAP HANA on highly optimized, dedicated appliances. While the appliance delivery is easy and comfortable, it might introduce some limitations regarding hardware flexibility.

Therefore, SAP now offers an additional on-premises delivery approach for SAP HANA, HANA Tailored Datacenter Integration (TDI) that provides more flexibility of selecting the hardware components for compute servers, storage, and networking. In turn, Dell EMC’s portfolio expanded to support TDI, converged infrastructure and hyperconverged infrastructure (HCI) models so you can run SAP HANA like any other database on shared infrastructure.

SAP HANA on Dedicated Infrastructure



SAP HANA on Shared Infrastructure



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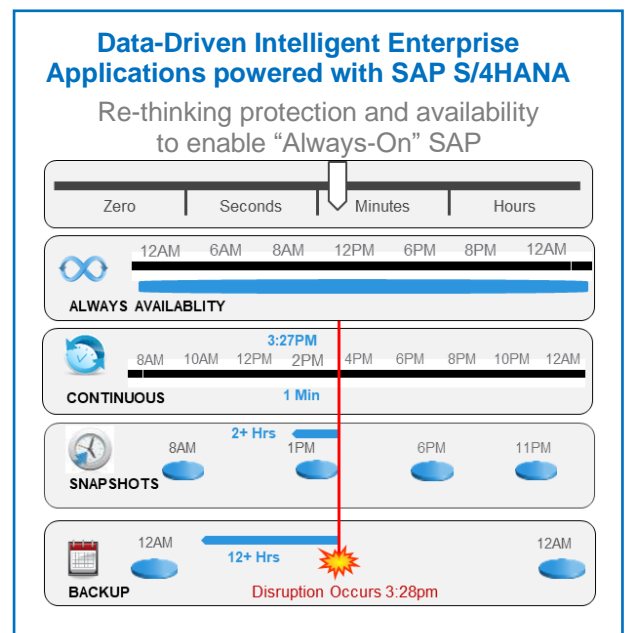
Dell Technologies supports all SAP paths for deploying SAP HANA infrastructure on-premises but *running SAP HANA on shared infrastructure* has become the *preferred model* – it gives you more flexibility with lower TCO as you scale. SAP HANA TDI approach allows you to:

- Reduce hardware and operational costs by using your own preferred Dell EMC servers, storage, converged infrastructure and operation processes.
- Have more flexibility by running SAP HANA on hyperconverged infrastructure (HCI) with Dell EMC platforms certified for VMware / vSAN on VxRail, VMware / PowerFlex OS on PowerFlex.

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 EMC 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 S/4HANA

Your path to transforming IT for SAP is unique. Some common objectives in sustaining classic SAP deployments while migrating to SAP HANA and SAP S/4HANA include the need to:



- Consolidate and simplify IT to lower TCO and increase productivity for traditional SAP Business Suite and SAP Business Warehouse landscapes on infrastructure ready for SAP HANA.
- Run SAP in a cloud operating model bringing greater agility with higher-value features, including self-service, orchestration, and application-lifecycle management.
- Enable new data-driven intelligent applications and business processes, powered from the edge to the core.



Dell Technologies is ready to support your journey 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 (previously referred to as SAP Leonardo) 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.

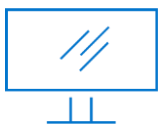
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Consult with a Dell EMC SAP Specialist to define your best path to transforming IT for SAP. General guidelines below:

Dell EMC solutions for SAP HANA Tailored Data Center Integration (TDI)	
 <p>Server Solutions</p>	<p>Dell EMC PowerEdge servers provide unprecedented performance for SAP deployments and are designed to start, scale, or consolidate SAP deployments. PowerEdge servers are available as SAP HANA Certified Appliances and SAP HANA TDI.</p> <p>See SAP HANA TDI Deployments on Dell EMC PowerEdge Servers</p>
 <p>Storage Solutions</p>	<p>Dell EMC Storage Solutions provide the power and scale for consolidation, automation, and intelligent operations of SAP deployments for mixed SAP and non-SAP workloads.</p> <ul style="list-style-type: none"> • Dell EMC PowerStore all-flash, container-based enterprise storage system provides data-centric, intelligent, and adaptable architecture while simplifying operations. • Dell EMC PowerMax enterprise platform delivers end-to-end NVMe storage class memory, mission-critical availability, and proven data services. • Dell EMC Unity XT represents the ultimate in storage simplicity and value in midrange all-flash and hybrid storage by harnessing the performance of all-flash and the economic benefits of disk. • Dell EMC PowerFlex software-defined platform combines compute and high-performance storage resources to deliver flexibility, elasticity, and simplicity with predictable performance and resiliency at scale. <p>Other Dell EMC storage options are also available. See SAP HANA TDI Deployments on Dell EMC PowerStore Storage Systems; Storage Configuration Best Practices for SAP HANA TDI on Dell EMC PowerMax Arrays; SAP HANA TDI Deployments on Dell EMC Unity XT Storage Systems; Configuration and Deployment Best Practices for SAP HANA on Dell EMC PowerFlex Infrastructure</p>

 <p>Converged Infrastructure Solutions</p>	<p>Dell EMC VxBlock 1000 integrated infrastructure simplifies IT and transform operations by bringing together Dell EMC SAP HANA TDI certified compute, storage, networking, and data protection in fully engineered, factory-built systems with dedicated support and life cycle management.</p> <p>See Dell EMC VxBlock for SAP and SAP HANA</p>
 <p>Hyperconverged Infrastructure Solutions</p>	<p>Dell EMC hyperconverged infrastructure runs SAP HANA with VMware on TDI certified PowerEdge servers, certified for production and non-production.</p> <ul style="list-style-type: none"> • Dell EMC VxRail integrated systems are designed with VMware, for VMware, to enhance VMware-enabled organizations' ability to streamline operations and predictably evolve. • Dell EMC 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. <p>See SAP HANA on Dell EMC VxRail Hyperconverged Infrastructure and SAP HANA on Dell EMC PowerEdge for VMware vSAN Hyperconverged Infrastructure</p>

For existing and new Dell Technologies solutions that are SAP-certified for running SAP HANA see the SAP HANA Hardware Directory for [Certified Appliance and TDI solutions](#) and [Certified Hyperconverged solutions](#).



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