

# **Splunk for Application Management**

Resolve problems faster. Gain end-to-end visibility across all components of your application environment. Use IT operational data to get unprecedented business insights.

# Traditional Approaches Fall Short in Today's Complex Environments

Traditional application management approaches are ill-prepared to handle the increasing complexity of today's IT environments. The rise of virtualization, SOA and DevOps methods have led to multi-layered, complex, siloed application environments—pushing established monitoring methods beyond their limits. Application management can fall short due to several challenges, including:

- Tools rely on summarized data and cannot drill down into granular source data, leading to incomplete analysis and longer problem-resolution times
- Point solutions cannot link events or transactions spanning the diverse components that make up an application or business service
- Developers are often unable to troubleshoot data in restricted-access production systems
- Data retention for historical trending, pattern detection and analysis is limited or non-existent.
- Data monitoring is limited or incomplete and does not account for the overall service—as a result it is usually considered unusable by business users

## A New Approach

Splunk Enterprise is the scalable and versatile data engine for IT with a unique approach to solving difficult problems in complex application environments. Splunk can collect, index and harness the power of all your machine-generated data across the components of your large scale, multi-tiered application infrastructure.

Splunk allows you to make machine data from all components of your enterprise applications usable, from a single place, without complex parsers or adapters.

Splunk provides access to your data, allowing you to find and fix issues fast, with rapid drill down into source data, across every type of application including SOA and composite architectures, packaged applications, web services, databases, .NET or Java applications, middleware and transaction processing systems. Splunk customers routinely see MTTR/MTTI improvements of 60-80%—translating to less downtime and higher service levels.

Collect, index and correlate machine data across tiers of your environment including data from applications, servers, network devices, virtualization layers and operating systems. Splunk's powerful search language and statistical analysis capabilities link events or transactions across technology tiers allowing you to understand real service levels, detect

anomalies and deliver true service-level reporting. Splunk customers gain the ability to trace transactions across a heterogeneous infrastructure in seconds rather than hours or days.

Set up highly granular role based access controls to allow access to production logs, metrics and configurations without access to production systems. Splunk lets you empower front line staff to instantly find answers to routine questions and significantly reduce escalations. Provide developers central, secure, self-service access to production logs for faster problem-resolution, without having to access individual devices.

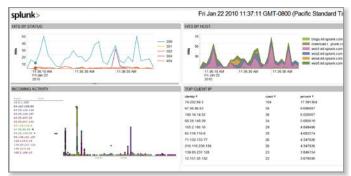
Proactively monitor and alert for previously identified causes of outages or performance issues across different components and make complex linkages in real time to avoid downtime.

Splunk's powerful visualization capabilities give you real-time views and custom dashboards, highlighting key application performance and availability metrics. Splunk also allows you to integrate non-IT data for additional analysis. The flexibility of Splunk lets you access untapped operational data, enabling more informed decision making for IT and the business.

## **Better Application Management**

# **Reduce Downtime or Avoid it Altogether**

Complex distributed applications introduce many points of failure. Problems are hard to find and fix, delaying incident response and creating costly escalations. Application developers and administrators don't have direct access to the machine data they need. The resulting downtime impacts operations, revenues and employee productivity. Splunk provides access to all your data, allowing you quickly fix problems, with rapid drill down into source data, across your infrastructure and applications. Splunk customers routinely experience dramatically less downtime with MTTR/MTTI improvements of 60-80%.



Achieve unprecedented operational insights with Splunk.



"Macy's.com stayed up for the 1st time in 6 years this season. Splunk helps us zero in on problems in seconds. Our MTTR has improved by 5x."

Camille Bali, Infrastructure Architecture Team, Macy's

### **Empower People, Reduce Escalations**

Tier 1 service desk professionals are the first to know when there is an issue, but existing tools provide them limited information to diagnose and pinpoint root cause. Splunk lets you empower your service desk with secure access to pertinent data from across all tiers of your infrastructure, reducing escalations by up to 90%. The Splunk customizable interface and integration with Active Directory allows rolebased access to support professionals as well as developers, enabling a faster root cause analysis and resolution while still maintaining compliance.



"Splunk reduced our escalations by 90% and our problem resolution time by 67%."

Paulo Carvalho, Director Operations, Vodafone

### **End-to-end Visibility**

Modern day applications span many software and hardware infrastructure components. Tracing business transactions from end-to-end can be complex because of shared interoperable application components. The powerful Splunk search language flexibly links together transactions across various elements, enabling complete visibility and control over operations.

Splunk consolidates logs and other machine data such as SNMP traps, events, messages and configuration changes from disparate systems into a single view, providing end-to-end visibility across transactions in a single view.



"It used to take hours, even days to track transactions. Now our Tier 1 support can respond to inquiries in seconds, while the customer is still on the phone."

Pete Elhke, Architecture Team, Pegasus Solutions

### **Proactive Monitoring and Alerting**

Recurring performance or availability issues can be anticipated before they impact the business with proactive monitoring and alerting. When you combine Splunk visibility across the different layers of your infrastructure with realtime monitoring, you can anticipate issues even before the customer calls. Splunk monitors transactions from end-to-end, watching for failures or bottlenecks between systems within each transaction, triggering alerts when specified service levels are not met.



"Splunk helps us to be smarter about our systems, predicting behaviors and addressing issues before they cause outages, errors - or customer complaints."

Flavio Mercato, Solutions Architect, Snap-On Tools

### **Business Metrics Reporting and Dashboards**

Traditional management tools provide component-level reporting and metrics, which may not make sense to business users. With the Splunk end-to-end monitoring capabilities, and its ability to integrate data from non-IT sources, users can measure service levels in real time and provide easy-to-build reports/dashboards with a view that make sense to business users.



"Splunk dashboards provide both the up-tothe-minute and long-term trending data that our business users need to make decisions that impact revenue."

Director of Production Engineering, edmunds.com

### Visibility Across the Virtualization Stack

Since virtualized applications are not pinned down to a particular piece of hardware, it is harder to troubleshoot issues across physical and virtual components. Hypervisors also make it difficult to diagnose when issues are related to the hardware, OS, applications or problems at the virtualization laver.

Splunk provides visibility across the dynamic virtual stack. Search and correlate events across virtual and physical components from one place, allowing for a true understanding of interdependencies. Splunk brings it all together for root cause analysis and complete end-to-end visibility.

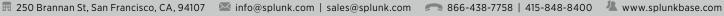


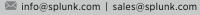
"Splunk delivers critical visibility of our virtual infrastructure, helping diagnose when things go

Joseph Rinckey, VMware Systems Engineer Leading Managed Healthcare Provider

# Free Download

Download Splunk for free. You'll get a Splunk Enterprise license for 60 days and you can index up to 500 megabytes of data per day. After 60 days, or anytime before then, you can convert to a perpetual Free license or purchase an Enterprise license by contacting sales@splunk.com.

















# Splunk and Big Data

Turn machine-generated data into real-time insights for IT and the business.

# **Big Data Comes from Machines**

All your IT applications, systems and technology infrastructure generate data every millisecond of every day. This machine data is one of the fastest growing, most complex areas of big data. It's also one of the most valuable, containing a definitive record of user transactions, customer behavior, sensor activity, machine behavior, security threats, fraudulent activity and more.

Machine data holds critical insights useful across the enterprise. Here are a few examples:

- Monitor end-to-end transactions for online businesses providing 24x7 operations
- Understand customer experience, behavior and usage of services in real-time
- Fulfill internal SLAs and to monitor service provider agreements
- Identify spot trends and sentiment analysis on social platforms
- Map and visualize threat scenario behavior patterns to improve security posture

Making use of machine is challenging. It's difficult to process and analyze by traditional methods or in a timely manner.

- Machine data is generated by a multitude of disparate sources; correlating meaningful events across these is complex
- The data is unstructured and difficult to fit into a predefined schema
- Machine data is high-volume and time-series based, requiring new approaches for management and analysis
- The most valuable insights from this data are often needed in real time

Existing business intelligence and data warehouse solutions are simply not engineered for this type of high-volume, dynamic and unstructured data. Emerging open source technologies can provide part of the answer, but require extensive and time-consuming integration with other open source projects and highly specialized skill sets.

Today's agile enterprises can't wait. Key stakeholders across the organization need to keep pace and adapt to rapidly changing business environments. They need a technology that supports real-time data discovery, ad hoc reports and rapid analysis. A solution that can give them answers as fast as they think of questions.

# Making Machine-generated Data Accessible, Usable and Valuable to Everyone

Splunk is the first enterprise-class platform that collects and indexes any machine data. Splunk can read data from just about any source imaginable, such as network traffic, Web servers, custom applications, application servers, hypervisors, GPS systems, stock market feeds, social media, sensors and preexisting structured databases. It gives you a real-time understanding of what's happening and deep analysis of what's happened across your IT systems and technology infrastructure, so you can make informed decisions. This is operational intelligence.

Integrated, end-to-end and real-time. Splunk collects and indexes any machine data from virtually any source, format or location in real time. It stores and indexes all of the data in a centralized location and keeps it secure with role-based access controls. Once in Splunk, you can search, monitor, report and analyze your data, no matter how unstructured, large or diverse it may be.

Enterprise-scale big data. Splunk scales to collect and index tens of terabytes of data per day, across multi-geography, multi-datacenter infrastructures. And because the insights from your data are mission-critical, Splunk provides the resilience you need, even as you scale out your low-cost, distributed computing environment.

Robust platform for developing big data apps. Developer teams will find a whole host of ways to leverage Splunk and maximize enterprise technology investments. Built-in SDKs for JavaScript and JSON with additional downloadable SDKs for Java, Python and PHP makes it easy to customize and extend the power of Splunk.

**Powerful integrations.** Splunk Hadoop Connect provides bidirectional integration to easily and reliably move data between Splunk and Hadoop. The Splunk App for HadoopOps provides real-time monitoring and analysis of the health and performance of the end-to-end Hadoop environment.

**Proven ROI.** The Splunk Enterprise platform is proven with over 4,400 enterprise customers using Splunk to improve service levels, reduce operations costs, mitigate security risks, enable compliance, enhance DevOps collaboration and create new product and service offerings. Splunk customers typically achieve an ROI measured in weeks or months, sometimes even before being deployed into production.

### What Makes Splunk Unique

Splunk Enterprise is an integrated, end-to-end, real-time solution for machine data delivering the following core capabilities:

- Universal collection and indexing of machine data, from virtually any source
- · Powerful search processing language to search and analyze real-time and historical data
- · Real-time monitoring for patterns and thresholds, provide real-time alerts when specific conditions arise
- · Powerful reporting and analysis
- · Custom dashboards and views for different roles
- · Resilience and scale on commodity hardware
- · Granular role-based security and access controls
- · Support for multi-tenancy and flexible, distributed deployments
- · Splunk Hadoop integration for reliable, bi-directional interoperability
- · Robust, flexible platform for big data apps

# **Customer Success with Splunk**

With over 4,400 licensed customers, our customers are the best examples of machine big data in action.

#### Salesforce.com®

Salesforce.com, the industry-leading enterprise cloud computing company, uses Splunk software to mine large quantities of data generated from across their entire technology stack.

Salesforce.com has over 500 users of Splunk dashboards from IT users monitoring customer experience to product managers performing analytics on new services like 'Chatter.'

"The fact that we had a data treasure chest was not obvious until Splunk came in to the picture. With Splunk, we have taken application troubleshooting for 97,000 customers to the next level. Splunk has augmented our ability to make data-driven decisions." Narayan Bharadwaj, Director Product Management, Salesforce.com

# **NPR®**

NPR, the award winning, multimedia news organization reaching 26.8 million listeners per week, uses Splunk software to gain better visibility and insight of their digital asset infrastructure.

NPR initially used Splunk to monitor and troubleshoot their endto-end asset delivery infrastructure. Before Splunk, there were critical business metrics they couldn't get from their traditional

web analytics solutions. They expanded their deployment of Splunk and now measure program popularity, views by device, reconcile royalty payments for digital rights, measure abandonment rates and more.

"Only Splunk easily gives us the business reports about our webbased digital assets that we need."

Sondra Russel, Online Metrics Analyst

### **Pegasus Solutions**

Pegasus Solutions, a major power behind the travel and hospitality industry, caters to hundreds of thousands of hotels, websites and travel agencies and processes 4-5 billion transactions per month. Pegasus uses Splunk to gather real-time insights from their operational data. Results from using Splunk include reduced escalations and troubleshooting, accelerated response to customer inquiries and unparalleled insights on the health of their system and business.

"Splunk scales to give us real-time monitoring as well as deep historical trend analysis across 50+ systems and 2 billion transactions a month. It is amazingly flexible—we get deep, detailed information and high-level health metrics—all from the same set of data."

Peter Elhke, Principal Systems Engineer, Pegasus Solutions

### **Online Travel Company**

One of the world's leading online travel companies initially used Splunk software to avoid website outages, saving millions of dollars in lost revenue. They quickly expanded their use of Splunk and within 10 months were monitoring 98% of their infrastructure. Today, over 2,700 users at this organization use Splunk to gain real-time insights of not only their IT infrastructure, but also online bookings, performance of air-travel coupons and optimizing SEM.

"We achieved real-time visibility and insights across a wide range of critical areas from server and application health and performance monitoring to bookings trends, coupon use and deal analysis with Splunk. We gained the ability to perform rapid, real-time analysis on tens of terabytes of unstructured, time-sensitive machine data." Sr. Director Infrastructure Architecture

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