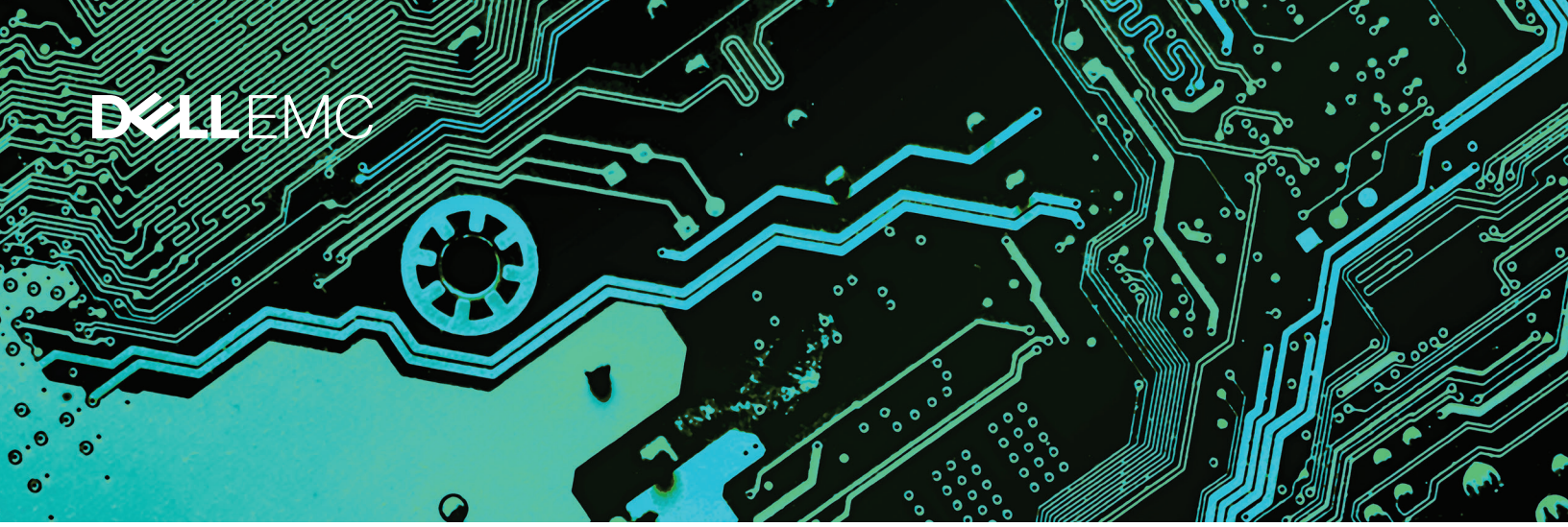

Dell EMC Ready Systems for Splunk

Harness machine data with simplified deployment of optimized solutions that you can upgrade and scale with ease

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Data, data everywhere...

Machine data is one of the fastest-growing and most complex areas of data. It also 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 is an industry-leading software for machine data analytics. It's the easy, fast and secure way to search, analyze and visualize the massive streams of machine data generated by your IT systems and technology infrastructure — physical, virtual and in the cloud — helping you deliver real-time visibility across the entire business. But many organizations find it complex and time-consuming to design, architect, test and validate hardware configurations for Splunk.

Harness machine data

100s

of apps and add-ons speed time to value[12]

Simplify deployment

82%

decrease in time to deploy VxRack FLEX[13]

Upgrade and scale with ease

5

minutes to add a new node with VxRail[14]

Leverage a system built for Splunk

Dell EMC and Splunk have partnered to make adopting Splunk simpler by engineering a portfolio of purpose-built Splunk systems that leverage the automation of VMware®. Dell EMC Ready Systems for Splunk are a selection of hyper-converged systems that provide non-disruptive scalability and performance, optimized for Splunk workloads. Together, Dell EMC and Splunk enable you to harness the power of machine data analytics with the simplified deployment and scalability of Dell EMC hyper-converged infrastructure.

Harness machine data

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

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 Systems for Splunk have been tested and validated with Splunk software to optimize your Splunk deployment.

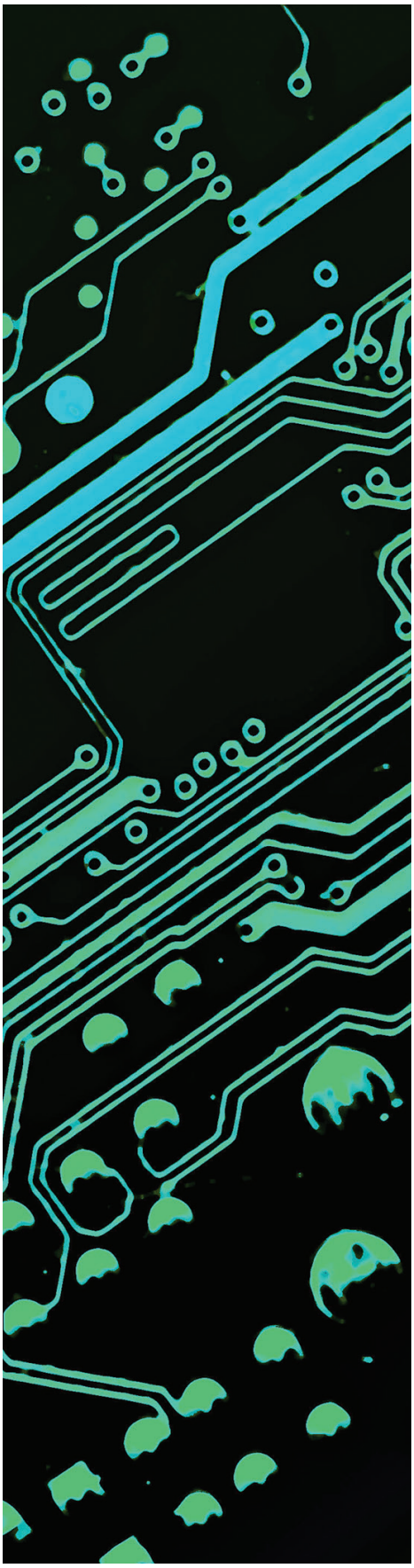
Upgrade and scale with ease

Splunk is a flexible solution that scales easily from a single focused use case to an enterprise-wide analytics backbone. Dell EMC Ready Systems 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.

[1] Splunk.com, "Enhance and Extend the Value of Splunk," 2017.

[2] Wikibon.com, "Hyperconverged Infrastructure as a Stepping Stone to True Hybrid Cloud," April 2017.

[3] Enterprise Strategy Group, "VxRail Hyper-converged Appliances from Dell EMC," January 2017.



Do any of these challenges sound familiar?

We think we could benefit from machine data — but don't know how to get a handle on it

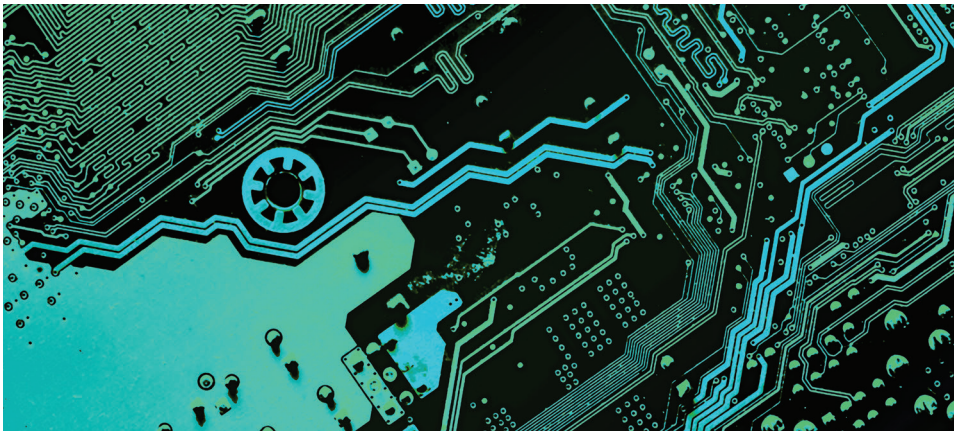
Machine data is the largest and fastest-growing section of data. Every second of every day, hundreds to thousands of IT components record what's happening in your business, with those records coming in an array of unpredictable formats. Dell EMC Ready Systems for Splunk combine the power of Splunk to make machine data accessible, usable, and valuable to everyone, with the simplicity and scalability of Dell EMC VxRail and VxRack FLEX.

Deploying infrastructure for Splunk is complex and time-consuming

One of the main benefits of Splunk is that it offers advanced functionality for a variety of well-defined use cases right out of the box. But if you have to spend weeks and months designing, architecting, deploying and tuning the underlying hardware, that advantage is eroded. Tested and validated Dell EMC Ready Systems for Splunk reduce the time, effort and resources required to build and architect a Splunk solution. In fact, Dell EMC is one of the only partners to architect and offer Splunk-validated systems.

It's hard to anticipate what our future needs will be for Splunk

Many organizations find that once they use Splunk for one use case, they want to add more. In addition, data sets keep growing exponentially, with no end in sight. Dell EMC Ready Systems for Splunk address your current and future needs by offering two flexible solutions — based on VxRail and VxRack FLEX — that allow you to scale capacity and compute independently or as a single, hyper-converged system.



Top Splunk use cases

Application delivery	Splunk software provides an approach to managing applications, helping developers deliver applications faster with positive customer experience. It spans silos to collect, index and analyze the machine data that provides insight into the availability, performance and usage of applications. As a result, DevOps organizations can deliver faster releases, operations teams can reduce mean time to resolution (MTTR), and development teams can optimize application quality, performance and costs.
Business analytics	Splunk software analyzes, visualizes and monitors machine data from any source — such as applications, mobile devices and servers — to provide insights to IT and business operations on-premises and in the cloud. Delivering these enhanced business insights, in real time, to executives and sales, product, marketing, operations, and customer service teams can help transform an organization into a market leader.
Cloud	Splunk enables centralized visibility across cloud, on-premises and hybrid environments so customers can leverage cloud with the security, visibility and assurance they require. Whether a customer is managing applications, infrastructure or security operations in the cloud, Splunk delivers operational intelligence for a real-time understanding of what's happening across business and IT so customers can make better-informed decisions.
IoT	Splunk software ingests, analyzes and visualizes real-time and historical machine data from any source — including industrial control systems and connected devices — enabling customers to improve operations, help ensure safety and compliance, perform predictive maintenance, and better manage the uptime and availability of industrial assets.
IT operations	Splunk collects and correlates machine data so customers can quickly troubleshoot issues and outages, monitor service levels and detect anomalies. Splunk can help reduce MTTR, lower monitoring costs, improve system uptime, and support strategic initiatives like data center optimization and tool consolidation.
Log management	Splunk can consolidate and index any log and machine data, including structured, unstructured and complex multiline application logs. You can collect, store, index, search, correlate, visualize, analyze and report on any machine-generated data to identify and resolve operational and security issues in a faster, repeatable and more affordable way.
Security and fraud	Splunk enables collaboration and implementation of best practices to address modern cyber threat challenges. With Splunk as a nerve center, security teams can leverage statistical, visual, behavioral and exploratory analytics to drive insights, decisions and actions.

Dell EMC Ready Systems for Splunk

VxRail is a great fit for VMware shops wanting to dedicate an appliance to running Splunk on VMware vSphere®. VxRack FLEX is a great fit for those wanting to run Splunk on bare metal or vSphere, or who want to run other workloads on the same rack system.

Dell EMC Ready System for Splunk on VxRail technical specifications

Sizing requirement	50GB/day (single/ combined)	500GB/day (distributed) 250GB/day (clustered)	1TB/day (distributed)	1TB/day (distributed or clustered)
Retention	90-day	90-day	90-day	7-day for hot/warm buckets and configurable retention for cold storage
Number of VxRail E460F	1	4	7	7
Memory	384GB (24 x 16GB) or 512GB (16 x 32GB)			
Storage	800GB per disk group (1 or 2 groups)			
Capacity	5.235TB (3 x 1.92TB) or 20.94TB (6 x 3.84TB SSD) per node[4]			
Network	2 x 10GbE SFP+ per node			
Software	Splunk Enterprise Splunk Universal Forwarder Red Hat® Enterprise Linux® 64-bit VMware vSphere Enterprise VMware vCenter Server® VMware vSAN Enterprise VMware vRealize® Log Insight™ VxRail Manager			
Dell EMC Isilon Scale-out NAS Storage X410 configuration (per node)				
CPUs				2 x Intel® Xeon® E5-2698 v4 processors @ 2.0GHz
RAM				128GB
SSD capacity				3.2TB
HDD capacity				64TB
Network				2 x 10GbE 2 x 1GbE

Refer to "Using Splunk Enterprise with VxRail Appliances and Isilon for Analysis of Machine Data" for more details.

[4] The net effective usable capacity of the VxRail cluster is half the raw capacity. This is due to the vSAN FTT=1 policy setting applied to each VM.

Dell EMC Ready System for Splunk on VxRack System FLEX technical specifications

Sizing requirement	250GB/day (clustered)	500GB/day (clustered)	1TB/day (distributed)	1TB/day (clustered)
Retention	90-day	90-day	90-day	30-day for hot/warm buckets and configurable retention for cold storage
Number of VxRack nodes	1 x search head 2 x indexers 1 x admin server	1 x search head 5 x indexers 1 x admin server	1 x search head 5 x indexers 1 x admin server	1 x search head 5 x indexers using Isilon storage to provide configurable retention for Splunk cold storage 1 x admin server
Compute	Dell EMC PowerEdge R630 Servers			
Processor	2 x Intel Xeon E5-2680 v4 processors per node			
Memory	512GB (16 x 32GB)			
Storage	10 x 3.84TB SSD			
Hot/warm storage	7.2TB	7.2TB	7.2TB	7.2TB
Cold storage	15TB	15TB	15TB	Configurable
Networking	10GbE Cisco® Nexus®			
Software	Splunk Enterprise Splunk Universal Forwarder Red Hat Enterprise Linux 64-bit VMware vSphere Enterprise VMware vCenter Server Dell EMC Vision Intelligent operations Dell EMC ScaleIO			
Dell EMC Isilon Scale-out NAS Storage X410 configuration (per node)				
CPUs				2 x Intel Xeon E5-2698 v4 processors @ 2.0GHz
RAM				128GB
SSD capacity				3.2TB
HDD capacity				64TB
Network				2 x 10GbE 2 x 1GbE

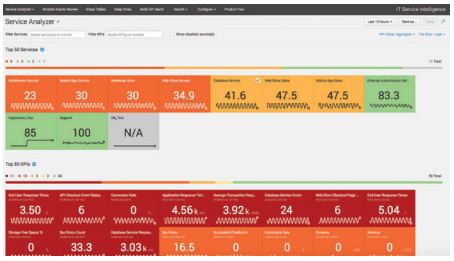
Refer to "Splunk Enterprise on VxRack FLEX for Machine Data Analytics" for more details.

Dell EMC VxRail is a preconfigured and pretested VMware hyper-converged infrastructure appliance. Powered by industry-leading VMware vSAN and vSphere software, the VxRail appliance streamlines and extends your VMware environment while dramatically simplifying IT operations with a known and proven building block for the software-defined data center (SDDC).

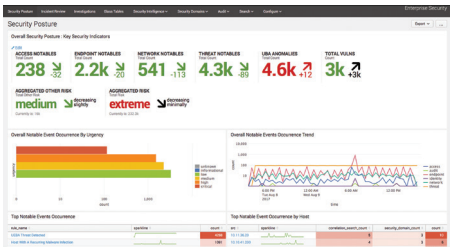
Dell EMC VxRack FLEX delivers virtualization, compute, networking and storage in a scalable, easy to manage hyper-converged system. It deeply integrates VMware vSphere virtualization software, delivering industry-leading application virtualization with a highly available, resilient, efficient on-demand infrastructure. VxRack FLEX offers flexible deployment options (storage-only or hyper-converged) and can support multiple hypervisors, operating systems and bare-metal configurations. Independently scale compute and storage, eliminating stranded resources and improve utilization.

Dell EMC Isilon X-Series is a flexible storage product that provides large capacity and high performance. Isilon storage uses intelligent software to scale data across a large number of commodity hardware units, enabling explosive growth in performance and capacity.

splunk>enterprise



Splunk IT Service Intelligence



Splunk Enterprise Security

Why Dell EMC?

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

- #1 converged infrastructure[5]
- #1 in traditional and all-flash storage[6]
- #1 virtualized data center infrastructure[7]
- #1 cloud IT infrastructure[8]
- #1 server virtualization and cloud systems management software (VMware)[9]
- #1 in data protection[10]
- #1 in software-defined storage[11]

For more information, visit: delltechnologies.com

Why Splunk?

Splunk Enterprise enables collection, indexing and visualization of machine-generated data gathered from different sources in your IT infrastructure. These sources can include applications, networking devices, host and server logs, mobile devices and more. Splunk turns silos of data into operational insights and provides visibility across your IT infrastructure to enable faster problem solving and informed, data-driven decisions. Splunk also:

- Blends metrics and events from both structured and unstructured data sources;
- Delivers powerful visualizations to reveal relationships, track trends and accelerate investigations;
- Collects and correlates multiple data sources to rapidly pinpoint service degradations and reduce mean time to resolution (MTTR); and
- Monitors infrastructure to detect anomalies and prevent problems in real time.

[5] IDC WW Quarterly Converged Systems Tracker, June 2016, Vendor Revenue — EMC FY 2015.

[6] IDC WW Quarterly Enterprise Storage Systems Tracker, June 2016, Vendor Revenue — EMC CY 2015.

[7] Dell EMC Annual Report, 2015.

[8] IDC WW Quarterly Cloud IT Infrastructure Tracker, Q1 June 2016, Vendor Revenue — EMC FY 2015.

[9] IDC WW Virtual Machine and Cloud System Market Shares 2015, July 2016.

[10] Dell EMC Pulse, "Gartner Recognizes EMC as a Leader in the 2016 Data Center Backup and Recovery Software Magic Quadrant," June 2016.

[11] IDC white paper, "Software-Defined Storage: A Pervasive Approach to IT Transformation Driven by the 3rd Platform," November 2015.

Services and financing

VxRack System Support maximizes the value of customer investment in Dell EMC Ready Systems with an integrated support portfolio that increases system availability, reliability and productivity. VCE Support provides:

- Coordination of technical support resources spanning all aspects of Dell EMC Ready Systems;
- Access to experts trained in all aspects of Dell EMC Ready Systems; and
- State-of-the-art support technologies and proven collaboration processes that proactively identify and rapidly resolve problems.

Dell EMC Professional Services

Solutions customized for your needs

Leverage on-site integration or application implementation with Dell EMC Professional Services.

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.

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.

Dell EMC Financial Services

- Full-service leasing and financing solutions are located throughout the US, Canada and Europe.
- Dell EMC Financial Services can finance the total technology solution.
- Efficient electronic quoting and online contracts offer an excellent experience.

Learn more about Dell EMC Financial Services.

Take the next steps toward harnessing more data

Machine data is everywhere, and it holds the key to better understanding user transactions, customer behavior, machine behavior, security threats, fraudulent activity and more. Contact your Dell EMC or authorized partner rep for more details on how to leverage your machine data, today.

Contact us

To learn more, visit www.dell.com/us/splunk or contact your local representative or authorized reseller.