

Data Drivers: Hackathon #1

Getting Started and Gaming PC Infra

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Why are we
here?



**Register to
join us!!!**

Race:

- Create interesting data
- Have FUN for work's sake

Hack:

- Learn Splunk's ITOps tools
- Build insights for McLaren's Shadow esports Team

Race & Broadcast Schedule

Race Date (all at 12PM PT)	Race Track	Broadcast Date (Splunk Twitch at 12 pm PT)
<u>March 30</u>	Barber Motorsports Park	<u>April 1</u>
<u>April 27</u>	Brands Hatch	<u>April 29</u>
<u>June 1</u>	Circuit De Spa	<u>June 3</u>
<u>June 22</u>	Phillip Island Circuit	<u>June 24</u>
<u>July 20</u>	Twin Ring Motegi	<u>July 22</u>
<u>August 17</u>	Sonoma Raceway	<u>August 19</u>

Hackathon Schedule

Date (12pm PT) on Twitch	Topic
<u>April 2</u>	Intro, participant access overview, Windows Smart Agent on gaming PC
<u>April 30</u>	iRacing GDI: Custom data ingestion with Python
<u>June 4</u>	Getting started with ITSI: Build KPIs that matter
<u>June 25</u>	Build a "service" that is our race
<u>July 23</u>	Race Day visualizations for the pit wall
<u>August 20</u>	Data to action & thresholds at speed

How To Participate

Choose your adventure...

Active - Hands-On

Register using QR code, then we...

- Invite you to our Discord Channel
 - Race Session and practice access info
 - Links to lab environments
 - Required API keys
 - Active support throughout series
- Racing
 - Not free, but totally fun
- Hackathon
 - You work through challenges with us
 - Support via Discord
 - Eligible for SWAG

Passive - Consumption

Hang out on Twitch with us and...

- Enjoy the race broadcasts
- Watch the Hackathons
- Maybe tinker in your own lab
- Feel free to comment in chat
- Tell your friends how awesome this is
- Don't be a troll

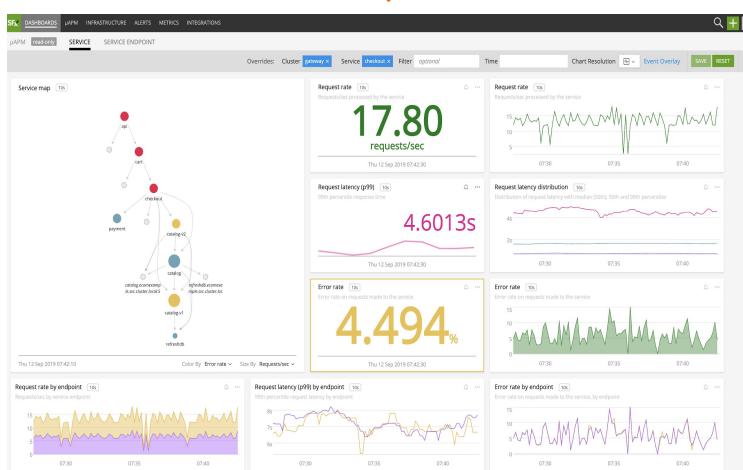
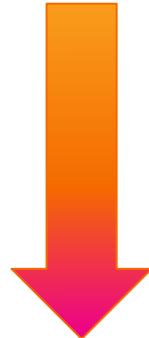
Our End-User



Hackathon Format

Subject to change at the whim of your hosts at any time!

1. Challenge Introduction
2. McLaren Shadow Esports Perspectives
3. Splunk Technical Overview
4. Collaborative Hacking
5. Homework: Bonus Challenge
6. Preview of Next Session



Monitor Gaming PC Infrastructure

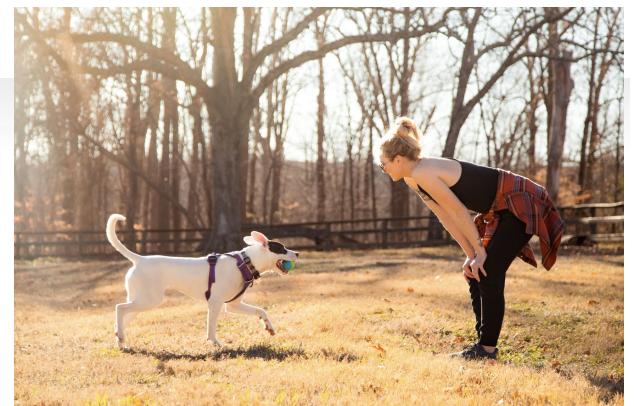
Your Hackathon Challenge:

Use Splunk Infrastructure Monitoring (SIM) and it's SmartAgent to send performance metrics from your gaming PC to our SIM environment.

We will provide you with the following via Discord:

- Lab Credentials
- Access Token
- Region Info
- SmartAgent for Windows

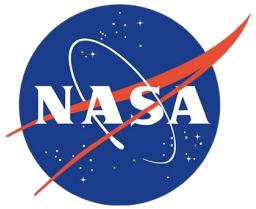
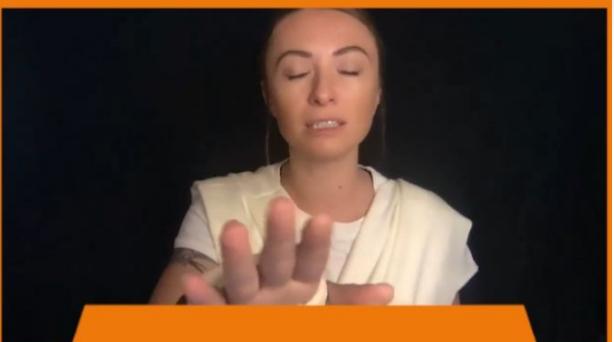




Jenna Eagle

(...like the bird)

IT Markets
Strategist @ Splunk



JPL
Jet Propulsion Laboratory

Splunk Infrastructure Monitoring (SIM)

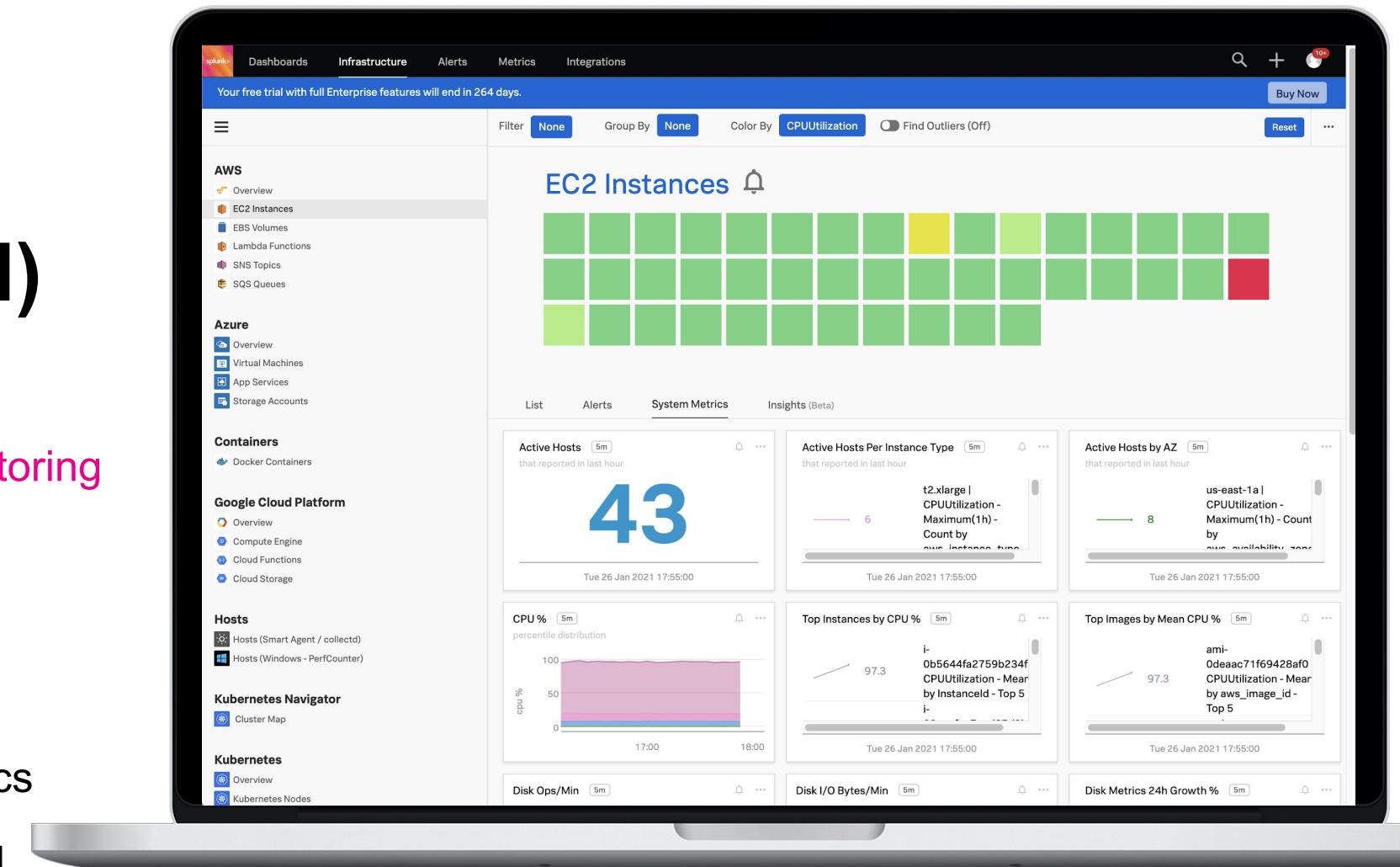
Real-time, on-prem & hybrid /
multi-cloud **metrics-based monitoring**

Sub-second visibility

Pre-built **OOB** dashboards &
hundreds of integrations

Custom & high-resolution metrics

Instant, analytics-driven alerting



Full Stack Instrumentation

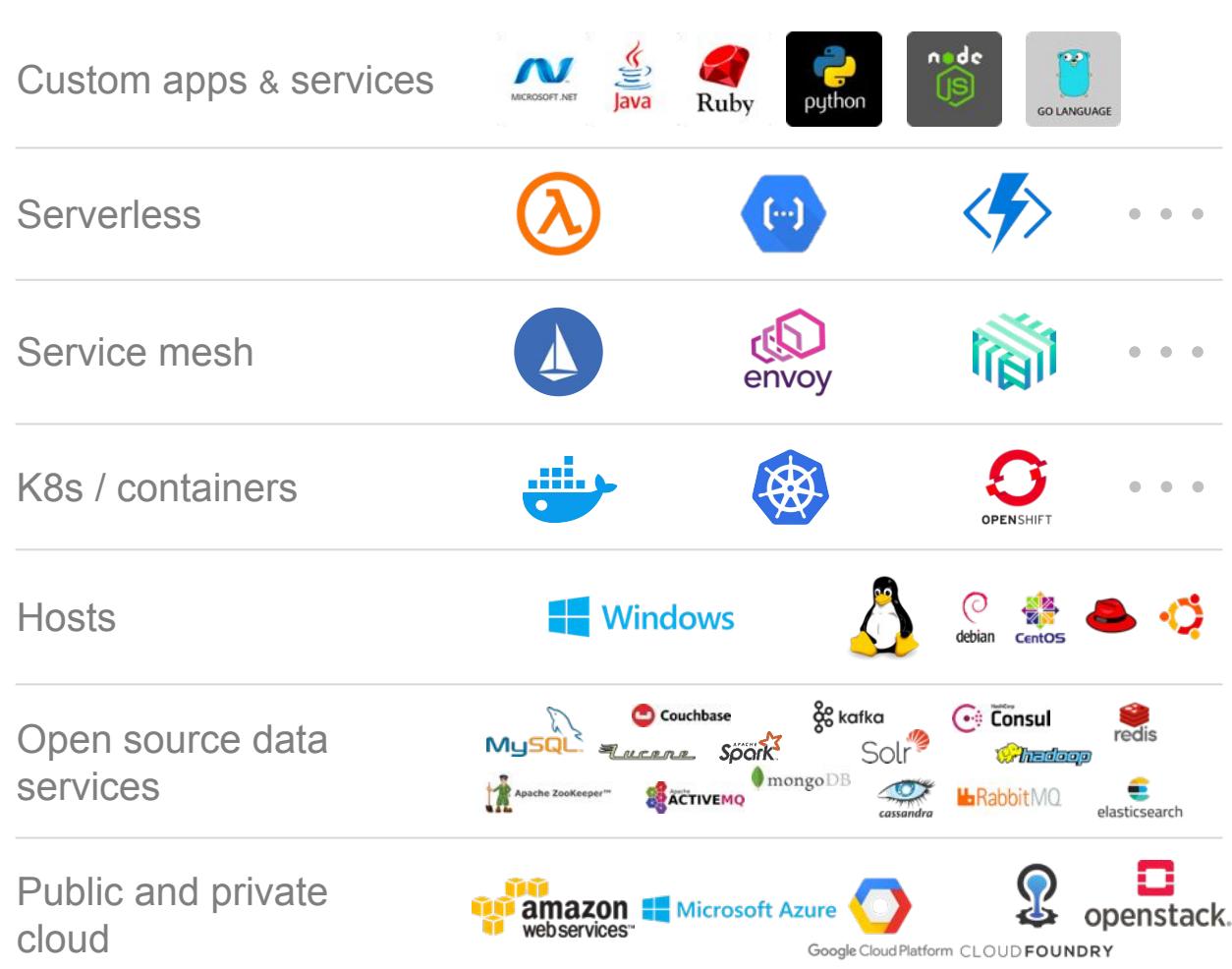
Integrations overview

Client libraries

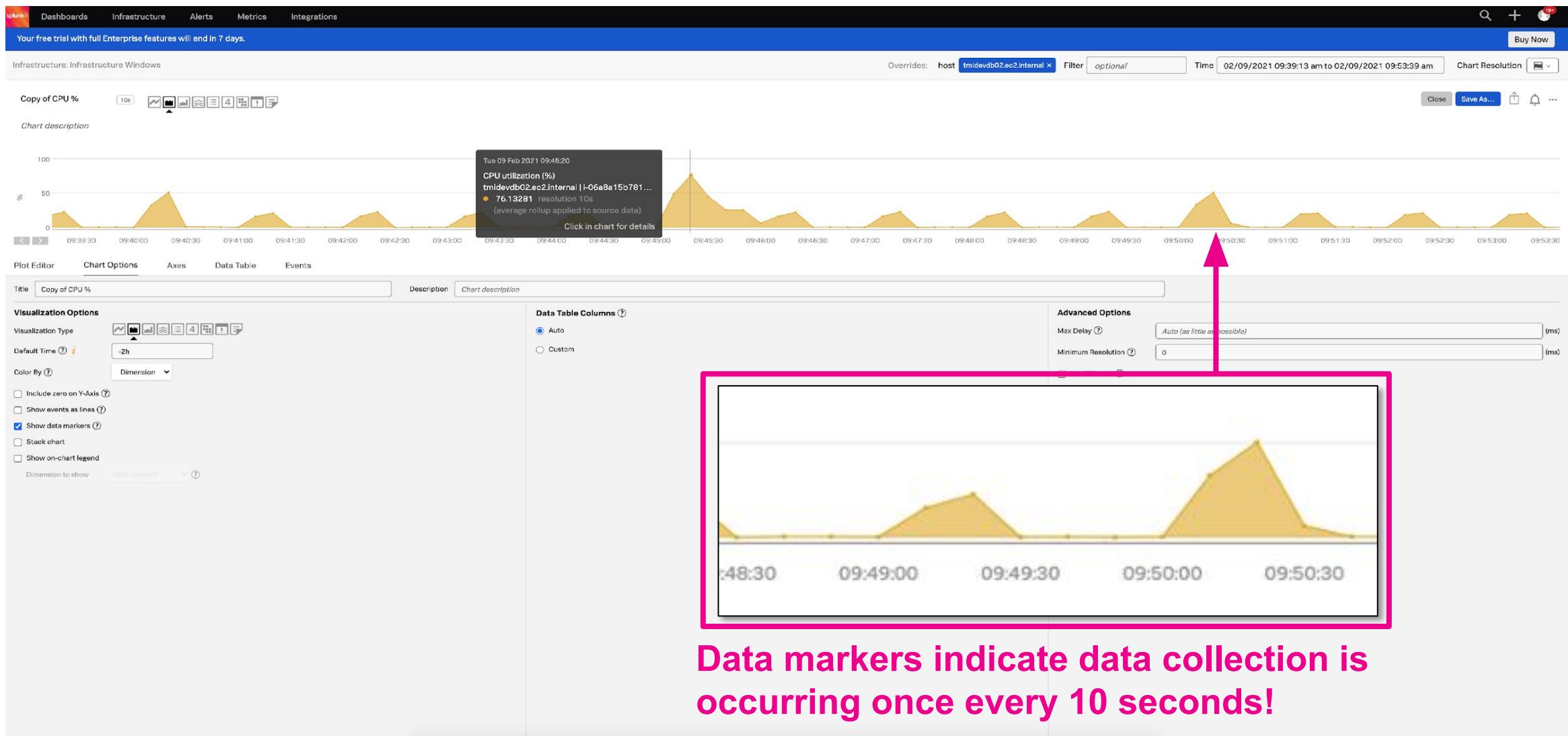
Function wrappers

Smart Agent for Linux
Smart Agent for Windows

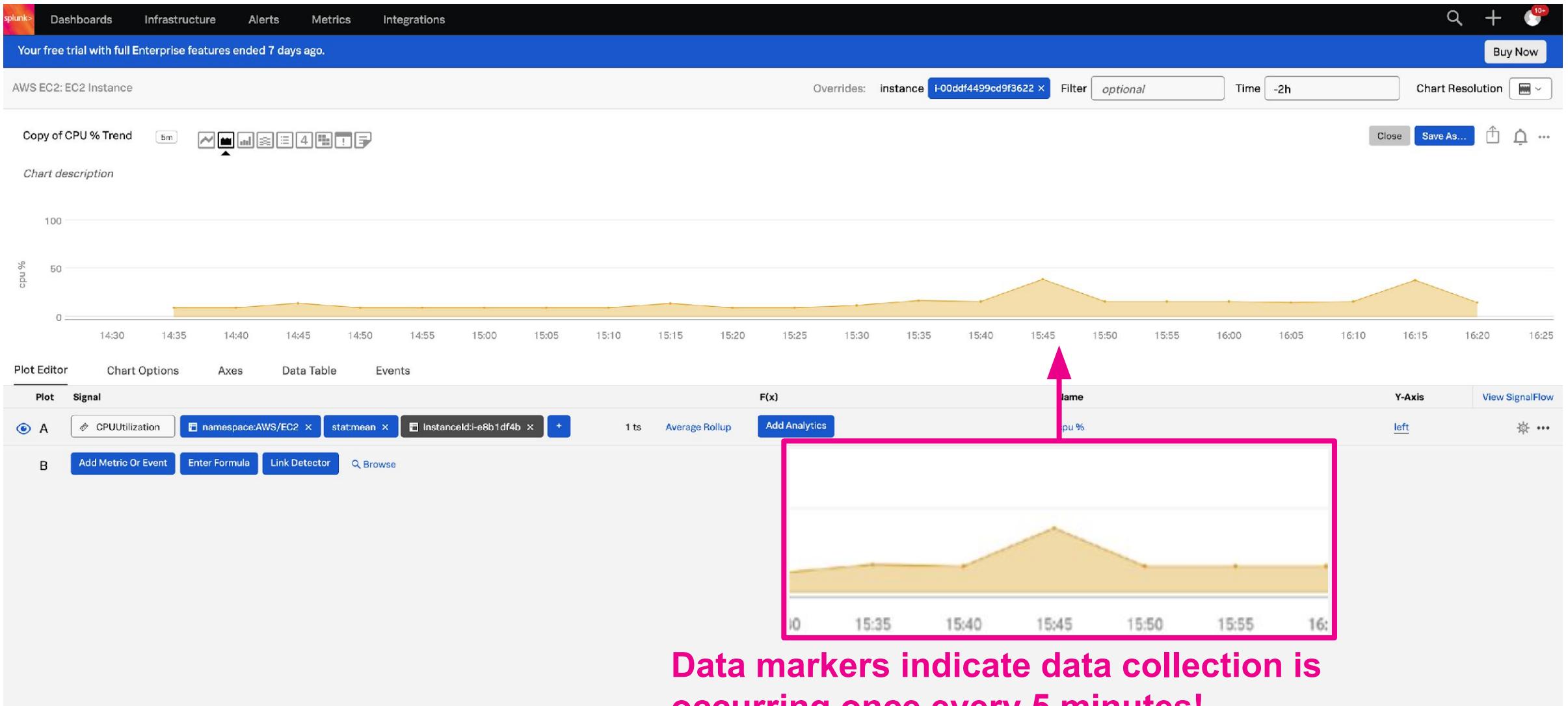
Cloud integrations



Using the Smart Agent for Windows



Using Collection from Cloudwatch



Data markers indicate data collection is occurring once every 5 minutes!

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- Don't "fly blind". ***Public Cloud monitoring offers per minute(s) granularity***. 5 minutes by default; 1 minute at best.
- By installing the SmartAgent, you can now see ***per-second granularity on metrics*** monitoring. 10 seconds by default; 1 second at best!

Infrastructure Monitoring and Troubleshooting Out of the Box

		Monitoring	Troubleshooting
Solution	Technologies Supported	Metrics Based	Log Based
Infrastructure Monitoring & Troubleshooting	AWS Public Cloud	✓	✓
	GCP Public Cloud	✓	✓
	Azure Public Cloud	✓	✓
	Pivotal Cloud Foundry (PCF) Private Cloud	✓	✓
	OpenShift Private Cloud	✓	✓
	Hybrid (on-prem + private/public) Cloud	✓	✓
	Kubernetes & Containers	✓	✓
	Serverless	✓	✓
	vSphere / VMware	✓	✓
	Linux/Windows Host and Physical Server	✓	✓
	Appserver / Webserver	✓	✓
	Database	✓ (Oracle coming soon)	✓
	Network	SNMP polling coming soon	✓
	Storage	✓ (cloud), future (on-prem)	✓

Monitoring - metrics-based performance dashboards & alerts

Troubleshooting - deep-dive root cause analysis via logs/events

Using Integrations

1

Click

2

Essential Services

- SignalFx SmartAgent
- Google Cloud Platform
- Amazon Web Services
- Microsoft Azure
- OpenTelemetry Collector
- SignalFx Telegraf agent

Services Monitored

- SignalFx SmartAgent
- SignalFx collectd agent
- Amazon Web Services
- ActiveMQ
- ActiveMQ message age
- Apache
- Apache Solr
- Apache Spark
- AppDynamics
- Cassandra
- Cloud Foundry
- Consul
- Conviva
- Couchbase
- CouchDB
- Docker
- Elasticsearch
- etcd
- EXPVAR
- Fluent Bit
- GitLab
- Google Cloud Platform
- Hadoop
- Kafka
- Redis
- RabbitMQ
- Solr
- Spark
- AppDynamics
- Cassandra
- Cloud Foundry
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- Google Cloud Platform

Using Integrations

The screenshot shows the Splunk web interface with the following layout:

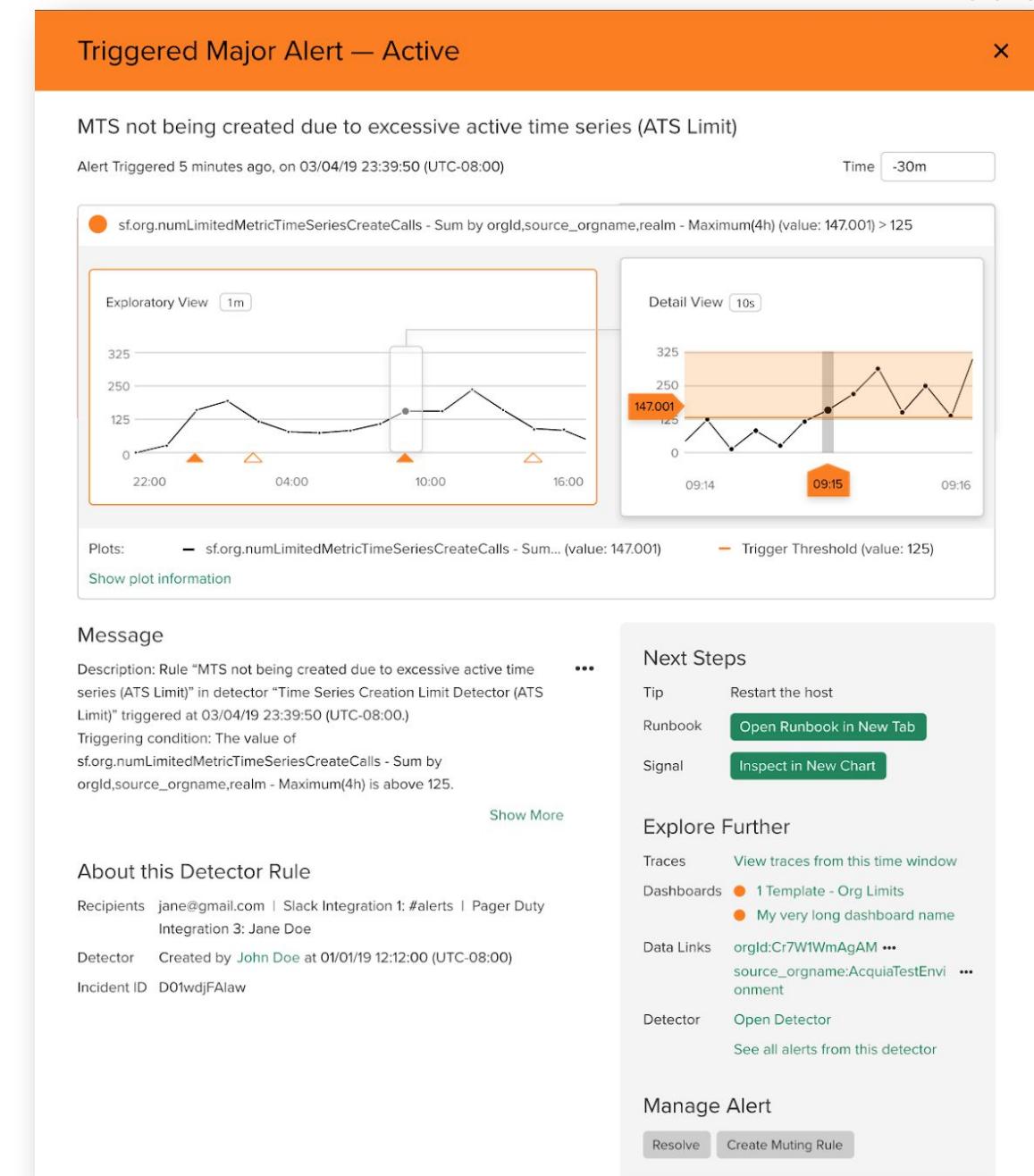
- Top Bar:** splunk > Dashboards, Infrastructure, Alerts, Metrics, Integrations. A message says "Your free trial with full Enterprise features will end in 8 days". A "Buy Now" button is visible.
- Left Sidebar:** A grid of icons for various integrations: Hadoop, HAProxy, MESOS, Microsoft Azure, Pivotal Cloud Foundry, PostgreSQL, AWS Services Monitored (Amazon ALB, Amazon API Gateway), and AWS Services Monitored (Amazon ElastiCache, Amazon ELB).
- Center Panel (PostgreSQL Integration Detail):**
 - Title:** PostgreSQL
 - Description:** Monitor PostgreSQL using the SignalFx Smart agent.
 - Tabs:** Overview (selected), Setup, Metrics, Built-in Content.
 - Features:**
 - PostgreSQL Nodes: Overview of data from all PostgreSQL nodes.
 - Built-in Dashboards:** A grid of nine charts showing PostgreSQL metrics over time (1m or 1h). The charts include:
 - Active Hosts: 3 hosts
 - Total DB Size (bytes): 6,523,064 bytes
 - Total DB Size (bytes) (Built-In Dashboard): 14.3M bytes
 - Top Hosts by Write Ops/sec: 9.40 operations
 - Top Hosts by # Rows: 16 rows
 - Total Transactions/sec: 13.60000 transactions
 - Transactions/sec 7d Change %: -0.300%
 - Total Blocks Read/sec: 0.015 blocks
 - Blocks Read/sec 7d Change %: 0.800%
- Right Sidebar:** Icons for Marathon, Memcached, NGINX Plus, OpenStack, vSphere, ZooKeeper, Amazon ElastiCache, and Amazon ELB.

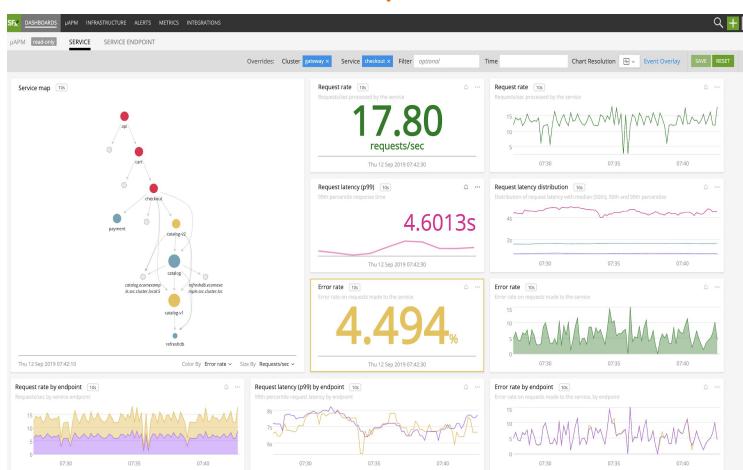
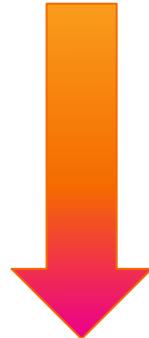
Real-time Alerting

Intelligent and low-noise alerting

Actionable alerts

Interactive exploration of patterns & trends





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Homework

Keep learning...

But what about the GPU?

(bonus points if it's not just nvidia gpu support)

Join Us Next Time

April 30 12PM PT

Getting iRacing metrics in SIM via custom python script

- Monitoring the data coming out of iRacing
- signalfx python library
- updated integrations and alerting

Thank You

