Dell EMC Ready Solutions for Business Applications

Optimize performance, reliability and efficiency for business-critical applications

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Give your workforce what they need to succeed

Today, the competition is relentless — and coming at you from every angle. To prevail, you need to make sure your workforce has everything they need to succeed. That includes high performance and availability from the business applications they rely on, as well as an efficient IT environment that shaves costs, simplifies management and maintenance, and speeds time to productivity.

Dell EMC Ready Solutions for Business Applications give you high performance, reliability and efficiency to enable rapid response times and operational continuity in areas such as data processing, email and other business-critical applications. The portfolio encompasses a wide selection of options, purpose-built for today’s top business drivers. Together with our partners, Dell EMC also offers consulting, installation, implementation, support and education services for business applications. The breadth of the Dell EMC portfolio makes it easy to find a solution that’s right for your needs and goals.

Performance
Refresh outdated technologies with the latest innovations to accelerate performance for business applications. Fast, high-performance infrastructure enables real-time responsiveness, quick results and increased productivity. Multiple configuration options provide flexibility to build a properly sized and tested configuration that is optimized for your performance goals.

Reliability
Tested and validated Dell EMC Ready Solutions help avoid pitfalls while meeting your availability requirements. Dell EMC PowerEdge servers help preserve uptime with proactive diagnostics and automated remediation. With the addition of the #1 backup appliance product, Data Domain, you can be confident that data is protected in a disaster.

Efficiency
Dell EMC engineering expertise and testing means that Dell EMC Ready Solutions reduce the time you spend planning, deploying and testing a solution. Further, Dell EMC Ready Solutions for Business Applications can include Dell EMC OpenManage Essentials, which simplifies and automates critical server lifecycle management tasks.
Typical business applications use cases
Defining an achievable use case that drives business value is the key to success. Although specific use cases will be unique to your company, the following table lists many use cases that could help you redefine your business and become more competitive.

<table>
<thead>
<tr>
<th>SAP HANA®</th>
<th>SAP landscapes</th>
<th>Microsoft® SQL Server®</th>
<th>Oracle® Database</th>
<th>Microsoft Exchange®</th>
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| • Making advanced analytics available to average users  
• Combining online analytical processing (OLAP) and online transactional processing (OLTP) into a single in-memory database  
• Accelerating transactions and reports inside SAP® Business Suite | • Modernizing current SAP landscapes  
• Creating a foundation for adopting SAP S/4HANA® within the next three to five years | • Delivering real-time operational intelligence  
• Leveraging enterprise-scale data warehousing  
• Combining relational data with nonrelational data | • Extracting value from data  
• Supporting new data types and structures beyond pure relational  
• Powering high-speed transactions  
• Addressing hybrid transactional and analytic models | • Upgrading or migrating from Exchange 2007, 2010 or 2013  
• Expanding a current email solution  
• Simplifying business processes  
• Consolidating servers/storage |

Do these challenges sound familiar?
“We struggle to continue to provide the performance our users demand.”
Maintaining legacy infrastructure is complex, time-consuming and costly, creating an environment where IT organizations simply tread water — adding more CPU, more storage, more spindles, more bandwidth and more software. But this approach only increases complexity and costs without significantly addressing performance and growth needs. Adopting properly sized and configured solutions can increase application performance dramatically. But with many different options available for hardware and storage subsystems, it could take multiple tries to find the right combination. Dell EMC understands these challenges and has both the expertise and the extensive portfolio to help customers quickly find the solution that will optimize performance for specific applications.

“It’s critical for us to safeguard application availability.”
In a 24x7 world, business applications need to be available at all times. Dell EMC Ready Solutions for Business Applications incorporate planning, testing, and best practice guidelines to maintain availability. Some solutions also leverage the six-nines (99.9999%) availability of Dell EMC VMAX storage and Dell EMC PowerEdge server availability features that help further preserve uptime. In addition, Dell EMC offers market-leading technologies for data protection, availability and business continuity.
“We need to reduce the time it takes to deploy new solutions, and reduce overall IT complexity.”

The digital economy offers exciting new opportunities, but it also brings unprecedented IT challenges. As new software, hardware, and other solutions are introduced, the old are discontinued and unsupported — and organizations that don’t adapt and adopt quickly won’t survive. Dell EMC Ready Solutions for Business Applications are purpose-built to be easy to purchase, deploy and manage. They start by delivering faster time to production, shortening the design cycle and configuration time with solutions that are tested and validated for easier planning and deployment. Once deployed, they provide the ability to manage everything with a few tools to simplify administration. Dell EMC and our partners also offer a consulting, implementation and support services to make implementation as easy as possible.

**Dell EMC Solutions**

Dell EMC Ready Solutions for Business Applications prepare you for whatever comes your way. Our approach provides choice in how you acquire and deploy solutions to support business application workloads.

**Dell EMC Ready Nodes**

Dell EMC Ready Nodes are building blocks designed for you to start or scale workload-specific deployments. These tested and validated solutions are built on Dell EMC PowerEdge servers preconfigured for specific applications.

**Dell EMC Ready Bundles**

Dell EMC Ready Bundles are tested and validated multicomponent bundles — with servers, storage, networking, software and services — in optimized configurations for an application, workload or use case.

**Dell EMC Ready Systems**

Dell EMC Ready Systems are rack-scale converged or hyper-converged infrastructure (HCI) — including servers, data storage devices, networking functions, virtualization, and management software — in configurations that have been tested and validated for specific applications, use cases or workloads.

**Dell EMC Ready Solutions for SAP HANA**

Pairing enterprise-class Dell EMC solutions with SAP HANA allows you to execute business analytics and data reporting in a single solution. Dell EMC Ready Solutions for SAP HANA offer proven performance and easy deployment, designed and delivered by a team with the expertise to deploy an SAP HANA solution that IT can manage like any other database.

Get proven performance

You’re investing in SAP HANA for its blazing fast performance, so naturally you’ll want to deploy it on infrastructure with proven benchmark performance metrics.²

Deploy quickly and easily

Get up and running with SAP HANA faster by choosing validated, tested and configured Dell EMC Ready Solutions for SAP HANA. Dell EMC offers consulting, implementation and support offerings to make SAP HANA as easy as possible.

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Tap into SAP HANA savvy
Dell EMC and SAP have built a strong relationship over nearly two decades, covering solution design and delivery, and extensive services expertise. Dell EMC has built a Global SAP Center of Excellence to foster a tighter partnership and greater coinnovation with SAP. This heightened level of collaboration has led to industry-leading benchmarks and exceptional customer results.¹

Dell EMC Ready Bundle for SAP Landscapes
SAP applications function better on a modern infrastructure, designed to deliver faster results with enhanced performance, agility and resiliency — and solutions that prepare you for adopting or expanding SAP S/4HANA are ideal. Dell EMC has the knowledge, expertise and tools that make it easy for you to consolidate and modernize SAP landscapes and be ready to adopt SAP S/4HANA when the time comes.

Streamline and reduce costs
Update with the latest, cost-effective innovations for greater performance and agility, efficiency and security — all while lowering operating expenses.

Get faster results
Get compute, networking and storage in a single solution, designed to reduce the time it takes to realize the benefits of a modern SAP infrastructure.

Prepare for the digital economy
Chart a clear path to SAP S/4HANA and leverage one of the first solutions to offer a SAP-certified Leonardo gateway device that allows for processing at the edge and data streaming back to the core.

Dell EMC Ready Bundle for Microsoft SQL
Microsoft SQL Server performance depends on the right architectural design and sizing. So, the infrastructure and implementation can have a huge impact on the results. Dell EMC has both the SQL Server expertise and the extensive portfolio to help you quickly find the right solution, implement the right processes, and get the right performance, while minimizing risk.

Optimize performance
Properly sized and configured hardware can increase application performance and reduce capital expenses dramatically. The Dell EMC Ready Bundle for Microsoft SQL delivers breakthrough mission-critical capabilities with in-memory performance and operational analytics built in.

Reduce costs
You can consolidate into a more efficient data center solution on cost-efficient industry-standard hardware with a smaller footprint — and consolidation means savings.

Enjoy exceptional scalability
Making the right hardware decisions is important for database scalability. Superior, future-ready solution design means you can scale without sacrificing performance, so you won’t outgrow the solution and need a forklift upgrade.

**Solution overview**

**Dell EMC Ready Bundle for Oracle**

Virtualization simplifies database management and provides the flexibility to mix online analytics processing (OLAP), online transaction processing (OLTP) and testing and development (test/dev) workloads on the same infrastructure. But optimizing and managing virtualized Oracle environments can be complex and costly. The Dell EMC Ready Bundle for Oracle is purpose-built to support OLTP, OLAP and test/dev at the same time without sacrificing performance or storage space.

**Safeguard availability**

The Dell EMC Ready Bundle for Oracle supports both production OLAP and OLTP along with test/dev environments in a single virtualized environment. So, when application owners and admins fix bugs, optimize an existing workload, and test patches or updates, applications continue to access critical data at the speed of business.

**Reduce costs**

The Dell EMC Ready Bundle for Oracle offers a lower entry point with a purchase price up to 33% lower than the most advanced engineered solution for Oracle in the market. In addition, the massive overprovisioning typical of databases gives them tremendous consolidation potential. With server consolidation, not only are hardware footprints reduced, but the costs for expensive database licenses are also reduced.

**Increase productivity**

The Dell EMC Ready Bundle for Oracle shortens the design cycle and configuration time with a solution that’s tested and validated with OLAP, OLTP and test/dev running in the same environment for easier planning and deployment. Once in service, embedded Dell EMC iDRAC with Lifecycle Controller enables intelligent, automated control of servers, storage and networking.

**Dell EMC Ready Bundle for Microsoft Exchange**

In an increasingly mobile and cloud-enabled world, IT is under pressure to deliver the secure, available and user-friendly Microsoft Exchange email experience users demand. Dell EMC Ready Bundle for Microsoft Exchange gives IT the power to quickly implement affordable infrastructure for Microsoft Exchange 2016, and scale just as quickly as the number of employees — and inbox sizes — grow.

**Savings**

Enjoy lower total cost of ownership (TCO) through efficient storage design and system management. High-density Dell EMC PowerEdge Servers reduce the hardware footprint and associated administration and energy costs.

**Speed**

Shorten the design cycle and configuration time for faster deployment. Built-in Dell EMC engineering expertise means that the Dell EMC Ready Bundle for Microsoft Exchange is tested to reduce the time you spend planning, deploying and testing an Exchange 2016 solution.

**Scale**

Enable a future-ready solution with exceptional scalability and flexibility. Dell EMC developed this solution using a building block approach that balances low-cost internal storage and the high density Exchange requires. As your organization grows, you can add mailboxes simply by adding one or more Dell EMC Ready Bundles, without rearchitecting the original solution.

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*Learn more*

- Dell EMC Ready Bundle for Oracle — solution overview

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"House of Brick case study, "Exadata vs. Vblock: A Case Study," August 2015."
Enabling technologies

Dell EMC PowerEdge 14G servers
The next generation of Dell EMC PowerEdge servers is set to accelerate key business applications workloads. Dell EMC PowerEdge 14G servers are engineered to deliver unmatched performance and versatile configurations to meet the demands of business applications. Flash storage, the latest processors, greater memory bandwidth and flexible local storage make Dell EMC PowerEdge servers a foundational choice for business applications.

Dell EMC Storage
From high-performance all-flash arrays to hybrid flash and scale-out NAS storage, Dell EMC Storage solutions help you efficiently store, protect and manage information so you can do more, move faster and perform better.

Dell EMC Networking
Based on open standards, future-ready Dell EMC Networking solutions help you improve network performance, lower networking costs and remain flexible to adopt new innovations. Take control of your network and learn how Dell EMC’s strategy for open networking can dramatically transform your business.

SAP HANA
Groundbreaking SAP HANA in-memory database software provides the power to run advanced analytics alongside high-speed transactions and get accurate, up-to-date responses in seconds. SAP HANA allows applications to keep pace with demanding data analytics needs across a variety of deployment options.

SAP applications
SAP serves more than 365,000 customers in more than 180 countries. SAP customers include:
- 87% of the Forbes Global 2000 companies
- 98% of the 100 most valued brands
- 100% of the Dow Jones top scoring sustainability companies

Microsoft SQL Server
Microsoft SQL Server delivers breakthrough mission-critical capabilities with in-memory performance and operational analytics built in—while security features help protect your data at-rest and data in-motion. In addition, SQL Server 2016 delivers a database solution for hybrid cloud, enabling you to easily build, deploy and manage solutions that span on-premises and cloud.

Oracle Database
Oracle databases play a critical role in today’s enterprises, providing access to fast, scalable and reliable database technology in a cost-effective, hybrid cloud environment. Oracle Database includes a series of innovations that helps you easily transform to the cloud while preserving investments in Oracle technologies, skills and resources.

Microsoft Exchange
Microsoft Exchange delivers secure, available and user-friendly email experiences, plus helps you manage increasing volumes of communications across multiple devices while protecting sensitive information and simplifying compliance.
Why Dell EMC?

The combination of Dell and EMC brings together two industry-leading companies with strong reputations for value and innovation. Dell EMC holds leadership positions in some of the biggest and largest-growth categories in the IT infrastructure business, and that means you can confidently source your IT needs from one provider — Dell EMC.

- #1 in hyper-converged infrastructure
- #1 converged infrastructure
- #1 in traditional and all-flash storage
- #1 virtualized data center infrastructure
- #1 cloud IT infrastructure
- #1 server virtualization and cloud systems management software (VMware®)
- #1 in data protection
- #1 in software-defined storage

Proven results for SAP HANA

80% of data updated in real time
$6.17 million in benefits
77% improvement in average data compression
100% ROI after only nine months
87% reduction in extract, transform, load (ETL) times

Enhanced performance for SAP landscapes

World record on the 4-socket SAP Sales and Distribution (SD) benchmark held by Dell EMC PowerEdge R940 Server

Up to 44% faster performance with the Dell EMC PowerEdge R940 Server with Intel Xeon Platinum 8180 Scalable processors, compared to the Dell EMC PowerEdge R930 Server with Intel Xeon E7-8893-v4 CPUs in an SAP Sales and Distribution (SD) Sybase environment

Measurable benefits for Microsoft SQL Server

42% increase in transactions per second
43% increase in batch requests per second
50% decrease in actual query response time

Higher availability and lower costs for Oracle Database

Six-nines availability with VMAX, with only 30–60 seconds of downtime per year

Up to 20% lower licensing costs, thanks to Dell EMC PowerEdge servers with Intel® Xeon® processors

Customer success with Microsoft Exchange

$1 million USD in expected savings by consolidating infrastructure

Email servers consolidated from 49 to 6 data centers
Services and financing

Dell EMC “Try and Buy” programs
Dell EMC offers a variety of programs that allow you to try solutions and products in your own environment. These programs streamline decision-making and reduce the risk associated with new technology investments.

Dell EMC Customer Solution Centers
Experience Dell EMC solutions in our global network of 21 dedicated facilities. The Dell EMC Customer Solution Centers are trusted environments where world-class IT experts collaborate with you to share best practices, and facilitate in-depth discussions of effective business strategies using briefings, workshops or proofs-of-concept to help you become more successful and competitive. Dell EMC Customer Solution Centers reduce the risk associated with new technology investments and can help improve speed of implementation.

Solutions customized for your needs
Leverage on-site integration or application implementation with Dell EMC Professional Services.

Deployment assistance when you need it
You can trust Dell EMC to deploy the racked configuration in your data center, including network cabling, operating system, firmware and hypervisor with Dell EMC ProDeploy.

Support is always on for you
Enjoy unlimited access to 24x7 chat, email and phone support services with how-to assistance and disaster recovery from Dell EMC ProSupport.

All-flash deployment and support
Dell EMC Services helps you optimize returns from VMAX all-flash technology by providing an optimally deployed and supported solution that delivers a trusted mission-critical architecture to deliver on business and technical needs. Dell EMC VMAX All-Flash Services include planning and design, implementation and installation, data migration and support.

Dell EMC Financial Services
Let the wealth of leasing and financing options from Dell EMC Financial Services help you find opportunities when your organization faces decisions regarding capital expenditures, operating expenditures and cash flow.

- Leasing and financing solutions are located throughout the U.S., Canada and Europe.
- Dell EMC Financial Services can finance your technology solution.
- Electronic quoting and online contracts offer an efficient purchase experience.

Learn more about Dell EMC Financial Services.
Solution overview

Optimize business applications right away
There’s no need to wait any longer. Contact your Dell EMC or partner representative to find out how you can enhance the performance, reliability and efficiency of business applications, today.

Resources
External
- Dell EMC Ready Solutions for SAP HANA: dellemc.com/hana
- Dell EMC Ready Bundle for SAP Landscapes: dellemc.com/landscapes
- Dell EMC Ready Bundle for Microsoft SQL: dell.com/sql
- Dell EMC Ready Bundle for Oracle: dellemc.com/oracle
- Dell EMC Ready Bundle for Microsoft Exchange: dell.com/exchange
- Dell EMC customer stories
- Dell EMC Customer Solution Centers

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To learn more, visit dellemc.com or contact your local representative or authorized reseller.