

# Dell EMC Ready Solutions for Data Analytics

Reshape the core of your modern business

## Table of Contents

Unlock the value of your data. . . . .	2
Typical data analytics use cases . . . . .	3
Are you facing any of these challenges with your data warehouse? . . . . .	3
Are you facing any of these roadblocks to digital transformation? . . . . .	4
Dell EMC Ready Solutions for Data Analytics . . . . .	4
Dell EMC Ready Bundles for Hadoop . . . . .	5
Dell EMC Ready Solutions for Splunk. . . . .	5
Enabling technologies. . . . .	6
Why Dell EMC? . . . . .	7
Services and financing . . . . .	8
Take the next step, today . . . . .	9

## Data-centric

## Simple

## Profitable

~60%

of organizations generate revenue from their data.<sup>1</sup>

83%

of organizations report using data to make existing products more profitable.<sup>2</sup>

\$65M

increased net income when a Fortune 1000 company increased their data accessibility 10%.<sup>3</sup>

60%

increase in operating margins for retailers who leverage the power of big data.<sup>4</sup>

## Unlock the value of your data

The data-driven age is dramatically reshaping industries and reinventing the future. As vast amounts of data keep pouring in from increasingly diverse sources, leveraging that data is both critical and transformational for your business. Today, data is currency.

Mastering data and data analytics holds tremendous potential for dramatically growing revenue and controlling costs. And while some companies are well down the path to becoming data-driven organizations, others are just starting out. This is because it's often difficult know where to begin. That's where Dell EMC can help.

Dell EMC Ready Solutions for Data Analytics can help you unlock the value that exists within your data. The portfolio encompasses a wide selection of options, purpose-built for today's top data transformation goals. Together with our partners, Dell EMC also offers consulting, installation, implementation, support and education services for data analytics. The breadth of the Dell EMC portfolio makes it easy to find a solution that's right for where you are on your data analytics journey.

### Data-centric

With digital transformation, all roads lead to data. Data-driven decision-making becomes a key tool to enable transformation. Dell EMC can help you on your journey with solutions for harnessing data to transform how you do business.

### Simple

Dell EMC — along with world-class partners such as Intel®, Hortonworks®, Cloudera®, Syncsort®, Splunk® and more — is focused on simplifying the implementation and maintenance of data analytics solutions. This helps you take the first step and creates a foundation for growth. Optimizing your existing infrastructure can be as simple as setting up a different architectural structure that introduces a modern, flexible and scalable solution — no “rip and replace” required.

### Profitable

Companies that build data analytics solutions see strong financial returns. Dell EMC can help you understand the journey, define the use case and invest properly to see a strong return on investment (ROI).

<sup>1</sup> The Economist Intelligence Unit, “[The Business of Data](#),” 2016.

<sup>2</sup> Forrester Consulting, “[The Total Economic Impact of the Dell | Cloudera Apache Hadoop Solution, Accelerated by Intel](#)” Commissioned case study conducted on behalf of Dell EMC and Intel, November 2015.

<sup>3</sup> Bernard Marr, “[Big Data: 20 Mind-Boggling Facts Everyone Must Read](#),” September 2015.

<sup>4</sup> “[Go from data to decision faster](#)” Dell infographic.

## Typical data analytics use cases

Defining an achievable data analytics use case that drives business value is the key to success. Although specific use cases will be unique to your company, there are two broad categories of data analytics use cases that capture the data analytics journey for most organizations: data warehouse optimization and digital transformation. Within these categories, many use cases can help you redefine your business and become more competitive:

Data warehouse optimization	Digital transformation
<ul style="list-style-type: none"> <li>• Log aggregation and analytics</li> <li>• Dual/tiered storage and active archive</li> <li>• Supply chain management</li> <li>• Manufacturing traceability</li> <li>• Enterprise asset management</li> <li>• High-speed transaction processing</li> </ul>	<ul style="list-style-type: none"> <li>• Enhanced application delivery</li> <li>• Business analytics</li> <li>• Cloud</li> <li>• Internet of Things (IoT)</li> <li>• IT operations</li> <li>• Log management</li> <li>• Security and fraud detection</li> <li>• Real-time continuous sales forecasting</li> <li>• Improving the speed of innovation</li> </ul>

### Are you facing any of these challenges with your data warehouse?

**“We need to reduce the cost of storing and analyzing growing volumes of semistructured and unstructured data.”**

New data types and analytics approaches challenge traditional infrastructure, resulting in slow response times, inability to meet aggressive service level agreements (SLAs) and overburdened enterprise data warehouses (EDWs). As traditional EDWs hit their limits, many forward-looking organizations are deploying open-source Apache® Hadoop® as a complement to their existing EDWs, and then offloading data warehouse processing functions to Hadoop — a cost-effective, highly scalable solution that can store volumes of structured, semistructured and unstructured data sets. Offloading massive extract, transform, load (ETL) processing demands — from the EDW to an environment that is both cost-effective and capable of managing large data sets — leaves more resources for other workloads. Developed in partnership with Cloudera, Hortonworks, Intel and Syncsort, Dell EMC Ready Bundles for Hadoop allow you to capitalize on the unique technical and cost advantages of Hadoop, while making better use of existing EDW investments.

**“We need to reduce the cost of archiving data while making it more accessible.”**

With data growing at a fast pace, it’s often impractical to archive most data. The practice of archiving “low value” data by moving it from primary to secondary storage is a common practice for many organizations. Using Hadoop as an affordable alternative for data too valuable to discard — but accessed occasionally — is an example of an active archive. Hadoop allows you to store data in its native format, and moves data between storage tiers so it can be accessed directly by applications or end-users. While providing cost-effective data archiving, Dell EMC Ready Bundles for Hadoop can also enable broad organizational access to varied data sets for ad hoc analysis.



### Are you facing any of these roadblocks to digital transformation?

**“Without a 360-degree view of customers, we’re falling behind the competition.”**

In today’s competitive environment, you need to work harder and smarter to retain customers. After all, it’s your customers who ultimately drive revenue. McKinsey estimates each 10-point uptick in customer satisfaction increases revenue by 2–3%.<sup>5</sup> Increasingly, the path to customer retention runs through mountains of big data. The key is to use data analytics to gain a 360-degree view of each customer. This enables you to identify and reward the most loyal customers, as well as identify and work to retain the customers most likely to defect. A Hadoop solution lets you manage, capture, integrate and analyze massive amounts of structured, semistructured and unstructured data to build that important 360-degree customer view. That’s why Dell EMC has teamed up with industry leaders — such as Intel, Hortonworks, Cloudera and Syncsort — to remove the uncertainty and barriers that may dissuade an organization from deploying Hadoop.

**“We’re not able to make use of valuable machine data.”**

Machine data is one of the fastest-growing and most complex areas of big data. It contains a definitive record of events that can reveal information about user transactions, customer behavior, machine behavior, security threats, fraudulent activity and more. Making use of this data, however, presents real challenges. Traditional data analysis, management and monitoring solutions are not engineered to handle this high-volume, high-velocity and highly diverse data. Splunk Enterprise software is the easy, fast and secure way to search, analyze and visualize the massive streams of machine data generated by IT infrastructure, business applications, computers, mobile phones, embedded systems and other networked devices — physical, virtual and in the cloud — helping deliver real-time visibility across the entire business. Dell EMC Ready Solutions for Splunk help consolidate, simplify and protect machine data.

## Dell EMC Ready Solutions for Data Analytics

Dell EMC Ready Solutions for Data Analytics are designed to help you throughout your digital journey. These solutions enable you to get started with your first data analytics project — quickly and simply — or to create greater value for more sophisticated data analytics projects. Our approach provides choice in how you acquire and deploy solutions to support data analytics use cases and 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 configured 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.

<sup>5</sup> Joao Dias et al., “[The Four Pillars of Distinctive Customer Journeys](#),” September 2016.



## Learn more

- [Dell EMC Ready Bundles for Hadoop — solution overview](#)

### Dell EMC Ready Bundles for Hadoop

Cost-effective, future-ready Dell EMC Ready Bundles for Hadoop are easy-to-implement solutions that help you efficiently harness Hadoop and the power of data analytics to drive competitive advantage.

#### Leverage an optimized solution

These solutions are developed jointly with leading Hadoop distributions, and based on extensive experience with real-world Hadoop production installations. They include the hardware, software, resources and services needed to deploy and manage Hadoop in a production environment.

#### Reduce costs

Get compelling total cost of ownership (TCO) benefits by using cost-optimized, industry-standard Dell EMC servers and storage to decrease the cost to store and process large data sets versus traditional business intelligence (BI) and analytics solutions.

#### Deliver outstanding performance

Provide excellent performance with minimal testing prior to purchase and minimal risk with solutions engineered and certified to work together and provide known performance parameters and deployment methods.



## Learn more

- [Dell EMC Ready Solutions for Splunk — solution overview](#)

### Dell EMC Ready Solutions for Splunk

Dell EMC Ready Solutions for Splunk provide nondisruptive scalability and performance, optimized for Splunk workloads. Together, Dell EMC and Splunk enable you to harness the power of Splunk machine data analytics with the simplified deployment and scalability of Dell EMC infrastructure.

#### Harness machine data

Splunk makes it simple to collect, analyze and act upon the untapped value of data generated by infrastructure, security solutions and business applications — giving you the insights to drive operational performance and business results. Dell EMC Ready Solutions for Splunk are purpose-built for the needs of Splunk, helping consolidate, simplify and protect machine data.

#### Simplify deployment

Maintaining consistent performance and leveraging flash — so you get fast query and search capabilities from Splunk — requires a thoughtful approach to infrastructure design. Dell EMC Ready Solutions for Splunk have been tested and validated with Splunk software to reduce the time, effort and resources spent on trying to build a Splunk solution.

#### Upgrade and scale with ease

Splunk is a flexible solution that scales easily from a single focused use case to an enterprise-wide analytics backbone. Dell EMC Ready Solutions for Splunk are designed from the start to dynamically fit your current and future needs. When it's time to grow, you can scale-out horizontally without interruption to Splunk operations.

If you need traditional database technologies to enable your data analytics projects, Dell EMC has a variety of Dell EMC Ready Solutions for Business Applications to simplify deployment and optimize costs. Key database solutions include:

- [Dell EMC Ready Solutions for SAP HANA](#)
- [Dell EMC Ready Bundle for SAP Landscapes](#)
- [Dell EMC Ready Bundle for Microsoft SQL](#)
- [Dell EMC Ready Bundle for Oracle](#)

## Enabling technologies

### Dell EMC PowerEdge 14G servers

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

### Dell EMC Isilon Scale-Out NAS

Data analytics environments require large, scalable, reliable and efficient storage solutions. With support for multiple workloads and enterprise-grade data and file management capabilities out of the box, [Dell EMC Isilon Scale-Out NAS](#) is the leading storage solution for data analytics. Isilon is ideal for consolidating multiple types of data and where storage must scale faster than compute. You can take advantage of the high capacity of Isilon to reduce the acquisition and ownership cost for managing and monetizing data using advanced or predictive analytics and machine learning.

### Dell EMC Networking

Today's data analytics workloads call for new thinking about network architecture. Based on open standards, [Dell EMC Networking solutions](#) free you from outdated, proprietary approaches. Our future-ready networking solutions help you improve network performance, lower networking costs and remain flexible to adopt new innovations. Take control of your network's future and learn how Dell EMC's strategy for open networking can dramatically transform your business.

### Hadoop

From open source to commercial distributions, Hadoop provides the foundation to many data analytics use cases allowing for data consolidation of structured and unstructured data coupled with analytics processing. Hadoop becomes the "Swiss Army knife" that sits at the core of successful data analytics projects. Dell EMC partners with Cloudera and Hortonworks to deliver Dell EMC Ready Bundles for Hadoop, which simplify deployment and accelerate time to results on Hadoop deployments.

### Splunk

IT systems, business applications and connected sensors create massive amounts of unstructured data. This "machine data" holds valuable insights, but it can be a challenge to understand at scale. Solutions like Splunk address a defined data analytics use case around IT system data, and create a predefined analytics framework to gain valuable insights from this data. Dell EMC has partnered with Splunk to simplify the infrastructure planning, deployment and management for Splunk.

## Why Dell EMC?

Dell EMC's differentiator is its strong partnerships with industry leaders. Partnerships with Splunk, Syncsort, Cloudera, Hortonworks and others allow Dell EMC to create solutions that are secure, easy to use and cost effective.

In addition, 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<sup>6</sup>
- #1 converged infrastructure<sup>7</sup>
- #1 in traditional and all-flash storage<sup>8</sup>
- #1 virtualized data center infrastructure<sup>9</sup>
- #1 cloud IT infrastructure<sup>10</sup>
- #1 server virtualization and cloud systems management software (VMware®)<sup>11</sup>
- #1 in data protection<sup>12</sup>
- #1 in software-defined storage<sup>13</sup>

### Dell EMC Hadoop successes

- Dell EMC with Cloudera Hadoop accelerates new product revenue with payback in 6 months. NPV: \$5.6M. ROI: nearly 2X.<sup>2</sup>
- Dell EMC Data Analytics Solutions allow Omneo® to streamline its supply chain and realize US\$15–25 million in savings per year.<sup>14</sup>
- Dell EMC with Cloudera Hadoop and Syncsort enabled an entry-level technician to execute an ETL job for performing data validation in 60.3% less time compared to a senior engineer using DIY open-source tools.<sup>15</sup>

### Dell EMC customers harness machine data with Splunk

- Enhance productivity with hundreds of apps and add-ons.<sup>16</sup>
- Simplify deployment with an 82% decrease in time to deploy VxRail FLEX.<sup>17</sup>
- Upgrade and scale with ease: just five minutes to add a new node with VxRail.<sup>18</sup>

<sup>6</sup> [dell EMC.com](http://dell EMC.com)

<sup>7</sup> IDC WW Quarterly Converged Systems Tracker, Q1 2017, June 2017, Vendor Revenue.

<sup>8</sup> IDC WW Quarterly Enterprise Storage Systems Tracker, September 2017, Vendor Revenue — EMC Q2 2017.

<sup>9</sup> Dell EMC Annual Report, 2015.

<sup>10</sup> "Go from data to decision faster" Dell infographic.

<sup>11</sup> IDC WW Quarterly Cloud IT Infrastructure Tracker, April 2017, Vendor Revenue — EMC Q4 2016.

<sup>12</sup> IDC WW Virtual Machine and Cloud System Market Shares 2016, July 2017.

<sup>13</sup> Dell EMC Pulse, "Gartner Recognizes EMC as a Leader in the 2016 Data Center Backup and Recovery Software Magic Quadrant," June 2016.

<sup>14</sup> IDC WW Semiannual Software Tracker, 2H2016, April 2017.

<sup>15</sup> Principled Technologies Report commissioned by Dell, "Performance Advantages of Hadoop ETL Offload with the Intel Processor-powered Dell EMC | Cloudera | Syncsort Solution," July 2015.

<sup>16</sup> Splunk.com, "Enhance and Extend the Value of Splunk,"

<sup>17</sup> Wikibon.com, "Hyperconverged Infrastructure as a Stepping Stone to True Hybrid Cloud," April 2017.

<sup>18</sup> Enterprise Strategy Group, "VxRail Hyper-Converged Appliances from Dell EMC," January 2017.

## Did you know...?

Dell EMC has more than 10 years of experience engineering Hadoop solutions. Let us put that experience to work for your customers.

## Services and financing

Taking the first step is often the hardest part of the journey. Dell EMC offers several important services to help you become comfortable with your decisions to invest in data analytics.

### Dell EMC Big Data Vision Workshop

The [Dell EMC Big Data Vision Workshop](#) aligns IT and the business around a strategic business initiative. Using data science techniques, the workshop identifies and prioritizes an optimal use case for data analytics. The workshop aligns the goals and expectations around data analytics by applying research, interviews, and data science expertise and techniques to your business and data. The three-week engagement culminates in a one-day workshop where the teams collectively agree on the optimal analytics use case and a path forward to solving a business problem.

### Dell EMC Big Data Technology Advisory Service

The [Dell EMC Big Data Technology Advisory Service](#) is a three-week consulting engagement that reviews your infrastructure, data environment, analytical needs and organization in the context of your data analytics goals or technology challenges. The engagement identifies critical capabilities, a recommended architecture and a technology roadmap to implement those capabilities.

### Dell EMC Big Data Migration Services for Hadoop

This consulting engagement migrates EDW data to Hadoop, or existing Hadoop data to Isilon. This drives operational efficiencies and storage scalability, and creates a foundation for advanced analytics. It improves ETL performance by offloading those processes to Hadoop while enabling ingestion of both structured and unstructured data sets.

### 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. Contact your authorized Dell EMC or channel partner representative for information on specific programs.

### 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, facilitate in-depth discussions of effective business strategies using briefings, workshops, or fully supported proofs-of-concept, and 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.

### Dell EMC Professional Services

Leverage on-site integration or application implementation with [Dell EMC Professional Services](#).

### Dell EMC ProDeploy

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](#).

#### Dell EMC ProSupport

Enjoy unlimited access to 24x7 chat, email and phone support services with how-to assistance and disaster recovery from [Dell EMC ProSupport](#).

#### 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 available 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](#).

## Learn more

- Dell EMC Ready Bundles for Hadoop: [dell EMC.com/hadoop](http://dell EMC.com/hadoop)
- Dell EMC Ready Solutions for Splunk: [dell EMC.com/splunk](http://dell EMC.com/splunk)
- [Dell EMC Customer Stories](#)
- [Dell EMC Customer Solution Centers](#)
- [Dell EMC Technology Strategy and Implementation services for big data](#)

## Take the next step, today

Data analytics is a journey. Beginning with a partner who encourages collaboration, has a depth of understanding in data analytics, a wide breadth of solutions, and who drives success through secure and supported growth can lead you to success at every step of the journey. Get in touch with your Dell EMC or partner sales representative to learn more, today.

## Contact us

To learn more, visit [dell EMC.com/bigdata](http://dell EMC.com/bigdata) or contact your local representative or authorized reseller.

