App Dev's Introduction to SDC

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About

- Formerly: Manager, UI/Systems/QA Engineer
- San Francisco, sometimes Santana Row
- Worked at Splunk for 7 years
- Surprise Villain at the Splunk Roll20 DnD Group

Goals

Understand the difference in how apps are deployed on SDC v Classic

Understand the motivation and general design behind SDC

Know where to go for more information

Agenda

1. Big Honkin' Overview
2. Core Services
3. Data Ingestion
4. Search Technology
5. Apps
6. Q&A

Big Honkin' Overview

AKA WTF (is) SDC

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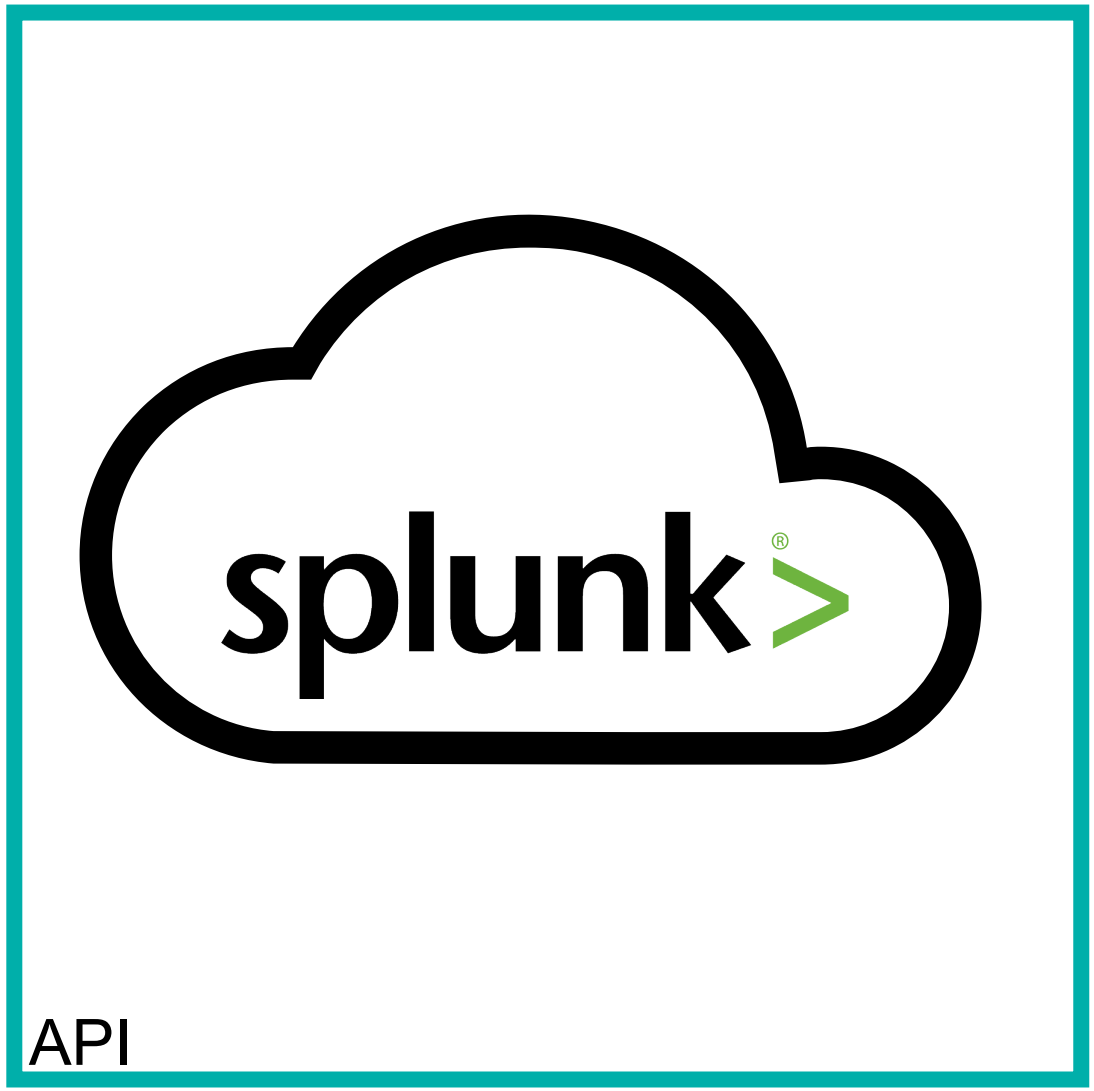
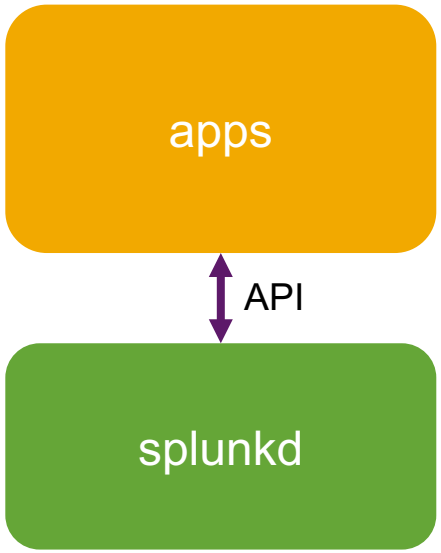
What's different about developing in SDC?

WTF is SDC



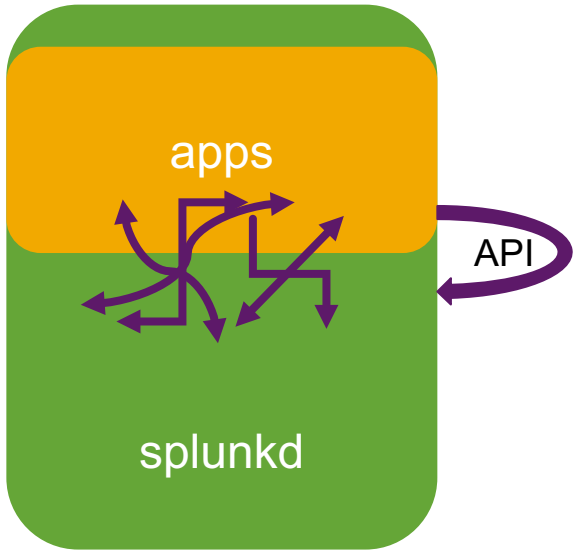
But Splunk Enterprise is API-driven…

Perception



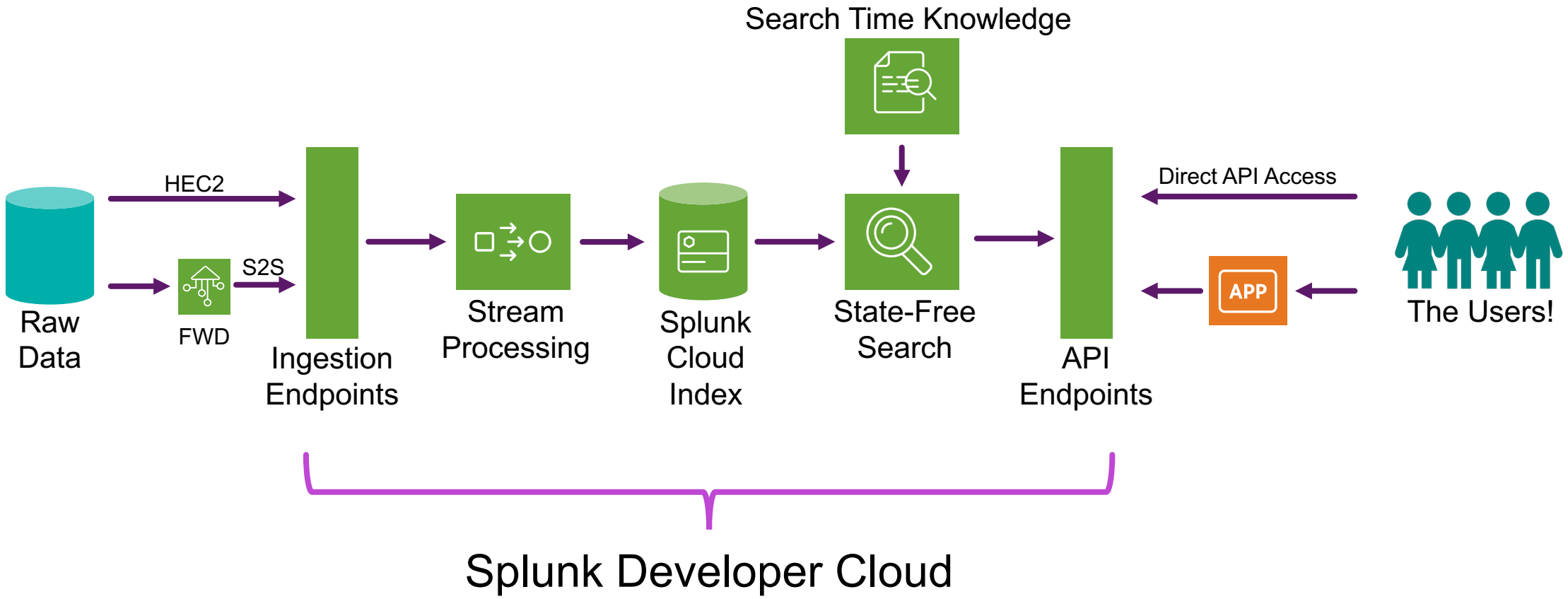
We want to get here

Reality



- Developing apps in Splunk Enterprise is not a delightful experience
  - Lacks significant functionality that apps are forced to “re-invent” every time
  - Too many implementation and deployment details are exposed (e.g. search head clustering)
  - Many interactions outside of the API (e.g. apps write to the file system, use of deployer, etc.)
  - Very limiting authorization model

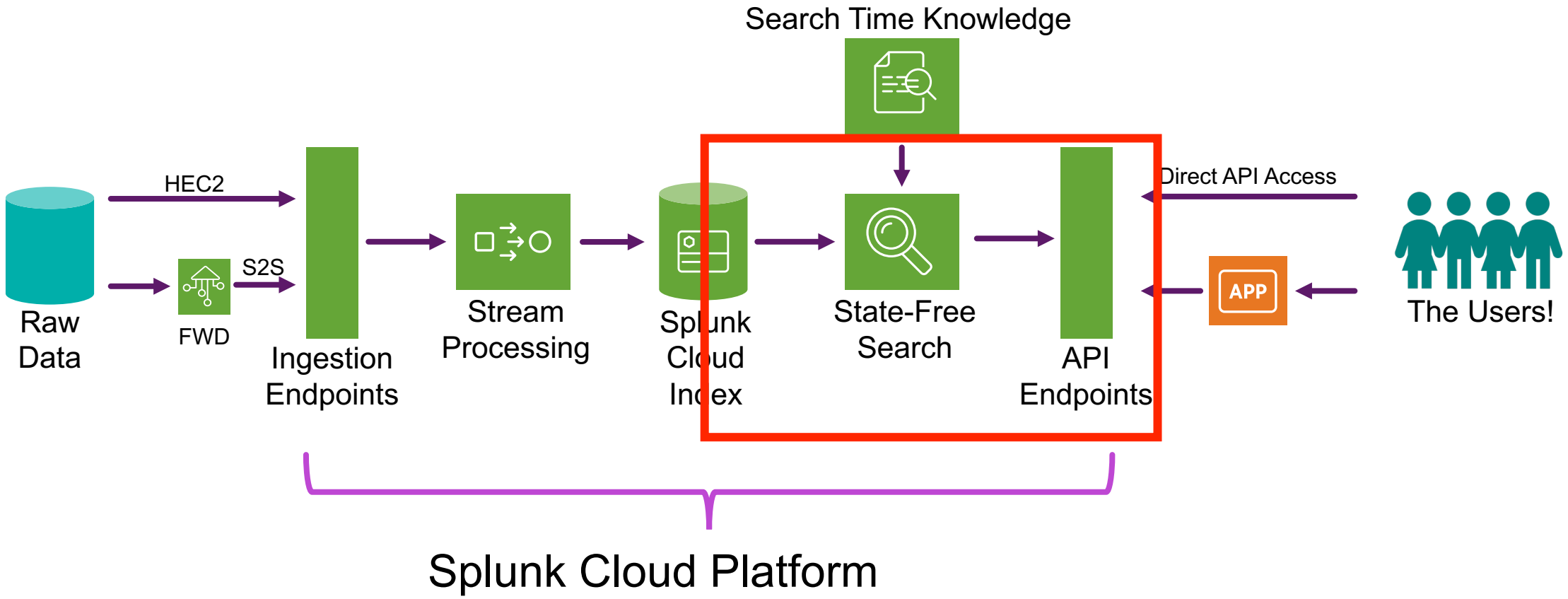
A Day in the Life of Data



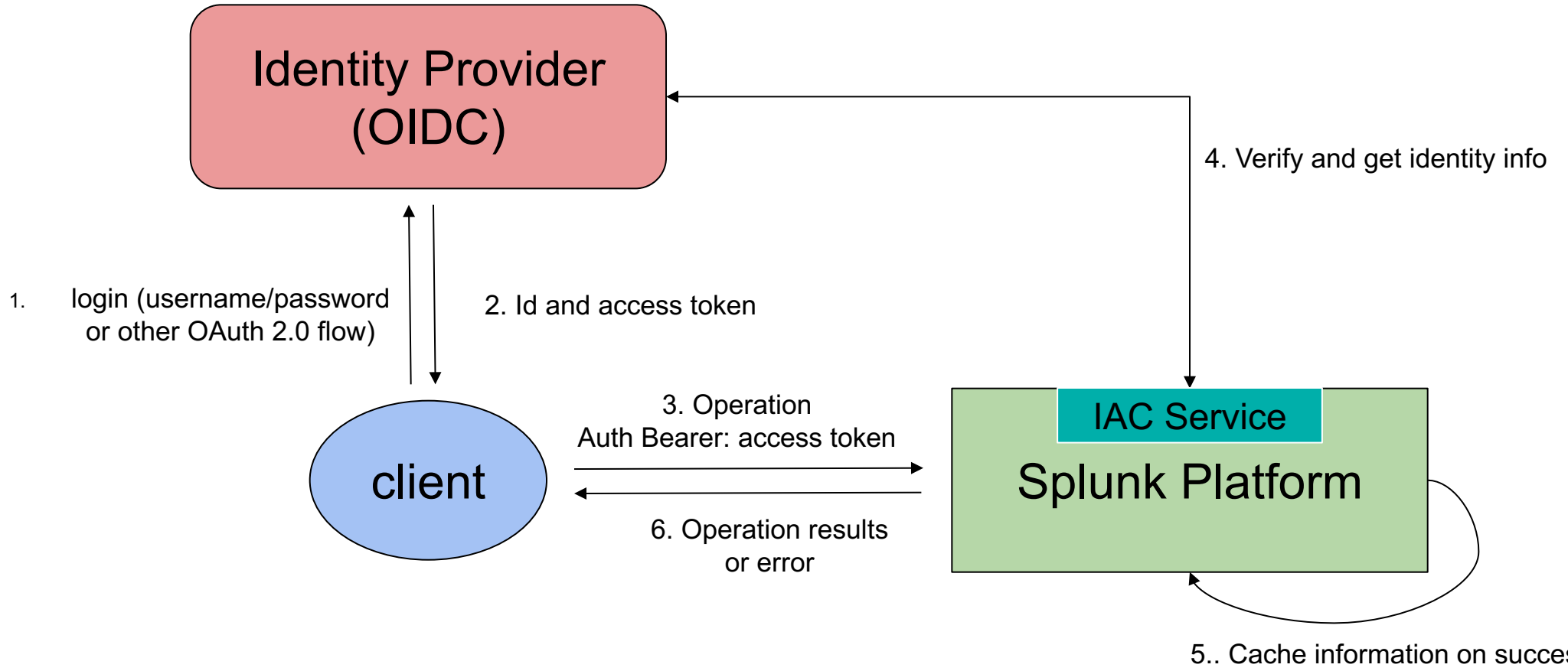
Core Services

AKA the nuts and bolts

A Day in the Life of Data



Cloud Authentication Workflow



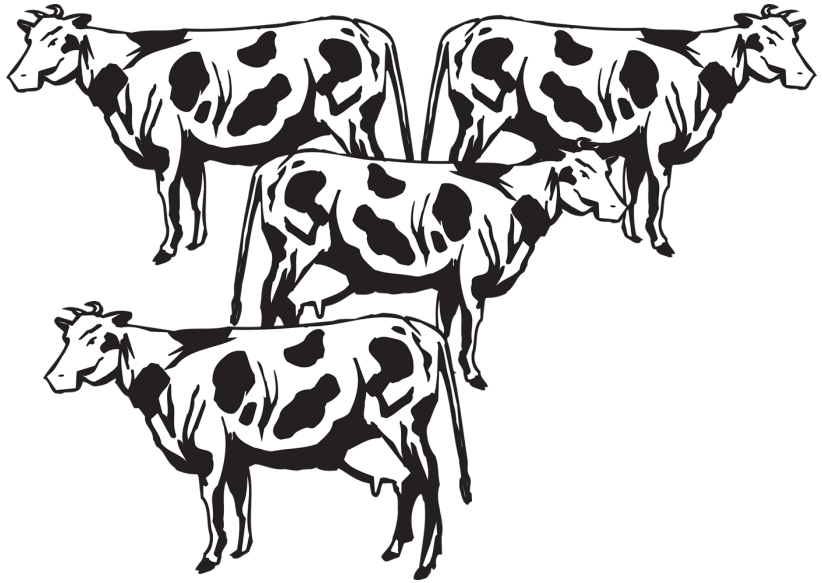
Cloudifying Deployment Scaling

splunk>enterprise

- SHC, Search Peers

splunk> Developer Cloud

- State-Free Search



Cloudifying KV Store

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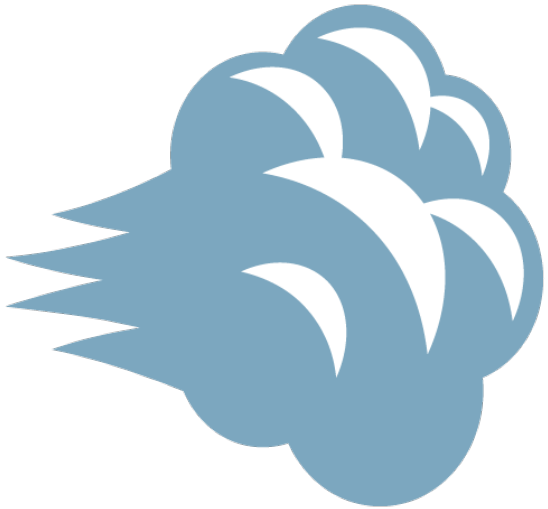
- KV Store
  - (collections.conf)



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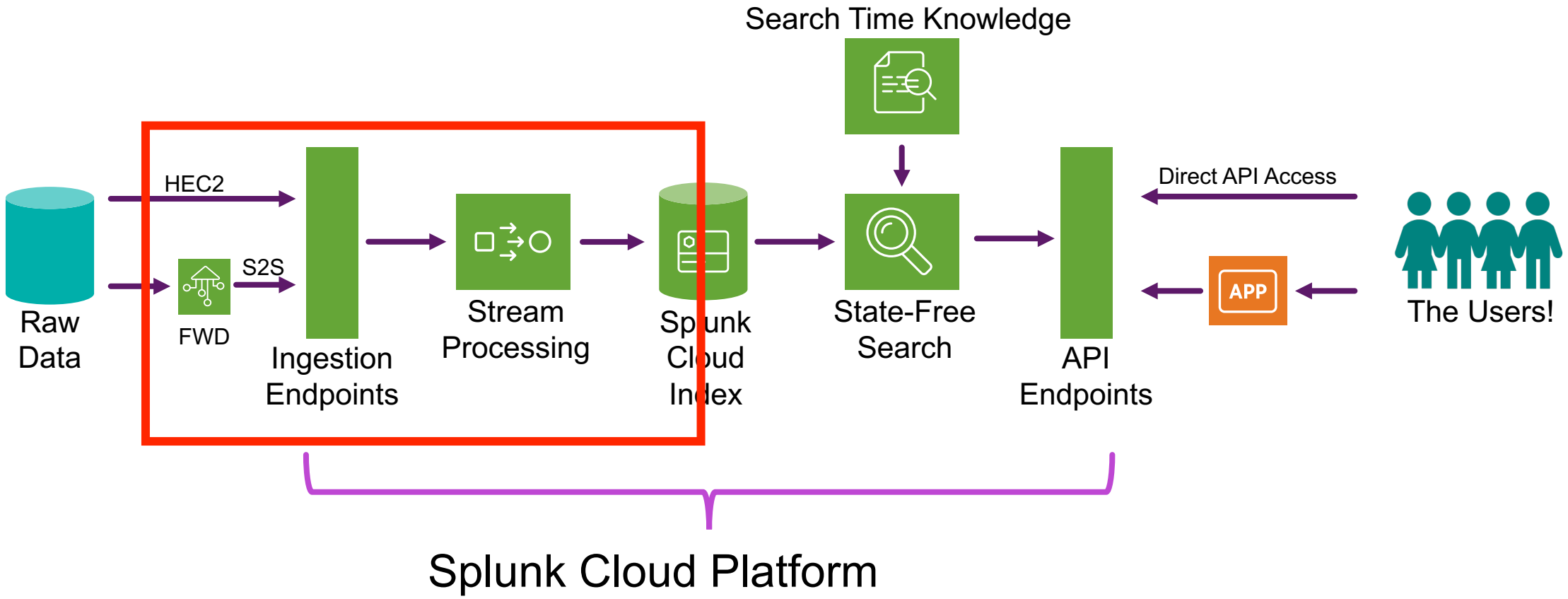
- KV Store
  - (Dataset in Catalog)

Data Ingestion

AKA data, it's what apps crave

A Day in the Life of Data



Cloudifying Index Transforms

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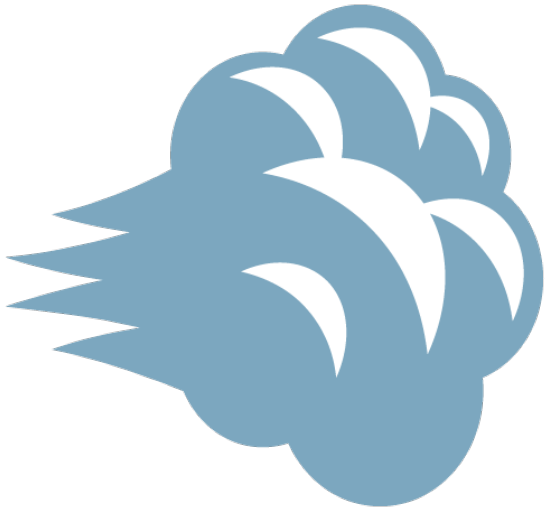
- Indexed Fields, Null Queue
  - (props/transforms/fields.conf)



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- BLAM Pipelines
  - (Data Availability APIs)

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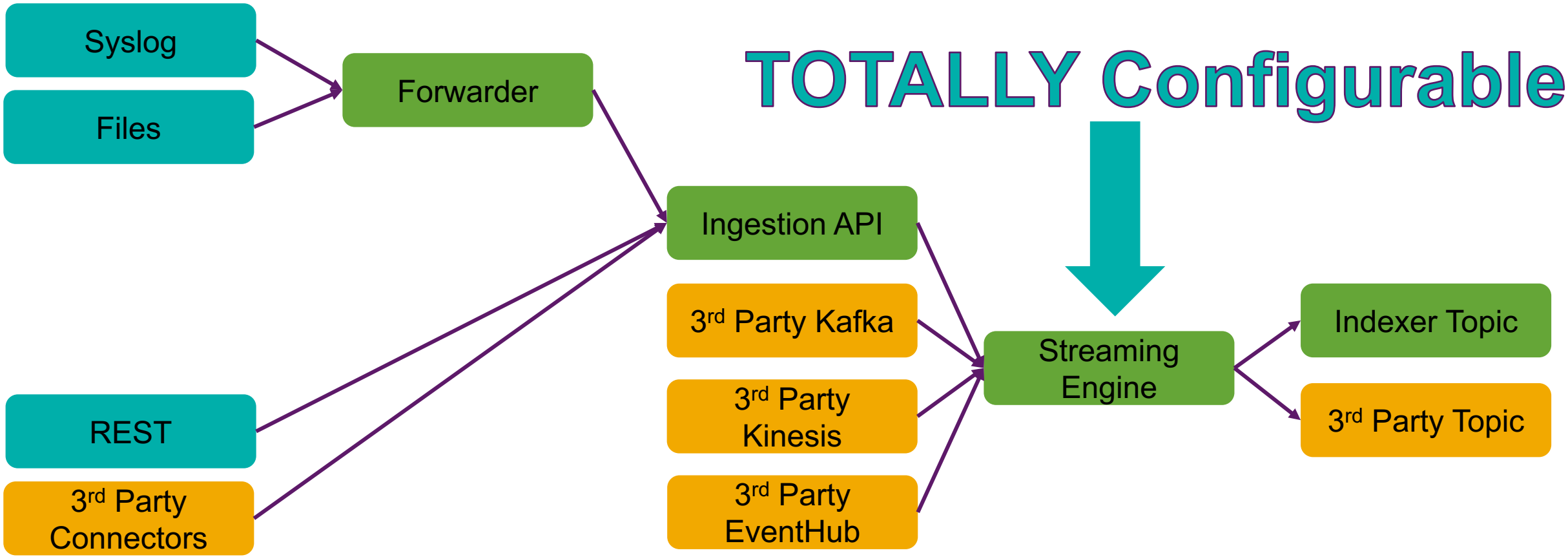
Overview



Stream Processing – Why?

- *Complement* Splunk's query-time data wrangling with ingest-time wrangling
  - Building metrics from events
  - Pre-extract and enrich to make common queries simpler
  - Advanced routing of events
  - Enforce data quality standards
  - "Really realtime" searches and metrics
  - Move expensive saved searches to ingest-time triggers

Search Technology

AKA accessing data

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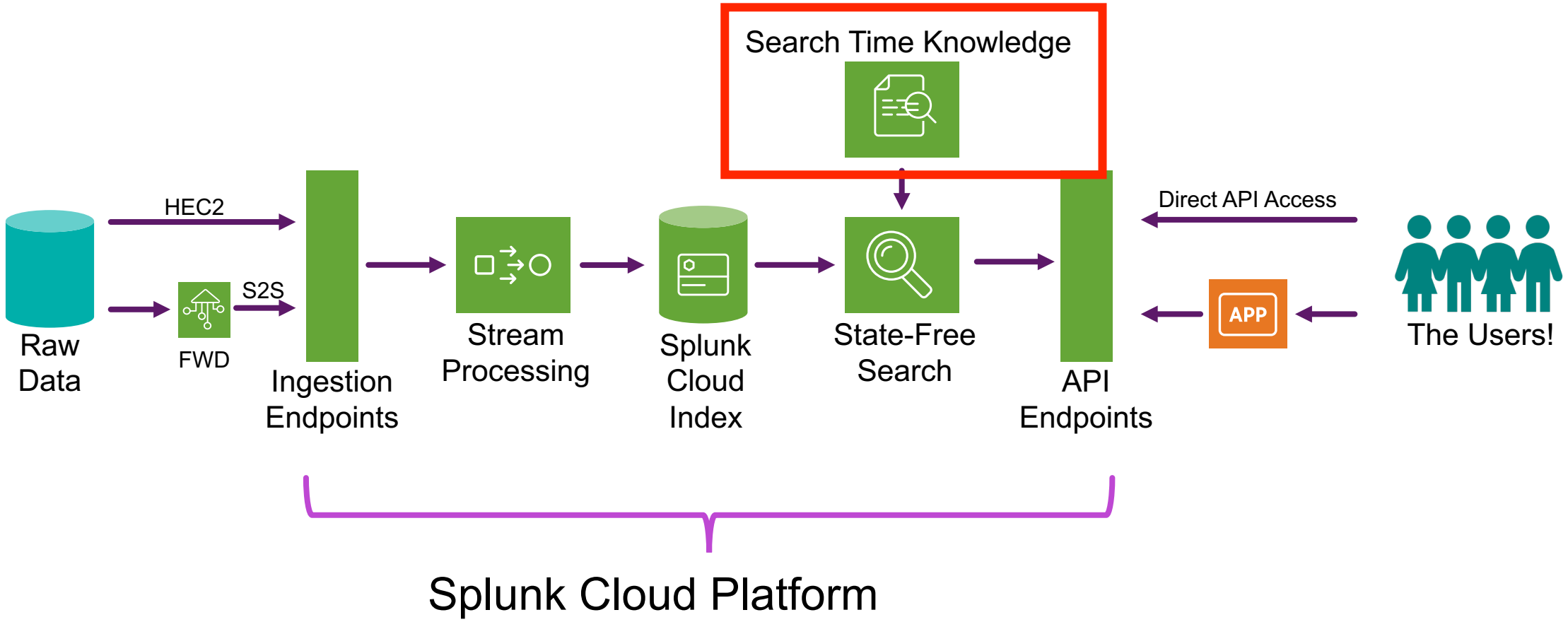
A Day in the Life of Data



Cloudifying Data Storage

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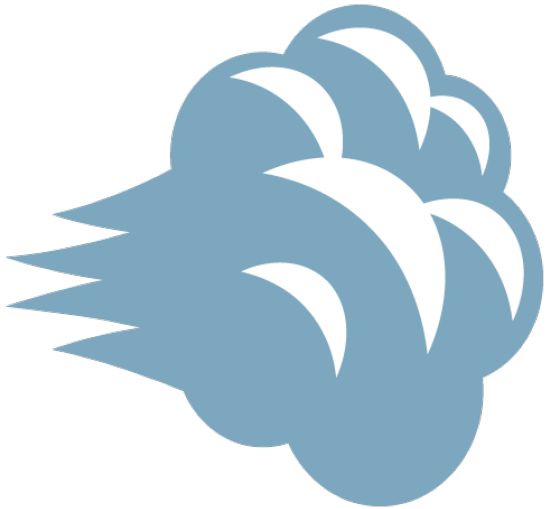
- Indexes, Collections, Saved Searches
  - (indexes/savedsearches/ collections.conf)



splunk> Developer Cloud

- Datasets in Catalog

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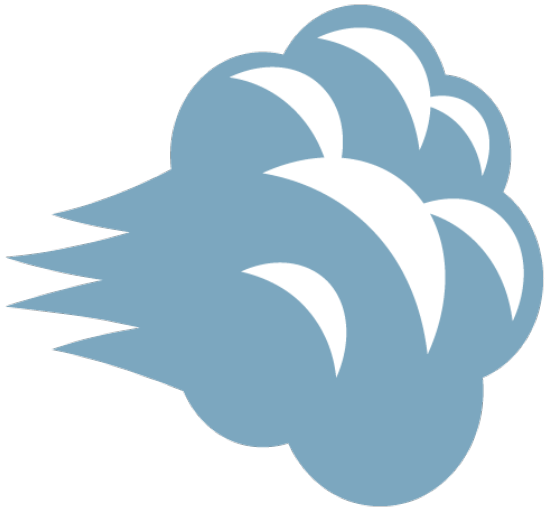
Cloudifying Search Time Knowledge

splunk>enterprise

- Field Extractions, Aliases etc.
  - (props/transforms.conf)



splunk> Developer Cloud

- Rules and Actions in Catalog

Cloudifying Search Time Knowledge

splunk>enterprise

```
[sourcetype::testlog]
FIELDALIAS-user = uid as user
EXTRACT-errors = dvc=\[w+\](?<err_id>[^:]+)
EVAL-company = coalesce(company, "NA")
LOOKUP-product_info = products ID AS pid OUTPUT Name
AS product_name
KV_MODE = auto
```

splunk> Developer Cloud

```
{
    "id": #id#,
    "name": #name#,
    "module": #module#,
    "match": "sourcetype::testlog",
    "actions": [ ... ]
        {..,
        { "id": #id#,
          "id": #id#,AS",
          "kind": "AUTOKV",
          "mode": "AUTO"products ID AS pid OUTPUT
        }oduct_name, Category as product_category",
        "owner": "user"
        }, ... ]
}
```

splunk> .conf18

Cloudifying Lookups

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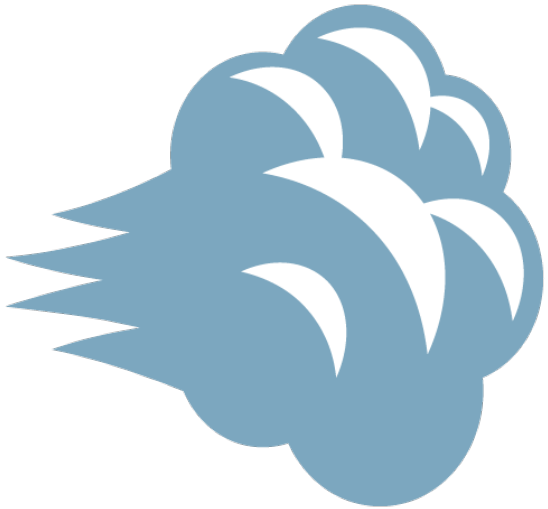
- Lookup
  - (transforms.conf, collections.conf, csv)



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- Datasets in Catalog
  - (Only KV Store based)

Cloudifying SPL

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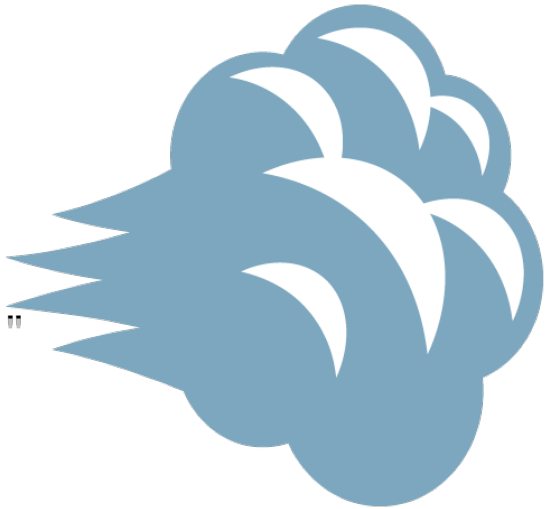
- SPL

```
index=main err*
| head 100
```

```
| mstats latest(_value) AS cost
WHERE index=metrics metric_name="cpu"
BY host span=1s
```

```
index=main
| stats count BY host
```



splunk> Developer Cloud

- SPLv2

```
| from index:main
| search err*
| head limit=100
```

```
| from metric:metrics
WHERE metric_name="cpu"
GROUP BY host, span(_time, 1m)
SELECT latest(_value) as cost, host
```

```
| from index:main
GROUP BY host
SELECT count(), host
```

Cloudifying App Namespaces

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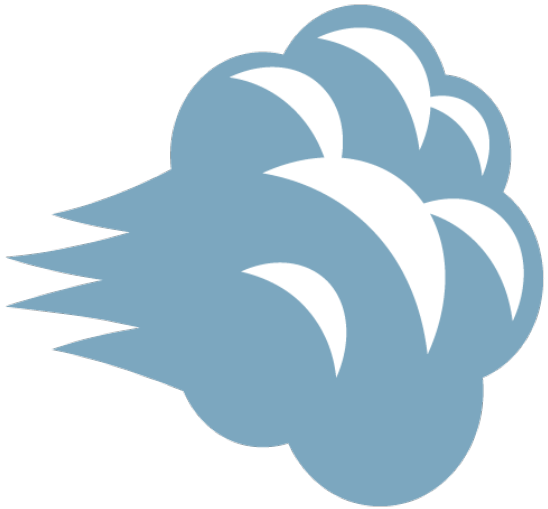
- App Namespaces



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- Modules

To learn more go to:

Intro to SPLv2, the Module System and the Catalog Thu 1:30pm

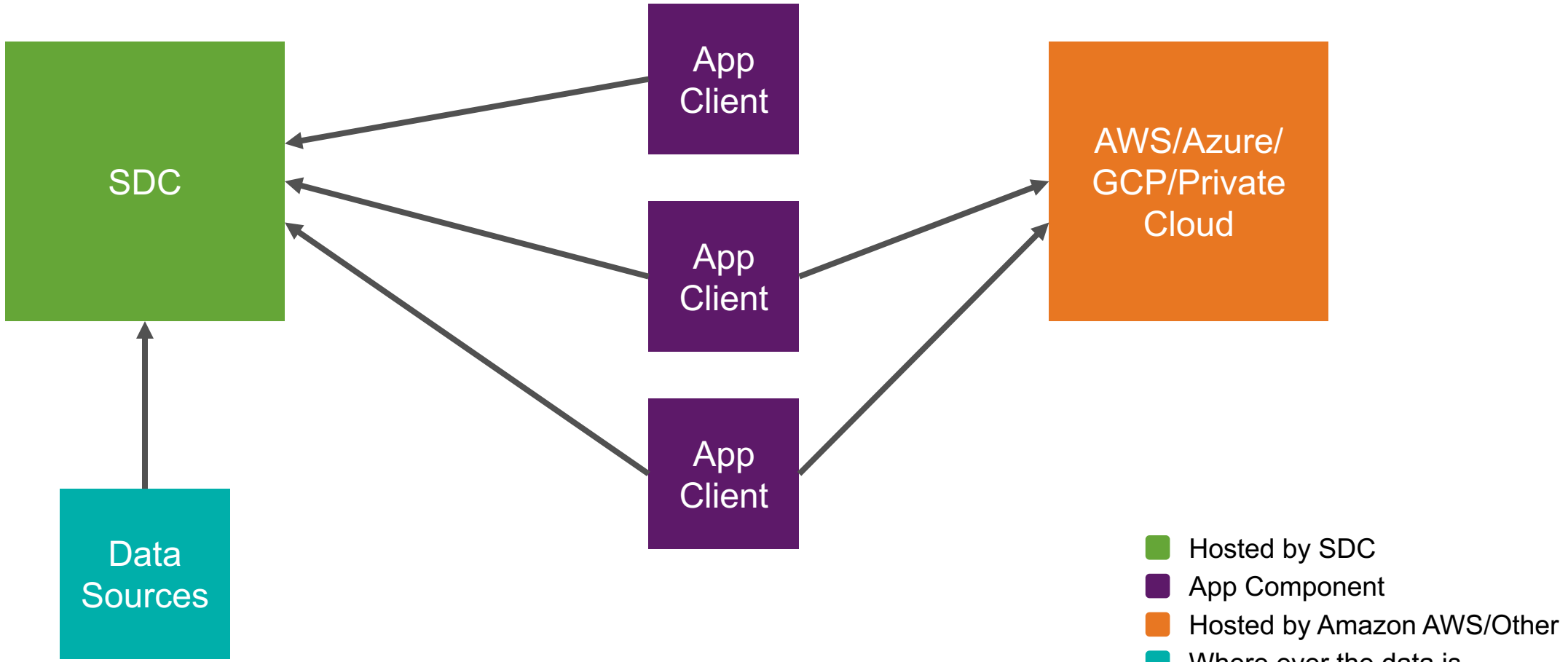
No Clear Analog

- Search Scheduling
- Eventtypes/Tags
- EAI REST Interfaces
- Modular Inputs

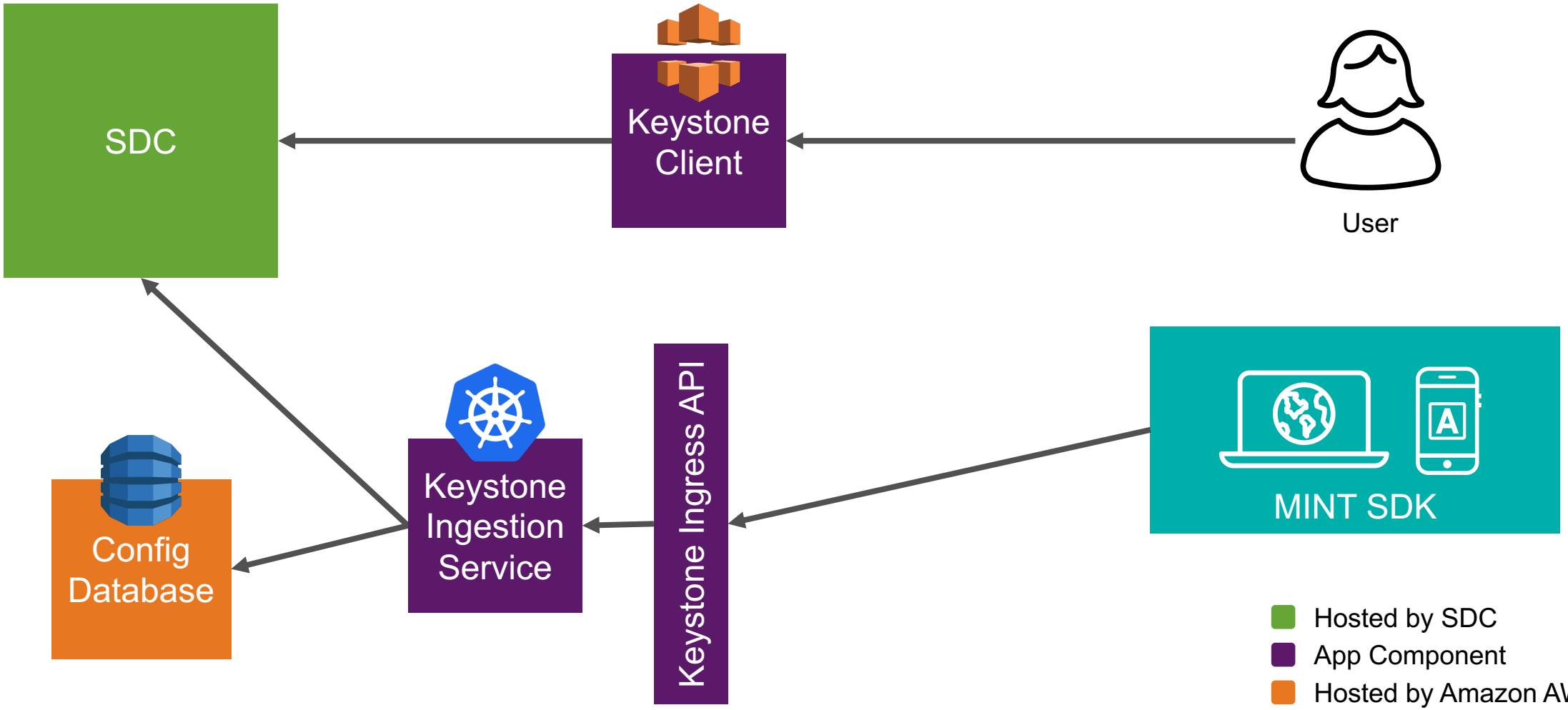
Apps

AKA what you build!

Future of App Deployments

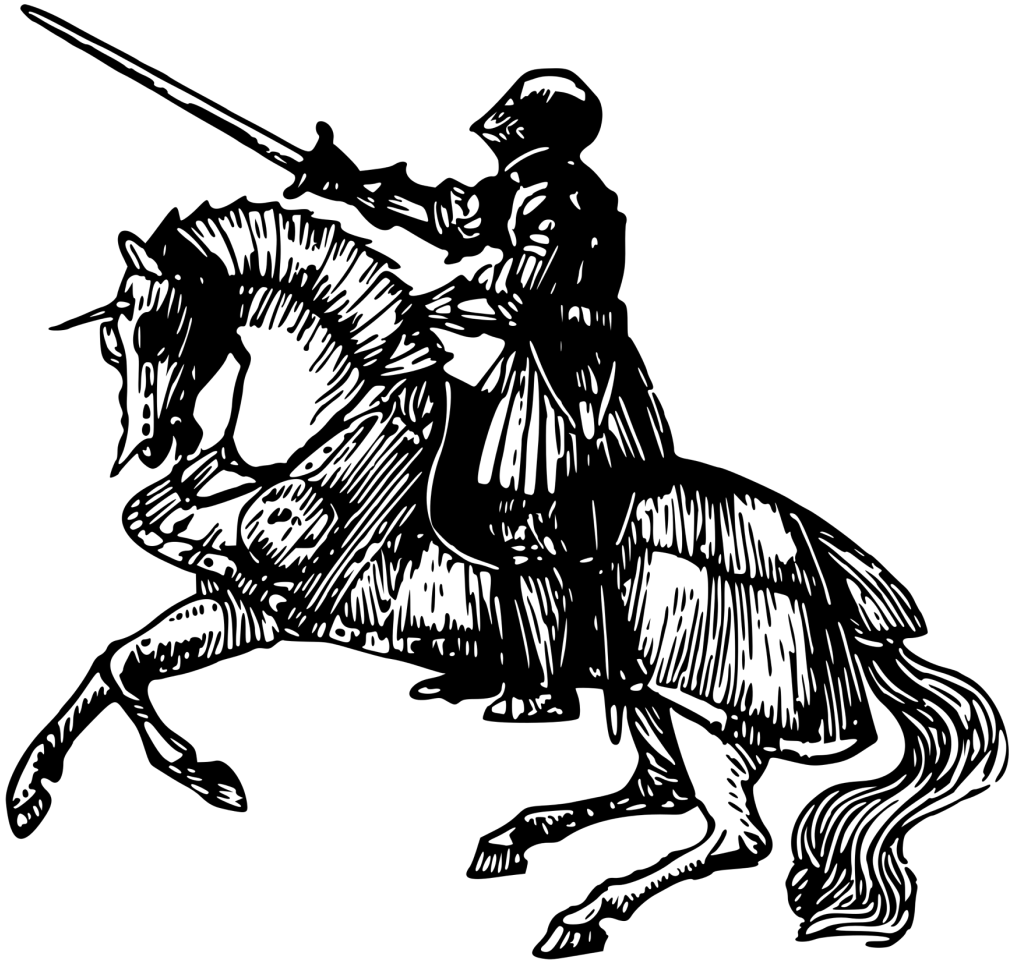


Splunk Insights for Web and Mobile Apps Architecture



Where To Go For More

- Dev Portal on SDC (SIGN UP!)
- Other talks
  - 12:45pm Splunk Developer Cloud Services and Features
  - 2:00pm Developer Tools for Splunk Developer Cloud
  - 3:15pm Partners Build Apps on Splunk Developer Cloud
  - 4:30pm Dashboards and Analysis UI Components for Developers
  - Thu 1:30pm Intro to SPLv2, the Module System and the Catalaog



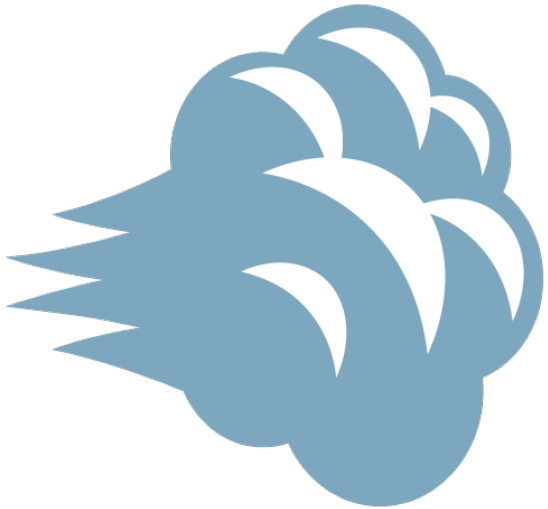
Thank You

Q&A

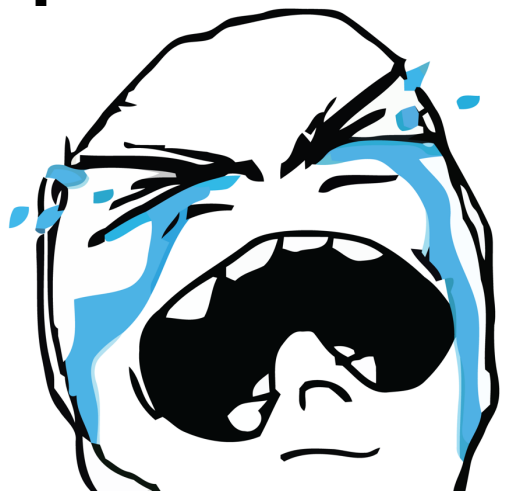
Cloudifying Custom Search Commands

splunk>enterprise

- Custom Commands
  - (code and commands.conf)



splunk> SDC



for now…