



splunk>

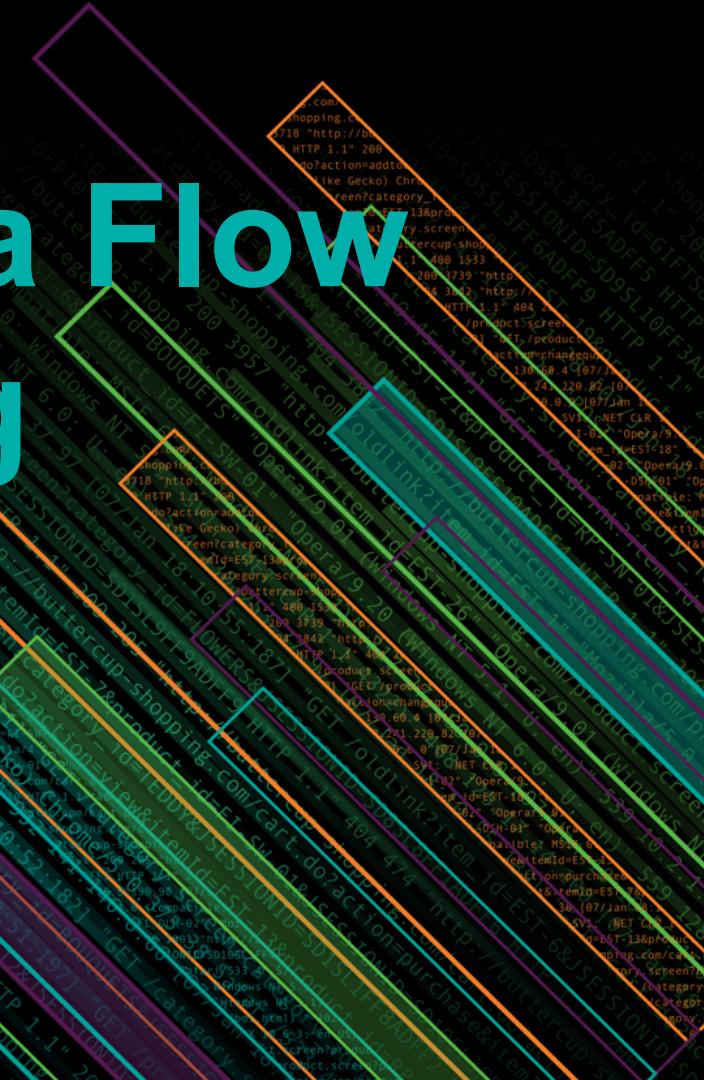
# Gain Control of Your Data Flow Using Stream Processing

Collect, process and deliver data with a single solution

Thor Taylor | Director, Product Management – Streaming

Joey Echeverria | Senior Principal Software Engineer - Streaming

October 2018



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# Gain Control of Your Data Flow Using Stream Processing



**THOR TAYLOR**

Director, Product Management - Streaming



**JOEY ECHEVERRIA**

Senior Principal Software Engineer - Streaming

# Product Discussion

Overview of market discussion and product direction



# Learning from our Past

# Data Providers



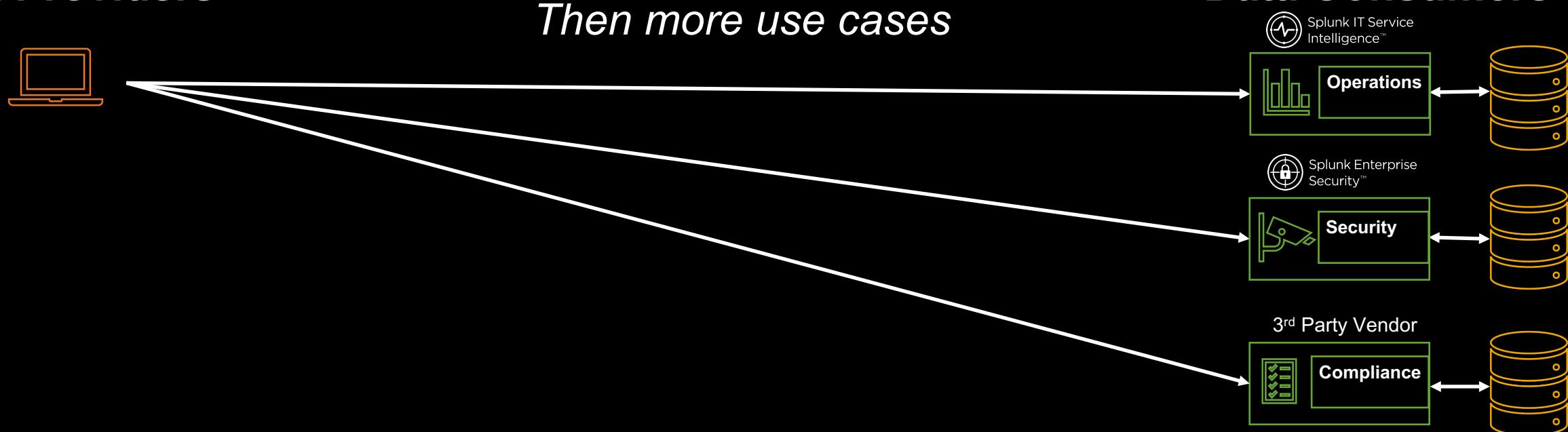
# *Simple Data Stream*



# Learning from our Past

# Data Providers

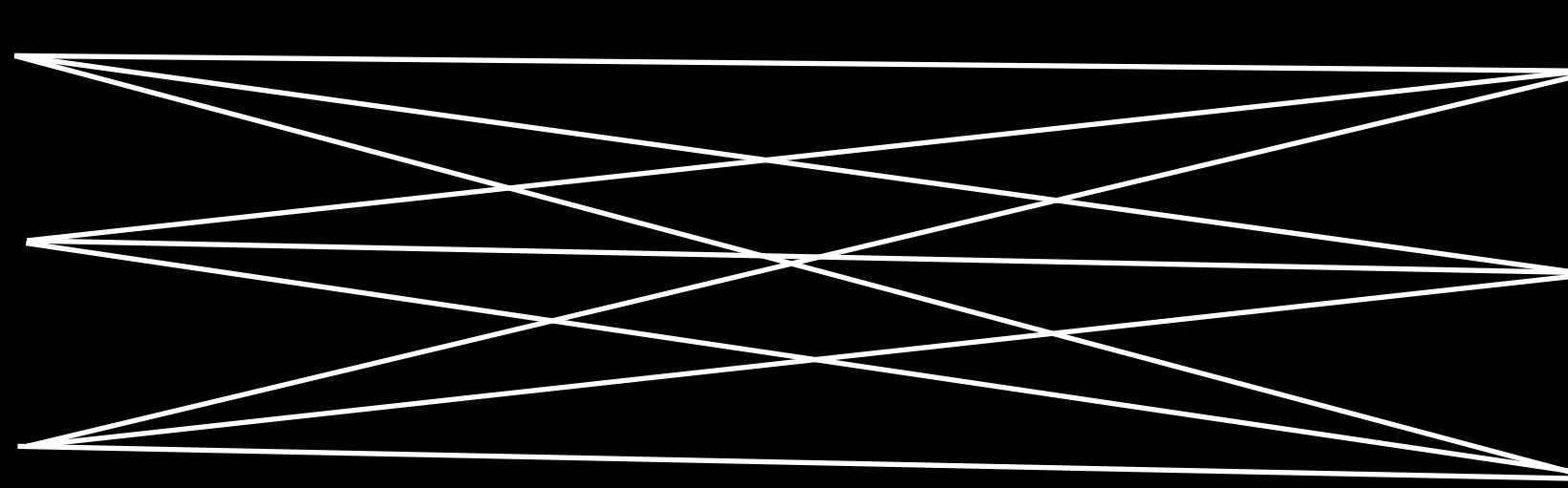
## *Then more use cases*



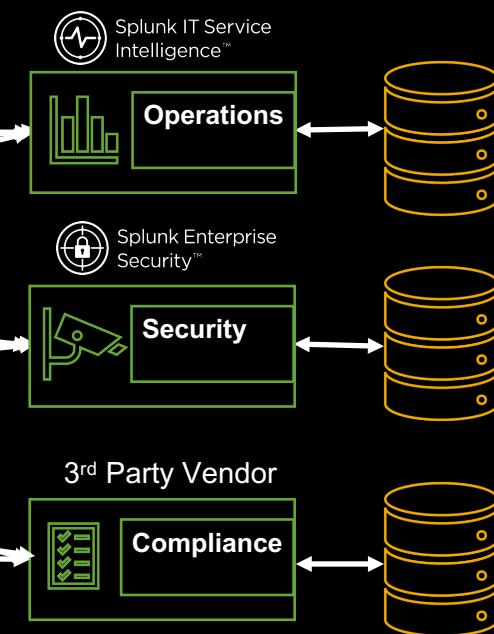
# Learning from our Past

# Data Providers

## *Then more data*



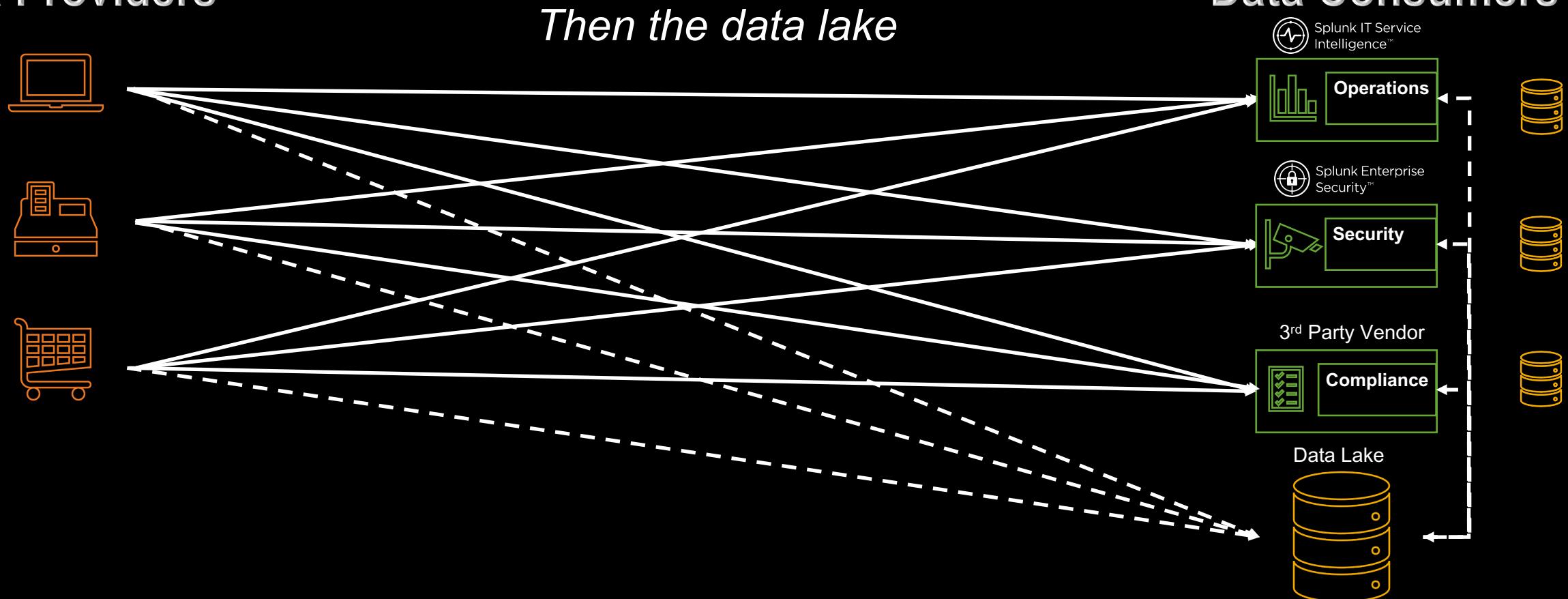
# Data Consumers



# Learning from our Past

# Data Providers

## *Then the data lake*

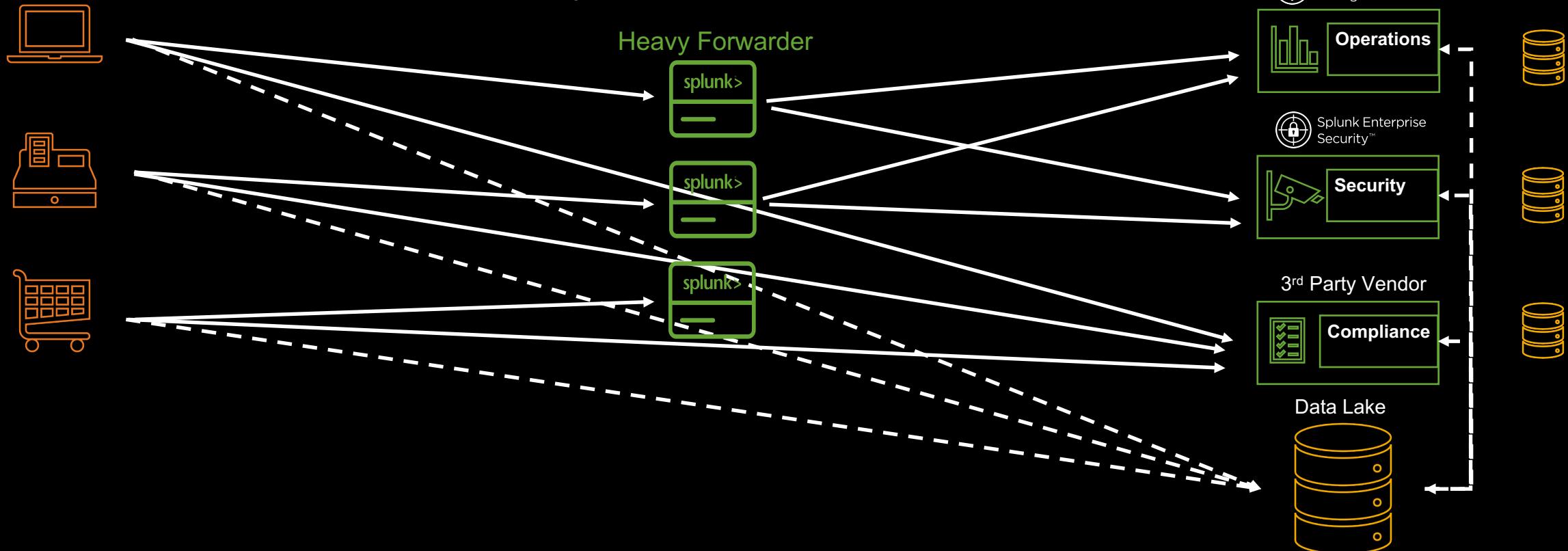


# Learning from our Past

# Data Providers

## *Try to Centralize it*

## Data Consumers



# Learning from our Past

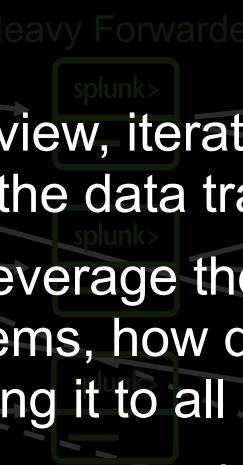
## Data Providers



*Try to Centralize it*

### Challenges

- How can we view, iterate on and monitor the health of the data transfer lifecycle?
- We need to leverage the same data in multiple systems, how do we do this without sending it to all systems?
- Is it possible to recognize and respond to data changes before it impacts our users?
- How do we scale and guarantee delivery?



## Data Consumers



# Solving the Problem

**Send Data to Many Systems and Reduce Data Loss/Latency**

# Data Providers



## *Let's add a new messaging layer*



- ▶ **Value Added**
    - Guaranteed at least once delivery
    - Provide Data Once/Consume Data Many Times
  - ▶ **Challenges**
    - How can we view, iterate on and monitor the health of the data transfer lifecycle?
    - Is it possible to recognize and respond to data changes before it impacts our users?

# Data Consumers



# Solving the Problem

Simplify getting data into both Splunk and non-Splunk systems

## Data Providers

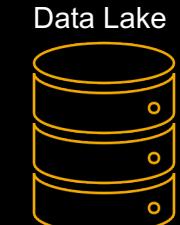


*Then add connectors*



- ▶ **Value Added**
  - Guaranteed at least once delivery
  - Provide Data Once/Consume Data Many Times
  - Simplify Data Ingest and Delivery
- ▶ **Challenges**
  - How can we view, iterate on and monitor the health of the data transfer lifecycle?
  - Is it possible to recognize and respond to data changes before it impacts our users?

## Data Consumers



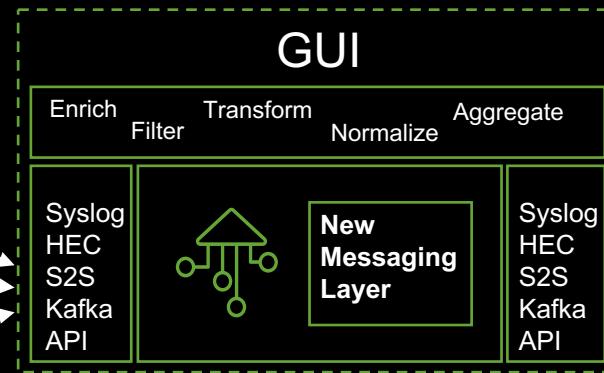
# Solving the Problem

Ability to iterate on data transfer lifecycle

## Data Providers



*Then add Processing and a user experience*



- ▶ Value Added
  - Guaranteed at least once delivery
  - Provide Data Once/Consume Data Many Times
  - Simplify Data Ingest and Delivery
  - View, iterate on and monitor the health of the data transfer lifecycle
  - Recognize and respond to data changes before it impacts our users

## Data Consumers



Splunk IT Service Intelligence™



Operations



Splunk Enterprise Security™



Security



Compliance



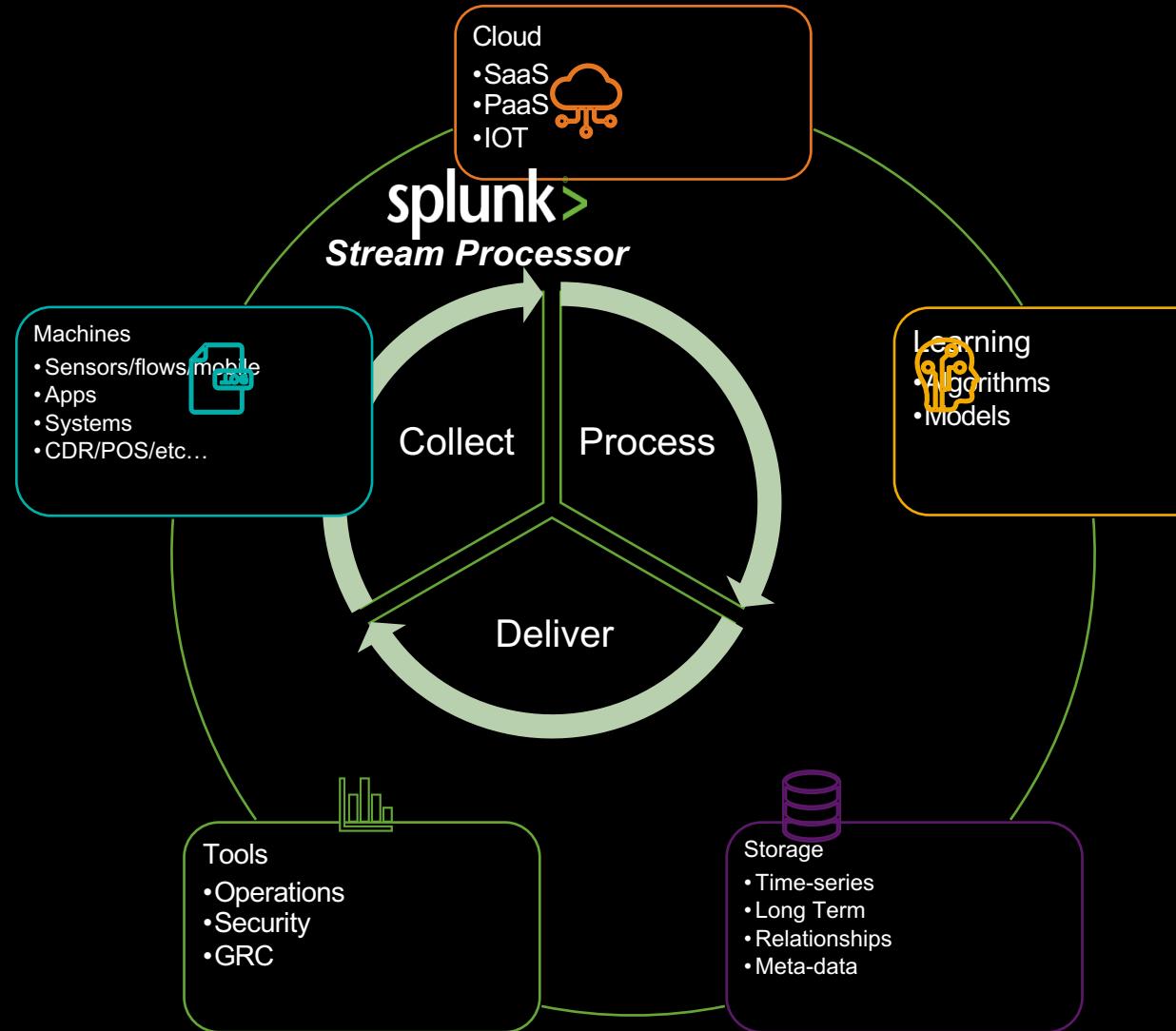
3rd Party Vendor



Data Lake

# Splunk Data Stream Processor

Shifting the way we think about data ingest



## *Guaranteed at least once delivery*

- ▶ Ability to view, iterate on and monitor the health of the data transfer lifecycle
- ▶ Simplify getting data into both Splunk and non-Splunk systems
- ▶ Improve the ability to recognize and respond to data changes

# Architecture Discussion

Overview of the platform and API's of the product

# Stateful Stream Processing

## An Overview

Data is processed *in stream* (e.g. during ingest)

## Data delivery guarantees

# Stateful operators

- ## At-least once

- ## At-most once

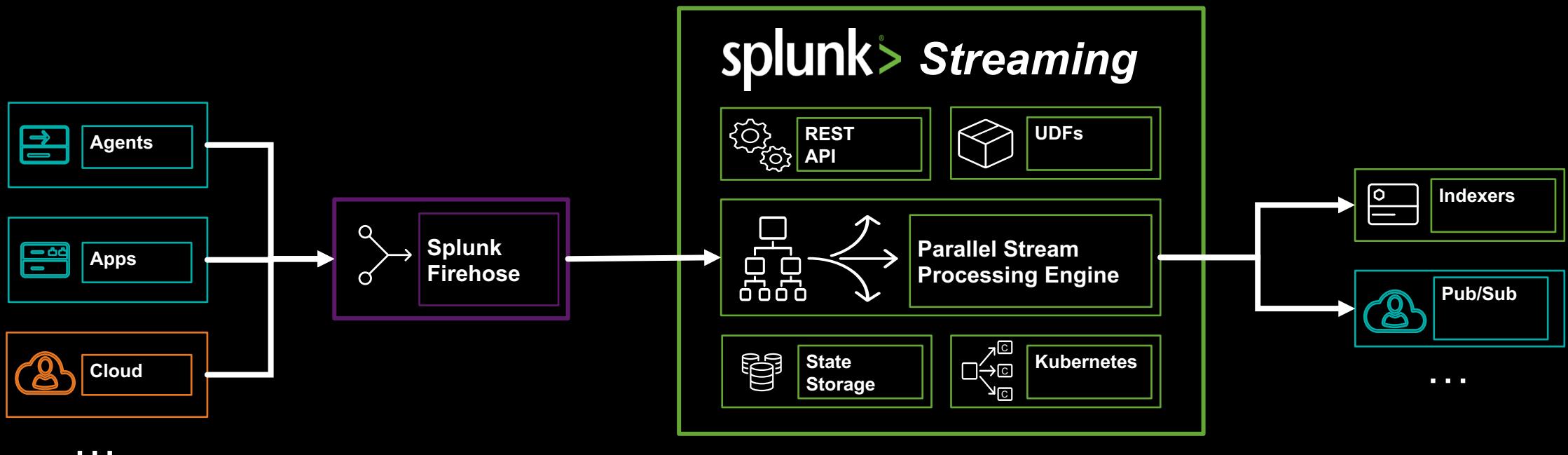
- ## Exactly once

- ## Data sources

- ## Data sinks

- ## Aggregation

# Architecture



# User Defined Functions SDK

## Java API

### Fully Integrated

All built-in  
functions built  
using the same  
SDK

## Function Types:

Streaming  
operators

Scalar  
functions

Sources

Sinks

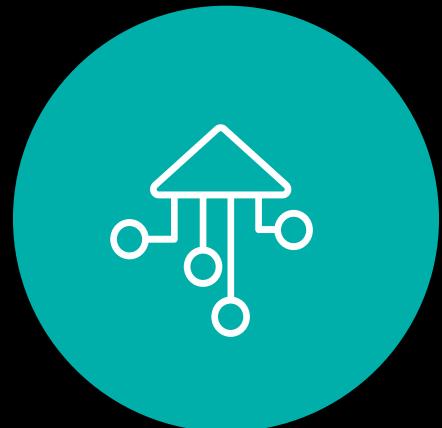
Aggregation  
functions

# Demo

Four demos designed to showcase our capabilities  
for beta

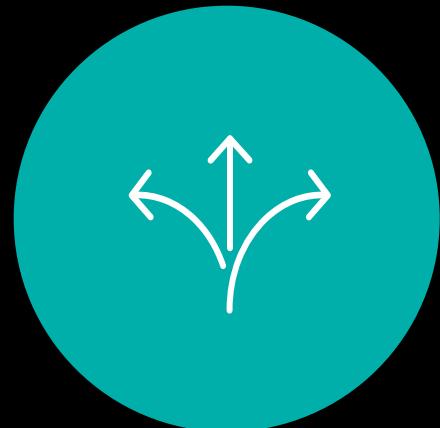
# Splunk Data Stream Processor

# Beta 2018 Targets



# Simplify Data Acquisition

*Connect to anything from  
pub/sub to push/pull data  
providers*



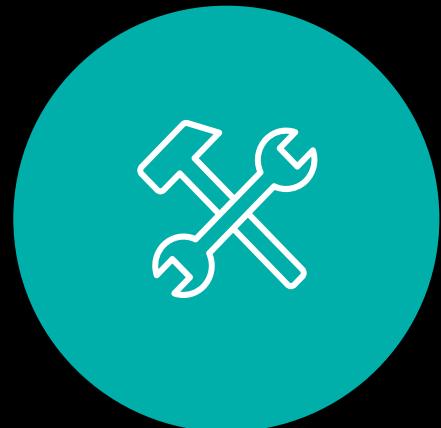
# Maintain Control over the Data Flow

*Route data where you want  
and only deliver data you  
want*



# Monitor and Respond to Data Drift

*See what's going on before  
data gets to your Splunk  
Index*



# Meeting Demands through Extensibility

*Customize capabilities and  
meet use cases using our  
API's*

# Data Ingestion Sessions

	2:15 – 3:00	FN1913 - Old Meets New: Syslog and Splunk Connect for Kafka	Scott Haskell, Principal SE Architect, Splunk Mark Bonsack Staff Sales Engineer, Splunk
	2:15 – 3:00	FN1313 – Taming GDI: The Wild World of “Getting Data Into” Splunk	Peter Chen, Principal Software Engineer, Splunk Blaine Wastell, Product Management Director, Splunk
	3:15 – 4:00	FN1185 - Unleashing Data Ingestion From Apache Kafka	Scott Haskell, Principal SE Architect, Splunk Donald Tregonning, Senior Software Engineer, Splunk Ran Xie, Software Engineer, Splunk
<b>Wednesday</b>	3:15 – 4:00	IT1647 - A Container Adventure: Scaling and Monitoring Kubernetes Logging Infrastructure	Matthew Modestino, ITOA Practitioner, Splunk David Baldwin, Principal Product Manager, Splunk Gimi Liang, Senior Software Engineer, Splunk
	4:30 – 5:15	FN1211 - Don't Miss the Bus — Splunking Kafka at Scale	Scott Haskell, Principal SE Architect, Splunk Ken Chen, Principal Software Engineer, Splunk Donald Tregonning, Senior Software Engineer, Splunk
	4:30 – 5:15	FN1919 - Gain Control of Your Data Flow Using Stream Processing	Thor Taylor, Director of Product Management, Splunk Joey Echeverria, Senior Principal Software Engineer, Splunk
	12:15 – 1:00	FN1729 - Splunk DB Connect Deep Dive: Beyond the Basics	Denis Vergnes, Principal Software Engineer, Splunk Tyler Muth, Analytics Architect, Splunk

# Thank You

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