Monitoring End User Experiences With Splunk and New Relic

Break down the silos in your observability infrastructure.

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New Relic At A Glance:

<table>
<thead>
<tr>
<th>NEWR</th>
<th>15k+</th>
<th>1.5B</th>
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</thead>
<tbody>
<tr>
<td>NYSE – 2014</td>
<td>Customers</td>
<td>Scale: Events &amp; Metrics Per Minute</td>
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</tbody>
</table>

1,700+ Global Enterprises

13,500+ Disruptors
Why is monitoring hard?
Lots of Data Sources

- Mobile SDK
- Browser Agents
- Synthetic Users
- Application Agents
- Infrastructure Agents
- StatsD
- Cloud & Custom Metrics
- Synthetic Infrastructure
- Social & Contact Center
- Logging / Machine Data
- Wire Data
From any source, monitoring data can be organized into three main categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Examples</th>
<th>New Relic Provides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traces</td>
<td>Relationships between events</td>
<td>Application components involved during a request with an error</td>
<td>✓</td>
</tr>
<tr>
<td>Metrics</td>
<td>Measurement of an event</td>
<td>Throughput, error rate, request rate, request duration</td>
<td>✓</td>
</tr>
<tr>
<td>Logs</td>
<td>Human-readable events</td>
<td>System startup output, process output</td>
<td>✓</td>
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New Relic Provides *via Splunk Integrations*
What is a transaction trace?
Traces: How Did an Application Arrive at a Result?
Tracing Provides Information on Which Segments of an Application Were Involved in a Result
Transactions Are a Central Part of New Relic's Product and Help Developers Diagnose and Troubleshoot Many Problems Without Guessing.
With Microservices, Applications ("Monoliths") Get Broken Up Into Smaller Pieces. The Traces Now Go Through Multiple Programs.
What’s The Problem New Relic & Splunk Are Trying To Solve?
Volume of operational data being generated is growing exponentially.

**Web App: Then**

1 application
3 large servers
1 database
1 data center
1 deploy/quarter

**Web App: Now**

30 containers
4 services
10 small instances
2 managed services
2 databases
2 cloud regions
3 deploys/day
Each tool, framework, platform and language has unique operational questions.

- **Java Engineer**: What’s the error rate of my Java application?
- **Web Developer**: Is the database slowing down Rails?
- **VP of IT Infrastructure**: What’s our spend in us-west-2?
- **Site Reliability Engineer**: How can we improve deploys to Amazon ECS?
To answer operational questions, teams define their own metrics, logging, and alerting practices.
Important operational data becomes siloed by service, app, or infrastructure type.
New Relic consolidates operational data to answer hard questions across teams, apps, and platforms.
Why would you want this?

Reduce MTTR with production log insights + metric-based application monitoring

See real-time application behaviors with byte-code instrumentation data in Splunk

See Splunk infra & security alerts in New Relic
## Data Sources - Splunk and New Relic

### Splunk Strengths
- Machine Data (specifically, around logs)
- Breadth across infrastructure (network, server, cloud infrastructure)
- Root cause analysis (often via config changes that are logged)
- Business-level KPIs, SLOs, etc. that span multiple applications
- Long term storage of raw management data

### New Relic Strengths
- Dependencies across app (via Agents embedded inside apps & microservices)
- Breadth of Code level (BCI) (Java, .Net, Ruby, Node.js, PHP, Python, Go, iOS, Android, Javascript)
- End User Monitoring (response time, etc.)
- Real-time Trace/Transactions time-series data
- Ease of instrumentation & agent install
How about you demo this thing already?
Integration Highlights - Splunk App for New Relic

- Ease of integration with New Relic APIs to collect application, transaction, mobile, browser and synthetic performance and quality key performance indicators

- Out-of-the-box dashboards to summarize transaction response time, ApDex, errors and other key information

- Long term storage of data collected by New Relic add-on
Splunk and New Relic: Break Down Silos

- Combine dashboard elements spanning many data sources
- Provide dashboards across many users
- Correlate time-series data based on Splunk Search Processing Language (SPL)
Splunk Alerts In New Relic
Integration Highlights - New Relic

- Splunk Reports in New Relic Insights to correlate code-level performance in New Relic, alongside detailed logs that provide additional context; for those using New Relic as their UI, having all the data in one place is valuable
- Ad-hoc querying of Splunk data to create flexible views of application logs against New Relic metrics and events for mobile, browser and APM
- Splunk Alerts available in context to APM and infrastructure monitoring via New Relic Insights
- In the long term, Splunk logs correlated to Transaction traces in APM to give the full context about application performance issues
Integration Example - Media Company

Situation
- App Dev and newly created “Dev Ops” teams have been the primary “buyer” for New Relic
- Operations team has been the primary “buyer” for Splunk
- Both teams would get more value by seeing monitoring data across entire environment

Splunk + New Relic
- Allows Operations team to see End User Monitoring and app server metrics alongside infrastructure components they are measuring
- DevOps teams can ad-hoc query Splunk and get events from Splunk, offering better insight into how infrastructure impacts the apps they are responsible for
What should you do next?

Have your New Relic license key?

Install the [Splunkbase plug-in](#)

See pre-built dashboards in Splunk.

Send Splunk Alerts to New Relic Insights
Thank You

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