

# Dell EMC Ready Solutions for Data Analytics

Optimized solutions designed to help you manage  
and harness the value of big data analytics

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~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>

## Big Data simplified

## Lower costs

## Optimized for performance and scalability

## 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.

Digital transformation is causing churn, uncertainty and disruption for many business leaders who need to act quickly as pressure increases from all directions. Big data analytics is at the core of this transformation. However, without the right tools, you'll be faced with complex, costly and inefficient trial-and-error approaches to implementing a data analytics solution.

Dell EMC Ready Solutions for Data Analytics provide an end-to-end portfolio of predesigned, integrated and validated tools for big data analytics — solutions that have been optimized for performance and scalability, calculated to lower costs and to ensure a strong return on investment, and designed to simplify deployment and operation of big data analytics projects. Consisting of high-performance Dell EMC infrastructure — PowerEdge servers, Dell EMC Networking, Isilon storage, select open source-based enterprise-class analytics software, and best-in-class services — these solutions all designed to harness the power of big data analytics to drive competitive advantage.

### Big data simplified

Developed jointly with leading partners, Dell EMC Ready Solutions for Data Analytics are based on extensive customer experience with real-world production installations. These solutions offer documented guidance to help simplify architecture decisions when implementing new environments.

### Lower costs

Dell EMC Ready Solutions for Data Analytics offer 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 and analytics solutions.

### Optimized for performance and scalability

Engineered and certified to work together, Dell EMC Ready Solutions for Data Analytics provide known performance parameters and deployment methods — ensuring that users can get excellent performance and minimal risk with architecture deployment.

<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.

## Do any of these challenges sound familiar?

**“We cannot stand up data analytics environments fast enough to meet demand.”**

Every leader and every department wants metrics. Data architects, analysts and scientists all have preferences for specific data analytics applications, yet the applications often have different requirements. And it takes time to architect, procure and deploy the right infrastructure. By the time it's operational, teams often want to try something different.

**“It's expensive to set up new data analytics clusters.”**

IT can't risk disrupting existing data analytics implementations every time someone requests a new or different analytics environment. Therefore, IT has to stand up a new one — each at a cost — with its own infrastructure, process and support team. While the initial phases of procuring resources in the public cloud can be faster and cheaper than on-premises solutions, moving massive amounts of data to and from public cloud can result in substantial data transfer costs.

**“Multiple data analytics environments continue to create more complexity.”**

The big data avalanche, coupled with opportunities for insight and automation, means groups will continue to request different data analytics environments. Before you know it, there are many different implementations with multiple versions of Hadoop, NoSQL, Kafka and Spark. Those same teams also want to experiment with AI and machine learning (ML). It's unsustainable, time-intensive, and complex to manage and maintain each and every implementation while the queue for new projects continues to grow.

### Struggling to make analytics projects successful

Many businesses have trouble getting started with analytics solutions or making sure projects are successful once they're completed. For more than a decade, Dell EMC has helped organizations solve the Hadoop skills gap by providing expert guidance and knowledge to streamline the architecture, design, planning and configuration of Hadoop environments. Today, this expert guidance and knowledge is embodied in Dell EMC Ready Architectures for Hadoop, designed to make Hadoop projects easier to start and more successful once completed.

### Reducing costs across the data center

IT budgets are typically constrained, which can make it difficult to free up resources for new Hadoop projects. Data storage in Hadoop is dramatically less expensive than legacy storage in data warehouses. By extracting, transforming and loading data from their legacy environments into Hadoop (ETL offload), organizations realized significant hardware, software and administrative cost savings.<sup>5</sup>

### Providing the blazing performance that makes Hadoop projects successful

Data is critical to every aspect of running a modern business. Teams need fast, concurrent access to data from every corner of the business to delight customers, outpace the competition, secure the enterprise, and maintain regulatory compliance. But testing and tuning Hadoop can be difficult and time consuming. Dell EMC Ready Architectures for Hadoop have been engineered and proven to deliver industry leading performance.<sup>6</sup>

<sup>5</sup> [“Fighting fraud the smart way - with data analytics and artificial intelligence.”](#) Dell EMC, August 2018.

<sup>6</sup> TPCx-BB - Top Ten Performance Results, [“SF10,000 Results.”](#) March 2018.

## Typical use cases

The use cases for data analytics solutions are diverse, but there are common patterns across industries and verticals. Here is a sampling of possible use cases.

### Ready Architectures for Hadoop Use Cases

Operational efficiency				
<b>Data warehouse augmentation</b>	<b>Log aggregation and analytics</b>	<b>Dual storage and active archive</b>	<b>Archive-intensive and tiered Hadoop</b>	
Reduces total cost of ownership (TCO) and increases return on investment (ROI)	Secures your enterprise	Reduces TCO and eases compliance	Provides enterprise storage features for storage-centric Hadoop workloads with large capacity requirements	
<ul style="list-style-type: none"> <li>Offload extract, transform, load (ETL) workloads</li> <li>Reduce licensing costs</li> <li>Enhance data accessibility</li> <li>Enable better data exploration and analytics</li> </ul>	<ul style="list-style-type: none"> <li>Prevent security breaches and threats</li> <li>Detect operational anomalies</li> <li>Increase infrastructure efficiency and automation</li> </ul>	<ul style="list-style-type: none"> <li>Lower data storage costs while maintaining accessibility</li> <li>Ease compliance and reporting</li> <li>Streamline inquiry processes</li> <li>Enjoy business operations improvement</li> </ul>	<ul style="list-style-type: none"> <li>Lowers costs for active archive</li> <li>Use for long-term tiered storage for regulatory compliance</li> <li>Get multi-protocol support for storage consolidation</li> </ul>	
Business transformation				
<b>Marketing</b>	<b>Finance</b>	<b>Healthcare</b>	<b>Pharmaceutical</b>	<b>Manufacturing</b>
Anticipating customer needs	Reducing risk and detecting fraud	Improving patient care and reducing costs	Ensuring regulatory compliance and validation	Achieving continuous process improvement
<ul style="list-style-type: none"> <li>Customer 360 insight</li> <li>Customer retention</li> <li>Customer segmentation</li> <li>Customer loyalty</li> <li>New product/service launch</li> </ul>	<ul style="list-style-type: none"> <li>Credit scoring</li> <li>Customer analytics</li> <li>Fraud detection</li> <li>Risk management</li> <li>Sarbanes-Oxley Act (SOX) compliance</li> </ul>	<ul style="list-style-type: none"> <li>Quality of care</li> <li>Patient safety</li> <li>Risk mitigation</li> <li>Fraud detection</li> <li>Claims management</li> </ul>	<ul style="list-style-type: none"> <li>Biomedical analytics</li> <li>Stability and shelf life</li> <li>Primary research</li> <li>FDA compliant manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Product quality</li> <li>Customer insight</li> <li>Demand forecasting</li> <li>Improved operations</li> </ul>

### Big Data as a Service Use Cases

<b>Consolidating multiple deployments</b>	<b>Creating on-demand consumption model for infrastructure and applications</b>	<b>Enabling self-service job creation</b>	<b>Leveraging the right tools for every job</b>
<ul style="list-style-type: none"> <li>Multiple data analytics environments can be difficult and costly to scale while the demand for analytics grows.</li> </ul>	<ul style="list-style-type: none"> <li>Allow data analysts to quickly and easily create big data environments while simplifying IT resource management.</li> </ul>	<ul style="list-style-type: none"> <li>Data scientists and analysts can spin up and spin down environments, running a variety of jobs against their data.</li> </ul>	<ul style="list-style-type: none"> <li>Enable data scientists and analysts to use their favorite tools for big data analytics. We support Cloudera® Hadoop, Hortonworks® Hadoop, Spark, Apache Cassandra®, Kafka, MapR®, TensorFlow™, and custom images for other services.</li> </ul>

### Real-Time Data Streaming Ready Architecture Use Cases

<b>Providing real-time feedback</b>	<b>Providing visibility via real-time sensor data</b>	<b>Remote monitoring and alerts</b>	<b>Streaming transformation of Hadoop installed base</b>
<ul style="list-style-type: none"> <li>Inventory management and agility</li> <li>Automatic ordering/shipping of low stock items</li> </ul>	<ul style="list-style-type: none"> <li>Labor efficiency</li> <li>Machine health and equipment administration</li> <li>Production attainment</li> </ul>	<ul style="list-style-type: none"> <li>Changes in demand</li> <li>Traffic patterns</li> <li>Perishable goods monitoring (i.e temp drop on eggs)</li> </ul>	<ul style="list-style-type: none"> <li>Customers currently using Hadoop as a batch process and data repository can easily connect to implement real-time streaming analytics.</li> </ul>

## 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 Solutions for Data Analytics is a comprehensive portfolio of solutions for big data analytics, ranging from multiple solutions for Hadoop and real-time data stream processing, to on-demand Big Data as a Service offers. The portfolio includes the following offers:

- Hortonworks Hadoop Ready Architecture — based on the Hortonworks Data Platform (HDP) software
- Cloudera Hadoop Ready Architecture — based on the Cloudera Distribution of Hadoop (CDH) software
- Real-Time Data Streaming — based on the Confluent Platform for Apache Kafka streaming data analytics
- Big Data as a Service — based on the Blue Data Elastic Private Instant Clusters (EPIC) software for Big Data as a Service (BDaaS)

## Dell EMC Ready Architectures for Hadoop

With Dell EMC Ready Architectures for Hadoop, you can save up to 12 months vs. do-it-yourself, and reduce storage costs to nearly one-twelfth of legacy platforms.<sup>2</sup> When it comes to performance, Dell EMC is #1 in Hadoop-based big data systems, according to SF10,000 TPCx-BB benchmark results.<sup>7</sup> Organizations realized additional performance benefits using Dell EMC's OpenManage to analyze hardware requiring changes or troubleshooting, saying, "It makes management of the environment much easier."<sup>8</sup>

### Leverage an optimized solution

### Reduce costs

### Deliver outstanding performance

#### Leverage an optimized solution

Dell EMC Ready Architectures for Hadoop are jointly engineered with Cloudera and Hortonworks. These solutions are tested, tuned and optimized so you can realize Hadoop benefits up to 12 months faster versus implementing on your own.<sup>9</sup> Based on nearly a decade of Dell EMC experience with enterprise Hadoop installations, Dell EMC Ready Architectures for Hadoop can be delivered as integrated solutions, with all the hardware, software and services to quickly get Hadoop into production.

#### Reduce costs

By extracting, transforming and loading data from legacy data warehouse environments into Hadoop (ETL offload), organizations can realize significant hardware, software and administrative cost savings. In fact, with Dell EMC Ready Architectures for Hadoop, customers report saving \$15M in hardware alone with data offload and storage.<sup>9</sup>

#### Deliver outstanding performance

With Dell EMC Ready Architectures for Hadoop, queries and analytics that took days could be completed in hours or less, and certain jobs could be completed near instantaneously thanks to Hadoop's parallel processing power.<sup>9</sup> At the same time, improved system administration efficiency can save up to \$540k per year, while supporting larger data sets than with traditional data warehouses.<sup>9</sup>

<sup>7</sup> TPCx-BB - Top Ten Performance Results, "[SF10,000 Results](#)," March 2018.

<sup>8</sup> Forrester Research study commissioned by Dell EMC and Intel, "[The Total Economic Impact of Dell EMC Ready Solutions for Hadoop](#)," updated August 2018.

<sup>9</sup> Forrester Research study commissioned by Dell EMC and Intel, "[The Total Economic Impact of the Dell EMC Ready Solutions for Hadoop](#)," August 2018.

### Dell EMC Ready Architectures for Hadoop configuration options

	PowerEdge server R740xd - 3.5"	Isilon Scale-out NAS Isilon H500 or H600
Scalability	Up to 288 nodes	Up to 84 storage nodes
Raw storage	64TB / node	102TB / Isilon H600
Processors	Dual Intel® Xeon® Gold 6140 2.3GHz, 18C/36T	Dual Intel Xeon E5-2680 v4 2.4GHz, 14C/28T
iDRAC network	S3048-ON	S3048-ON
Pod network	S5048-ON	(Internal) 40GbE or Infiniband
Cluster aggregation network	S6010-ON	S6010-ON 40GbE
Software	Cloudera Enterprise 6.1 Hortonworks HDP 3.0.1	OneFS 8.1.2
Operating System	Red Hat Enterprise 7.5 CentOS 7.5	

## Big Data as a Service

If you would like to support multiple distributions of Hadoop, and/or multiple big data analytics applications simultaneously as a service, take a look at Big Data as a Service.

BDaaS provides on-premises, self-service analytics for a wide array of analytics tools and distributions. The solution supports many different software distributions on one technology stack, and it provides rapid service and response times. Dell EMC dedicated data analytics solutions are best-in-class, purpose-built and unmatched in efficiency and performance for those specific workloads.

## Self-service analytics

### Self-service analytics

Speed is a key element of success. Data scientists, analysts and developers require on-demand access to real-time analytics to support business needs. Siloed legacy resources can't deliver the same on-demand access as public cloud providers, but the public cloud has tradeoffs, too. On-premises infrastructure integration and deployment of big data analytics can be complex and time consuming, sometimes taking months.

## Lower costs

Dell EMC provides a Big Data as a Service delivery model and gives data analysts on-demand access to infrastructure resources and analytics tools — such as Hadoop, Spark, NoSQL, Cassandra, Kafka and others — in minutes.<sup>10</sup> This enables IT to provide self-service big data analytics with the performance, compliance and security of an optimized on-premises solution. Analysts can quickly and easily provision their own resources, run jobs using their choice of tools, and even run multiple analytics workloads simultaneously thanks to multi-tenancy enabled by policy-based automation and management. Lines of business can create and execute their own use cases from a single pool of resources with the responsiveness required by modern big data analytics applications.

### Lower costs

When it comes to containing costs for big data analytics, customers are caught between legacy IT, which requires increasing resources to maintain, and paying skyrocketing monthly fees to a public cloud services provider. Big Data as a Service helps reduce costs by providing an automated, self-service portal built on a bedrock of industry-leading Dell EMC infrastructure.

Because Dell EMC has optimized and integrated the solution stack, you can reduce stand-up time from months to weeks. The savings continue past deployment, with reduced management complexity and no unpredictable, recurring monthly charges. The ability to scale compute and storage resources independently, as well as run multiple analytics

<sup>10</sup> "Access to instant, personal clusters," BlueData, August 2018.

instances on the same infrastructure helps eliminate costly cluster sprawl and maximize utilization rates while reducing cost. BlueData reports that you can save up to 75% compared to bare-metal deployments while increasing server utilization by up to 350%.<sup>11</sup>

**Simpler deployment, simpler support**

Reliability and operational simplicity are critical to supporting any enterprise IT environment. Dell EMC's Big Data as a Service includes everything you need to provide BDaaS, including the software, hardware and accelerator services, so you can spend more time on strategic projects. How much time? Customers report that if they tried to implement Hadoop on their own, it would have taken up to 12 months longer to hire the expertise, figure out the correct configurations, and deploy the solution.<sup>12</sup>

**Big Data as a Service configuration options**

	1x administrator node	2x gateway nodes
<b>Server</b>	PowerEdge R640	
<b>Chassis</b>	4x 3 .5" hard drive slots and 3 PCIe slots	
<b>Processor</b>	Intel® Xeon® Silver 4110	
<b>Memory (RAM)</b>	32GB (2x 16GB 2667 MT/s)	
<b>Internal storage</b>	2x 4TB, 7 .2K RPM SATA 6Gbps RAID 1	
<b>Network daughter card</b>	Intel X520 DP 10Gb DA/SFP+, + 1350 DP 1Gb Ethernet	Mellanox® ConnectX®-4 Lx Dual Port 25GbE DA/SFP
<b>Power Supply</b>	Dual, redundant, hot-plug 750W	
	<b>3x controller nodes and 7x worker nodes — High density or GPU accelerated</b>	
	<b>Controller node and worker node — High density</b>	<b>Worker node — GPU accelerated</b>
<b>Server</b>	PowerEdge R740xd	
<b>Chassis</b>	Up to 12x 3 .5" HDD, 4x 3 .5" HDD on mid-plane and 4x 2 .5" HDDs on Flex Bay	Up to 24x 2 .5" HDD
<b>Processor</b>	Dual Intel Xeon Gold 6140	Dual Intel Xeon Gold 6136
<b>Minimum RAM</b>	384GB (12x 3GB, 2667 MT/s)	
<b>GPU</b>		2x NVIDIA® Tesla® V100 GPUs
<b>Internal storage</b>	16x 4TB 7 .2K RPM SATA 6Gbps 512n 3 .5" hot-plug HDD 2x 600GB 10K RPM SAS 12Gbps 512n 2 .5" flex bay HDD	24x 2TB 7 .2K RPM NLSAS 12Gbps 512n 2 .5" hot-plug HDD
<b>Network daughter card</b>	Mellanox ConnectX-4 Lx dual port 25GbE DA/SFP rNDC	
<b>Power Supply</b>	Dual, hot-plug, redundant power supply (1+1), 1100W	
<b>Network (TOR)</b>	1x Dell EMC Networking S5048F-ON 25GbE for 36 servers across 3 racks	
<b>Management switch</b>	1x Dell EMC Networking S3048-ON 25GbE in each rack	
<b>Software</b>	BlueData EPIC Open Manage Enterprise Red Hat® Enterprise Linux®	5 custom images, Cloudera Hadoop, Hortonworks Hadoop, Cassandra NoSQL, Spark, in-memory GPU
<b>Services</b>	Big Data as a Service Accelerator (6 weeks), ProDeploy Plus, ProSupport	

<sup>11</sup> BlueData, "Streamlined operations," August 2018.

<sup>12</sup> "The Total Economic Impact of Dell EMC Ready Solutions For Hadoop," commissioned by Dell EMC | Intel, May 2018.

## Real-Time Data Streaming

The Real-Time Data Streaming Ready Architecture provides customers with an optimized real-time data processing infrastructure that allows modular integration from edge ingestion to analytical results. The solution helps customers eliminate the time, effort and resources spent on trying to build and architect real-time data pipelines and streaming apps and is compatible with Dell EMC Ready Architectures for Hadoop.

Real-time data processing architectures are complex and time-consuming to design and implement, with a vast ecosystem and numerous moving parts that create a high barrier to entry. Yet, many businesses need real-time data insights to be responsive, predictive and competitive.

Real-Time Data Streaming reduces risk and complexity and accelerates the time to value for a customer to implement an end-to-end real-time data processing solution in their own environment. It is designed and optimized to deliver exceptional performance and ensure right-sizing of infrastructure to the customer's needs, including properly-sized configurations, throughput and efficiency, capacity guidance, and scaling guidelines.

### Real-Time Data Streaming configuration options

Cluster Function	PowerEdge Server	Minimum Quantity
Confluent Control Center	PowerEdge R640	1
Confluent Platform	PowerEdge R640	2
Confluent KSQL	PowerEdge R640	2
Kafka Broker	PowerEdge R640	3
<b>Broker configurations</b>	<b>Standard Broker</b>	<b>High Performance Broker</b>
Processor	Dual Intel Xeon Gold 5118	Dual Intel Xeon Gold 6126
Memory	96 GB	96 GB
Network	25 GbE	25GbE
Partition Storage	12 TB (usable)	9.6 TB NVMe (usable)

## Services and financing

### Dell EMC Services

Dell EMC's portfolio of [services](#) helps customers drive the rapid adoption and optimization of their data analytics and AI environments.

[Dell EMC Consulting](#) provides data analytics and AI services from strategy through to implementation and ongoing optimization and helps bridge the people, process and technology needed to achieve the desired business outcomes. Related services include

- [ProConsult Advisory Services](#) are designed to help customers develop a plan to modernize their analytical platforms and architectures for scalability and performance, using our AS-IS / TO-BE methodology. The services provide a range of depth and detail, with one-day, three-week, six-week and custom options available.
- [Big Data as a Service Accelerator](#) is included with Big Data as a Service and covers the full implementation from solution scoping to set up and configuration, integration with existing infrastructure and knowledge transfer during a six-week engagement. Additionally, we assess the customer's desired future state analytics capabilities and develop an implementation roadmap to achieve it. This is also available as a stand-alone service.



- [Elastic Data Platform Implementation](#) incorporates additional functionality into Big Data as a Service and extends the implementation to include integration with service ticketing systems (e.g., ServiceNow), automated workflows to fully enable self-service, role-based access control, and advanced data management capabilities to provide enterprise-scale big data as a service. This custom service is also available as a full solution implementation.
- [Big Data Advisory and Implementation Services](#) cover a broad range of other services designed to help customers plan, implement and optimize solutions and infrastructure to drive value from their data and support AI and other advanced techniques. The services include technical architectures and roadmaps, solution and storage implementations, data and platform migrations, ETL/EDW offloads, data engineering services, health checks, and Hadoop performance optimizations.

[Dell EMC ProDeploy Plus](#) provides the local, personalized skill and scale needed to successfully execute demanding big data deployments in today's complex IT environments from beginning to end. For Big Data as a Service, we deploy the racked configuration in the data center, including network cabling, operating system, firmware and hypervisor.

[Dell EMC ProSupport](#) provides comprehensive hardware and collaborative software support to help ensure optimal system performance and minimize downtime. ProSupport also includes next-business-day on-site service with four- and eight-hour parts and labor response options, and escalation management with customer-defined severity levels. This service is included with the Big Data as a Service. Customers can also opt for ProSupport Plus to get a technology service manager who provides a single point-of-contact for support.

[Dell EMC Education Services](#) offer courses and certifications on [Data Science and Advanced Analytics](#) and workshops on [machine learning](#), in collaboration with NVIDIA, to develop the solution and technology skills needed to fully leverage data analytics and AI capabilities. Comprehensive training and validation on Dell EMC solution components, such as Isilon, PowerEdge and more are also available.

### Dell Financial Services

The wealth of leasing and financing options from [Dell Financial Services](#) can help you find opportunities when you're facing decisions regarding capital expenditures, operating expenditures and cash flow. Dell offers a wide range of payment options to make it easier than ever to meet your needs.

- Leasing and financing solutions are available throughout the United States, Canada and Europe.
- Dell Financial Services can help finance your technology purchase.
- Electronic quoting and online contracts offer an efficient purchase experience.

## Why choose Dell EMC for data analytics, AI and HPC

We're committed to advancing data analytics, AI and HPC, and we've dedicated a great deal of resources toward that goal.

- Come in for an [executive briefing](#) and collaborate on ways to reach your business goals.
- Dell EMC Centers of Excellence are staffed with people who speak your language. They are computer scientists, engineers and PhDs who are subject matter experts in a variety of disciplines.
- We are committed to [providing you with choice](#). We want you to get what you need and to have a great experience working with us. If we don't have what you need, we'll tell you who does. We believe in being open, and we publish our performance results.
- Dell EMC is the only company in the world with a portfolio that spans from Alienware® to supercomputers, including workstations, servers, networking, storage, software and services.
- Because Dell EMC offers such a wide selection of solutions, we can act as your trusted advisor without trying to sell you a one-size-fits-all approach to your problem. That range of solutions has also given us the expertise to understand a broad spectrum of challenges and how to address them.
- To protect, detect and recover from cyberattacks, [security is built into the Dell EMC PowerEdge server design](#), not bolted on after the fact.

## Resources

- [dell EMC.com/bigdata](http://dell EMC.com/bigdata)
- [dell EMC.com/hadoop](http://dell EMC.com/hadoop)
- [dell EMC.com/bdaas](http://dell EMC.com/bdaas)
- [dell EMC.com/analytics](http://dell EMC.com/analytics)

## Learn more

- [Dell EMC Customer Stories](#)
- [Dell EMC Customer Solution Centers](#)
- [Dell EMC Technology Strategy and Implementation services](#)

### Dell EMC Centers of Excellence

As data analytics, HPC and AI converge and the technology evolves, Dell EMC's worldwide HPC innovation centers provide thought leadership, test new technologies and share best practices. They maintain local industry partnerships; and have direct access to Dell EMC and other technology creators to incorporate your feedback and needs into their roadmaps. Through collaboration, [Dell EMC Centers of Excellence](#) provide a network of resources based on the wide-ranging know-how and experience **in the community**.

### Dell EMC Customer Solution Centers

Our global network of 21 dedicated [Dell EMC Customer Solution Centers](#) are trusted environments where world-class IT experts collaborate with customers and prospects to share best practices; facilitate in-depth discussions of effective business strategies using briefings, workshops, or proofs-of-concept (PoCs); and help businesses become more successful and competitive. Dell EMC Customer Solution Centers reduce the risks associated with new technology investments and can help improve speed of implementation.

### Proven results

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 Dell EMC.

- #1 in servers<sup>13</sup>
- #1 in converged and hyper converged infrastructure (HCI)<sup>14</sup>
- #1 in storage<sup>15</sup>
- #1 cloud IT infrastructure<sup>16</sup>

See [Dell Technologies Key Facts](#).

## 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.

<sup>13</sup> IDC [WW Quarterly Server Tracker](#), Vendor Revenue, March 2019.

<sup>14</sup> IDC [WW Quarterly Converged Systems Tracker](#), Vendor Revenue, September 2018.

<sup>15</sup> IDC [WW Quarterly Enterprise Storage Systems Tracker](#), Vendor Revenue, March 2019.

<sup>16</sup> IDC [WW Quarterly Cloud IT Infrastructure Tracker](#), Vendor Revenue, January 2019.

## Contact us

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

