

Become a

# Sumo Administrator

Administration Certification



sumo logic



# Course Agenda

- 10 min. ● Download files needed for lab 1
- 20 min. ● Data Collectors and metadata
- 30 min. ● **Hands on labs 1, 2, & 5:** Set up a collector with two sources
- 25 min. ● Optimization tools
- 20 min. ● Overview Administration setup
- 15 min. ● **Hands on labs 3 & 6:** Install an app and create an data ingest alert
- 60 min. ● Examination

# Become a Sumo Power Admin

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- Deploy a **data collection strategy** that best fits your environment
- Implement **best practices** around data collection
- Develop a **robust naming convention** for your metadata
- Learn to utilize **optimization tools**
- Discuss administration setup
- Create, **share and recommend** Searches and Dashboards

# Download files needed for lab 1

1. Download the apache log file

apache\_access\_logs\_tutorial.txt

2. Download the collector installation package



# Tutorial: Hands-on Exercises

## Training Environment:

[service.sumologic.com](https://service.sumologic.com)

username: [training+labs@sumologic.com](mailto:training+labs@sumologic.com)

password:

## Hands-on Labs:

- Follow along using the labs found under **Home > Certifications >**

TUTORIAL



# High-Level Data Flow

Conditional Logic, Filtering,  
Formatting Results

sumo logic



# Sumo Logic Data Flow

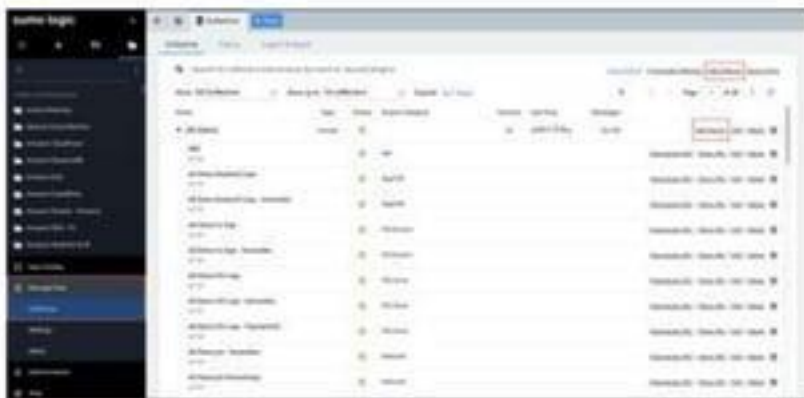


# Step 1: Getting your data into Sumo

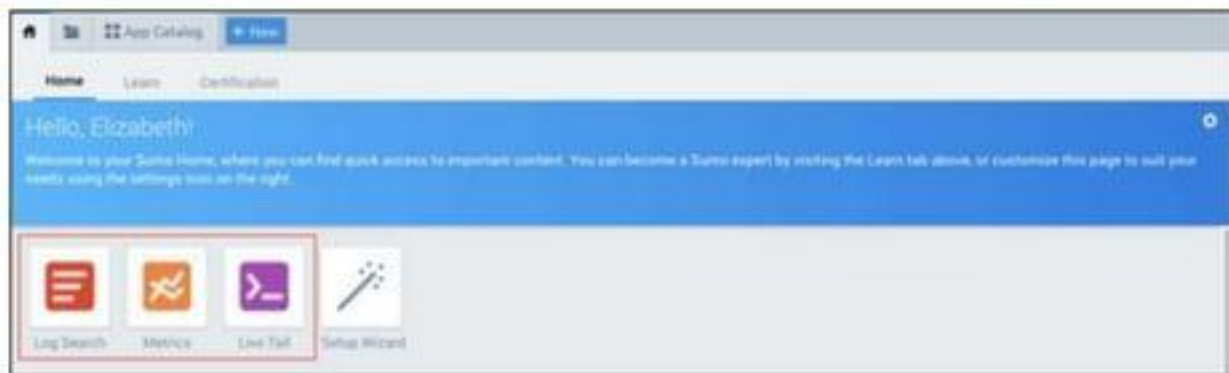
The journey of 10,000 logs begins with a single collector.

You start your data analytics journey by sending your data to Sumo.

You do this by setting up a local Installed Collector or web-Hosted Collector, then choosing the data sources that will provide the most value for you.



## Step 2: Searching and analyzing your data



Once your data is available in Sumo, you and your co-workers can search your logs and metrics to identify unusual conditions or errors that could indicate a problem. You do this by creating queries and parsing the resulting messages.

You can start a log search, metrics search, live tail, explore, or dashboard from the Sumo Home page by clicking +New. For walkthrough instructions on how to create a query and parse the messages, see the [Search Log Data](#) tutorial.

## Step 3: Visualize & Monitor

You can view the library of available apps by selecting App Catalog in the left navigation panel, then scrolling through the library or entering a name in the search field. For more information, see the [Install an App and View Data](#) tutorial.

You can view your data with predefined searches and dashboards that facilitate monitoring and troubleshooting. For more information, see the [Collect and Visualize Host Metrics](#) tutorial.

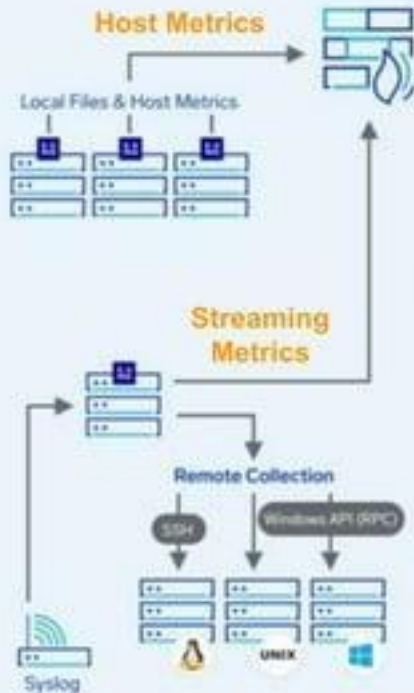


# Data Collection Strategy

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## Installed Collectors



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Logs-to-Metrics

Docker Stats

Containers

docker

Docker Logging Driver  
Docker Collector Container  
Collector on Docker Host

kubernetes

Kubernetes Metrics Plugin  
Ready for a Kubernetes Ecosystem

AWS Metrics + Metadata

## Hosted Collectors

aws

CloudWatch Logs

EC2

CloudWatch Metrics

HTTP Metrics

Stackdriver

Google Cloud Platform

Microsoft Azure

Monitor

Blob Storage

CDN

fastly

Akamai

Cloudflare

Security

Carbon Black.

CYLANCE

netkope

TREND MICRO

SaaS

Office 365

Salesforce

G Suite

SSO/MFA

okta

onelogin

Duo

# Compare Collectors

## Installed Collector



- Is installed on a system within your deployment locally or remotely
- Sources collect data available in your deployment
- Easy to troubleshoot based on Collector logs

## Hosted Collector



- Is hosted by Sumo Logic
- Is Agentless
  - Doesn't require a software to install or activate on a system in your deployment
- Hosts Sources to collect seamlessly from AWS, Google, and Microsoft products
- Can receive logs and metrics uploaded via a URL

# How many Collectors do you need?

## An Installed Collector on a dedicated machine

When you:

- Run a very high-bandwidth network with high logging levels. OR
- Require a central collection point for many Sources.

## More than one Installed Collector

When you:

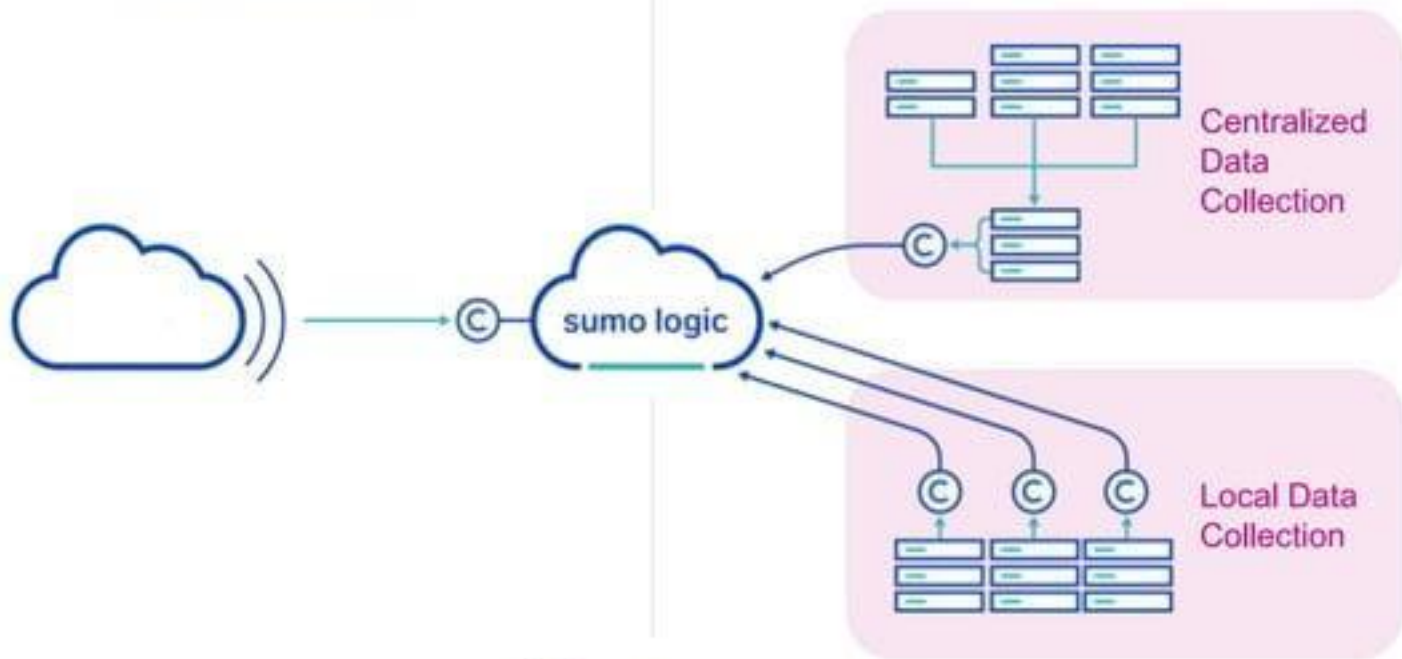
- Expect the Collector to ingest from > 500 separate files.
- Have memory or CPU limitations.
- Have geographically separated network clusters or regions.
- Expect combined logging traffic for one Collector to be > 15,000 events per second.



# Collector and Deployment Options

Hosted Collectors

Installed Collectors



Ⓒ = Collector





## CLOUD Data Collection

Most Data is generated in the Cloud and by Cloud Services and is collected via Sumo Logic Cloud Integrations.

### Source Types

#### S3 Bucket

- Any data written to S3 buckets (AWS Audit or other)

#### HTTPS

- Lambda Scripts, Akamai, One Login, Log Appender Libraries, etc.

#### Google / O365

- Google API and O365

### Benefits/Drawbacks

- + Hosted by Sumo Logic
- + No Software Installation
- + Can be configured with any number of sources
- + Is agentless

### Typical Scenarios

Customers using Cloud infrastructure, while it's possible to rely on Cloud Data Collection entirely, this is not typical. These source types are normally just part of the overall collection strategies



## LOCAL Data Collection

The Sumo Logic Collector is installed on all target Hosts and, where possible, sends log data produced on those target Hosts directly to Sumo Logic Backend via https connection.

### Source Types

#### Local Files

- Operating Systems, Middleware, Custom Apps, etc.

#### Windows Events

- Local Windows Events

#### Docker

- Logs and Stats

#### Syslog (dedicated Collector)

- Network Devices, Snare, etc

#### Script (dedicated Collector)

- Cloud API's, Database Content, binary data

### Benefits/Drawbacks

- + No Hardware Requirement
- + Automation (Chef/Puppet/Scripting)
- Outbound Internet Access Required
- Resource Usage on Target (hovers around 1% of compute memory)

### Typical Scenarios

Customers with large amounts of (similar) servers, using orchestration/automation, mostly OS and application logs

- On Premise Data Centers
- Cloud Instances



## CENTRALIZED Data Collection

The Sumo Logic Collector is installed on a set of dedicated machines, these collect log data from the target Hosts via various remote mechanisms and forward the data to the Sumo Logic Backend. This can be accomplished by either using Sumo Logic syslog source type or by running Syslog Servers (syslog-ng, rsyslog), write to file, and collect from there.

### Source Types

#### Syslog

- Operating Systems, Middleware, Custom Applications, etc

#### Windows Events

- Remote Windows Events

#### Script

- Cloud API's, Database Content, binary data

### Benefits/Drawbacks

- + No Outbound Internet Access
- + Leverage existing logging Infrastructure
- Scale
- Dedicated Hardware
- Complexity (Failover, syslog rules)

### Typical Scenarios

Customers with mostly Windows Environments or existing logging infrastructure (syslog/logstash)

- On Premise data centers

# How does the data collection flow?



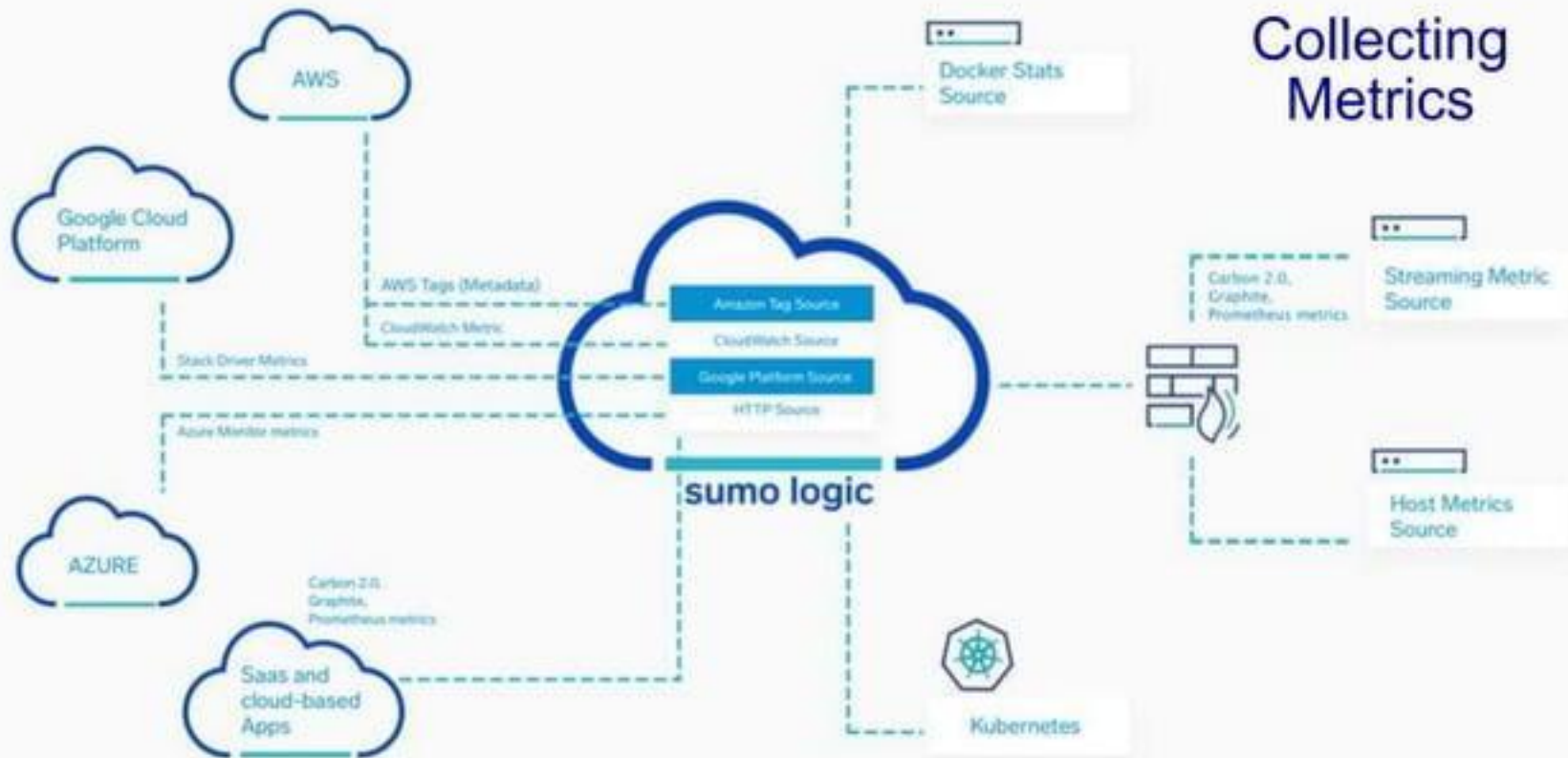
- Using IAM permissions, Sumo Logic scans the bucket at set intervals.
- SNS notifies Sumo Logic when new files are added to S3 bucket.

**Examples:** rsyslog, syslog-ng

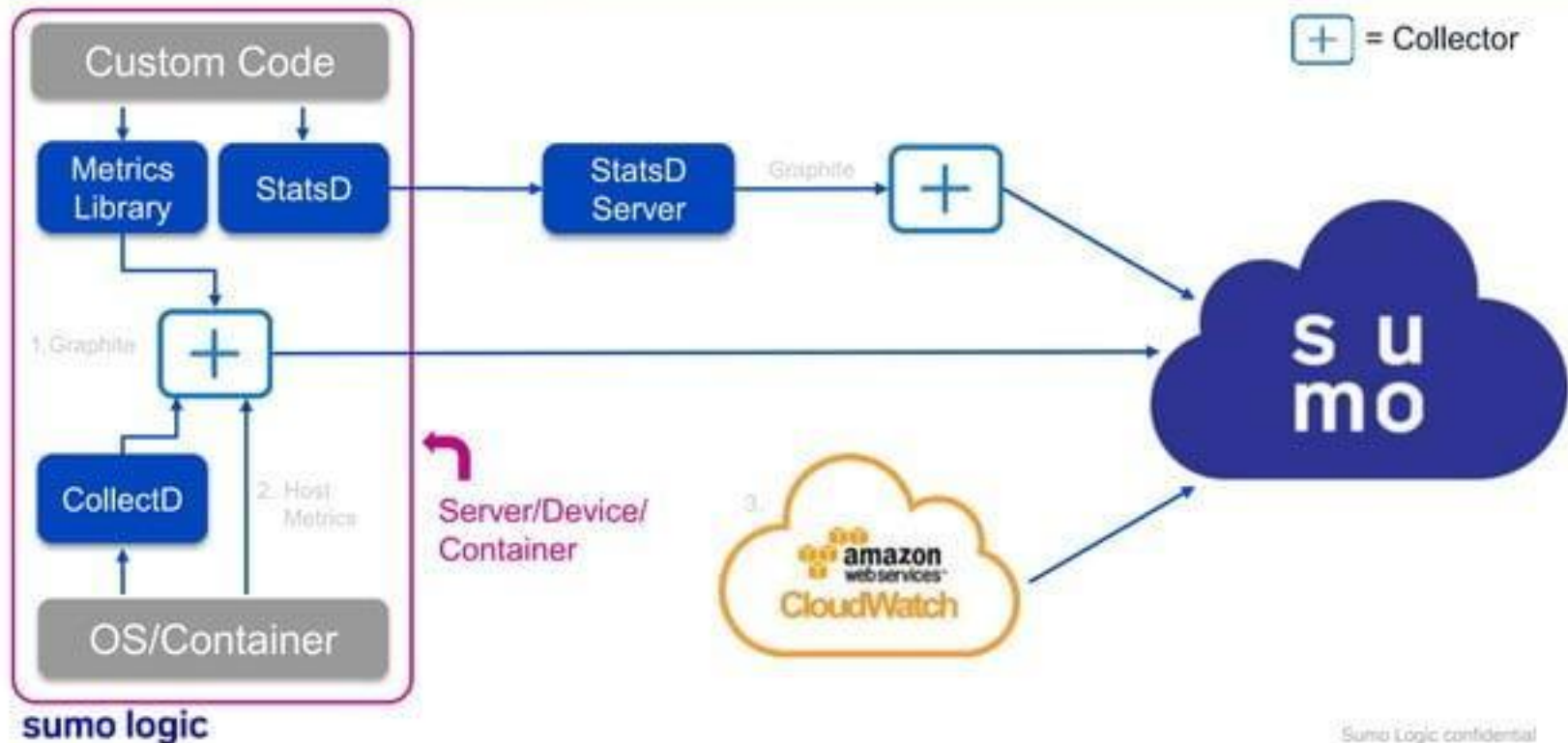
- Logs (or other data) are pointed to HTTP source, which acts as an endpoint.
- Hosted Collector can receive logs and metrics uploaded via a URL.

**Examples:** Kubernetes, FluentD, FluentBit

# Collecting Metrics



# Detailed collecting metrics



# Metric Ingestion and Retention

## Ingestion

- Each account is given free DPMs to apply go to **Administration>Account**
- You can ingest at a slower rate than 1 data point per minute (DPM)
- Sumo does not ingest metric data that is more than **one week** old.

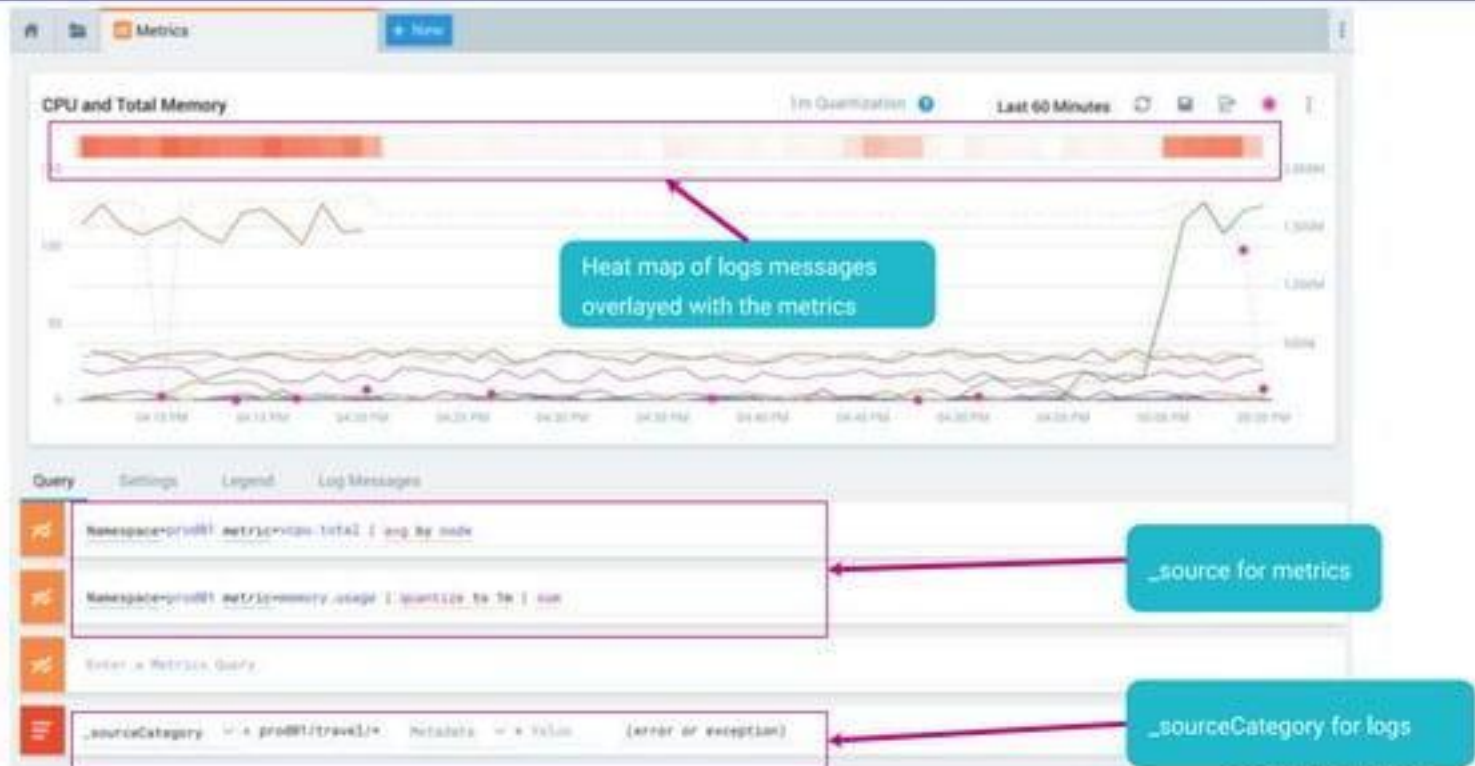
## Retention

- Metrics data is stored as raw, one minute, and one hour resolutions. It's retained according to the following retention policy:
- For historical rollups (1 minute and 1 hour) Sumo calculates the max, min, avg, sum, and count values for a metric per minute or hour.

Data Type Retained	Retention Period
Raw	7 days
1 minute resolution	30 days
1 hour resolution	13 months



# Best Practice Unified Metrics and Logs



# Metadata Design

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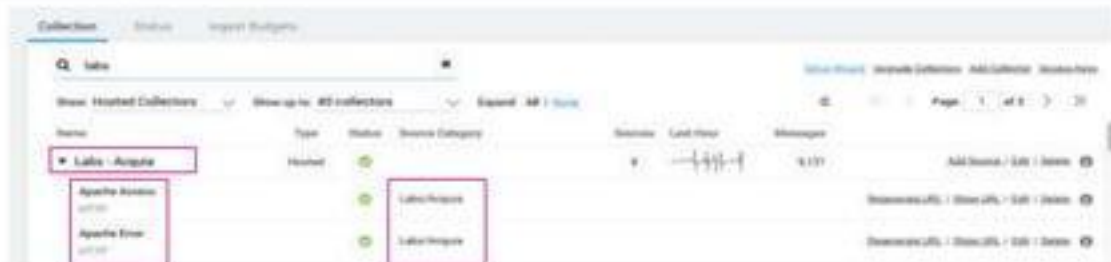


# Sending Data ⇒ Metadata



Metadata **tags** are associated with each log message that is collected.  
Metadata **values** are set through collector and source configuration.

Tag	Description
<code>_collector</code>	Name of the collector (defaults to hostname) (e.g. Labs - Acquia)
<code>_source</code>	Name of the source this data came through (e.g. Apache Error)
<code>_sourceCategory</code>	Can be freely configured. Main metadata tag (e.g. Labs/Acquia)



# Source Category Best Practices

## Recommended nomenclature for Source Categories

Component1/Component2/Component3...

Begin with the least descriptive, highest-level grouping, and get more descriptive with each component to the right.

<code>prod/myapp1/apache/access</code> <code>prod/myapp1/apache/error</code> <code>prod/myapp1/cloudtrail</code>	<code>dev/myapp1/apache/access</code> <code>dev/myapp1/apache/error</code> <code>dev/myapp1/cloudtrail</code>
<code>prod/myapp2/nginx/access</code> <code>prod/myapp2/tomcat/access</code> <code>prod/myapp2/tomcat/catalina/out</code> <code>prod/myapp2/mysql/slowqueries</code>	<code>dev/myapp2/nginx/access</code> <code>dev/myapp2/tomcat/access</code> <code>dev/myapp2/tomcat/catalina/out</code> <code>dev/myapp2/mysql/slowqueries</code>

**Note:** Not all types of logs need to have the same amount of levels.

# Metadata: Source Category Best Practices and Benefits

## Define the scope of searches

```
_sourceCategory=networking/firewall/* (all firewall data)  
_sourceCategory=networking/*/cisco/* (all Cisco data)
```

## Index and partition your data

```
_sourceCategory=prod/networking*  
_sourceCategory=sales/strategic/myapp*
```

## Control who sees what data through RBAC

```
_sourceCategory=aws/sec/cloudtrail*
```

# Metadata: Source Category Best Practices and Benefits

## Common components (and any combination of):

- Environment (Prod/UAT/DEV)
- Application Name
- Geographic Information (East vs West datacenter, office location, etc.)
- AWS Region
- Business Unit

## Highest level components should group the data how it is most often search together:

Prod/Web/Apache/Access	Web/Apache/Access/Prod
Dev/Web/Apache/Access	Web/Apache/Access/Dev
Prod/DB/MySQL/Error	DB/MySQL/Error/Prod
Dev/DB/MySQL/Error	DB/MySQL/Error/Dev

# Overview of Labs Part 1,2 and 5

**Part 2: Logs:**  
prod/apache/access  
(using \*.txt file)



**Part 1: Collector**  
prod\_webserver



**Part 5: Metrics:**  
prod/hostmetrics



© = Collector



Install a collector and sources

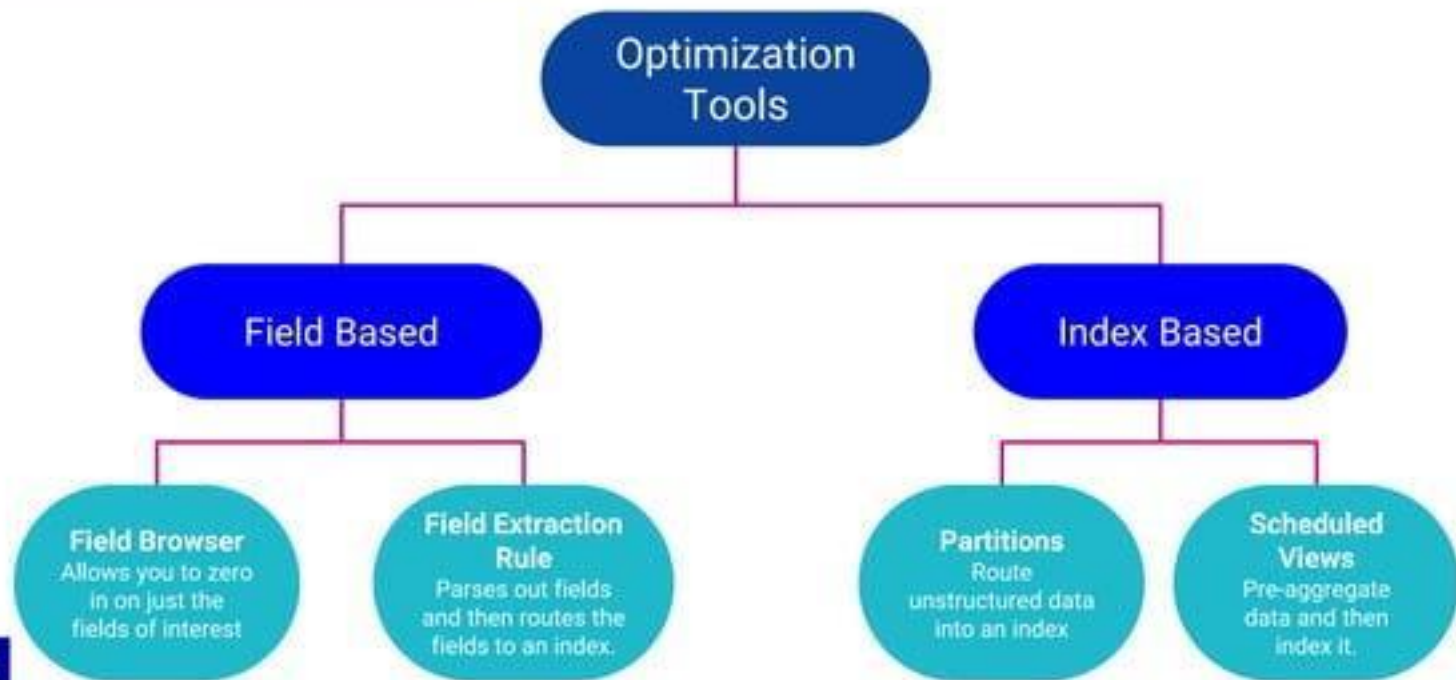
**Do Labs 1, 2, and 5**

# Optimization Tools

sumo logic



# Optimization Tools



# Field Browser

The Field Browser appears on the left side of the **Messages** tab of the Search page for both aggregate and non-aggregate queries.

It allows you to zero in on just the fields of interest in a search by displaying or hiding selected fields without having to parse them.

Click to save the settings for this search.

List of Fields shown in the Messages tab.

Indicates a Timestamp field

List of Fields that are hidden from view.

Indicates that the field contains numerical data.

Indicates that the field contains a text string.

The screenshot shows the Sumo Logic interface with a search query at the top: `_sourceCategory=logs/apache/access_mozilla`. Below the query is a search bar with buttons for 'Save As', 'Edit', 'Info', 'Share', 'Pin', and 'Link Tab'. The main section is titled 'Messages' and contains a table of search results. On the left side of the 'Messages' section is the 'Field Browser'.

The Field Browser is divided into two sections: 'Display Fields' and 'Hidden Fields'. The 'Display Fields' section lists fields with icons indicating their data type: a clock icon for timestamps, a number icon for numerical data, and a text icon for text strings. The 'Hidden Fields' section lists fields that are currently hidden from view.

Annotations with arrows point to specific elements in the Field Browser:

- An arrow points to the 'Save As' button, with the text: 'Click to save the settings for this search.'
- An arrow points to the 'Display Fields' section header, with the text: 'List of Fields shown in the Messages tab.'
- An arrow points to the clock icon next to the 'time' field, with the text: 'Indicates a Timestamp field'.
- An arrow points to the 'Hidden Fields' section header, with the text: 'List of Fields that are hidden from view.'
- An arrow points to the number icon next to the 'count' field, with the text: 'Indicates that the field contains numerical data.'
- An arrow points to the text icon next to the 'source\_name' field, with the text: 'Indicates that the field contains a text string.'
- An arrow points to the count '1' next to the 'time' field, with the text: 'Displays the count of a field. Available for non-aggregate queries only.'
- An arrow points to the tilde '~' next to the count '1' for the 'count' field, with the text: 'Tilde (~) in front of a count value indicates that the value is approximate.'

The search results table on the right shows columns for 'Time', 'ip\_address', and 'referrer'. The first row shows a timestamp '12/14/2019 9:10:30 AM -0700', an IP address '192.168.1.102', and a referrer 'http://www.mozilla.org/'.

## Field Extraction Rules

Field	Source	Destination	Created	Updated
id	source	target	2018-01-01	2018-01-01
name	source	target	2018-01-01	2018-01-01
email	source	target	2018-01-01	2018-01-01
password	source	target	2018-01-01	2018-01-01
status	source	target	2018-01-01	2018-01-01
created_at	source	target	2018-01-01	2018-01-01
updated_at	source	target	2018-01-01	2018-01-01

## Benefits

## Best Practices

## Limitations

- Better Performance
- Standardized field names
- Simplified Searches
- Build simple, specific Rules
- Test Parse and other operations thoroughly (use nodrop and isEmpty for testing)
- 50 rules/200 fields (Contact us to increase this)
- Not all operators supported (JSON auto)

# What are Partitions?

Partitions are custom indexes that **improve search performance by searching over a smaller number of messages** at query time. By default, we store all your data in the General Index.

However, for faster searching or RBAC control, you have the ability to create additional partitions so **your searches don't scan your entire data set**, but instead, scan only the necessary partition(s).

Production

Dev

Quality Assurance

Default Index

All members of your organization can take advantage of this partition structure when they run queries.

- ✓ No overlap
- ✓ < 20 Partitions
- ✓ Ideally between 1% and 30% of total volume
- ✓ Group data that is searched together most often
- ✓ Data retention customized

# Scheduled Views

Speed the search process for small and historical subsets of your data by functioning as a pre-aggregated index.

Reduce aggregate data down to the bare minimum, so it contains only the raw results that you need to generate your data.

## Best Practices

- Pre-aggregated data (e.g. for long-term trends)
- Find the needle in the haystack....
- Don't insert comments as it may interrupt the parsing of the pipes

## Limitations

- We recommend selectivity of  $> 1:10000$  (for every 10,000 log messages scanned there's only 1 result)
- View is updated by service ~once a minute
- Allows for backfilling
- Search view using `_view=[VIEW-NAME]`
- Data does count against ingest volume (if not using aggregation)

# Examples of applying Scheduled Views

## Web access trends

Creating a Scheduled View allows you to isolate logs related to your site, making it easy to report on web traffic patterns.

## App usage metrics

A Scheduled View can help you track the usage of one or more applications over time. Depending on your deployment, you could build a Scheduled View for each application.

## Threat analysis

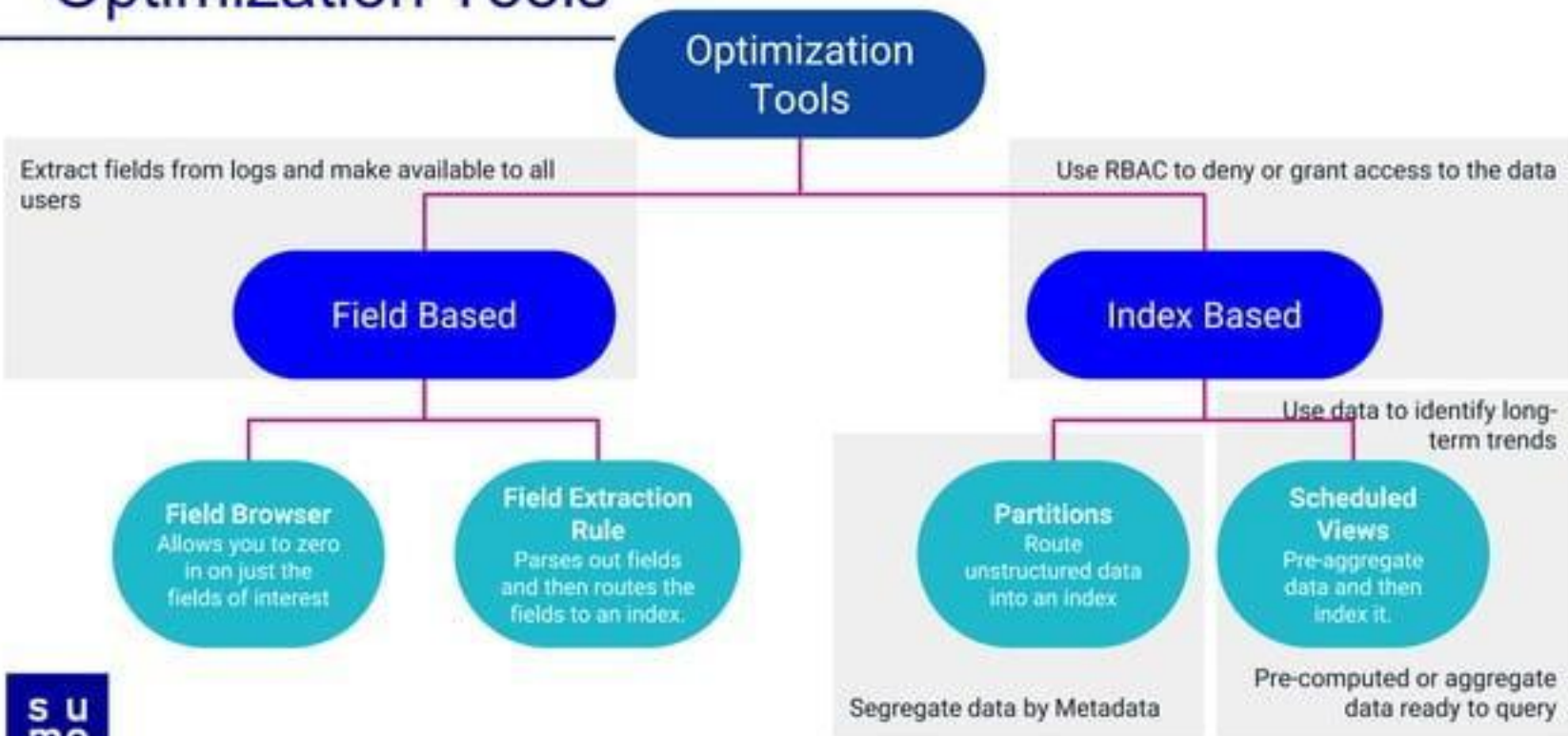
Because a Scheduled View indexes any type of data, you could create a Scheduled View for firewall logs, for example. You could then leverage this Scheduled View to see how threat types and threat levels vary over time, or even which IPs from high-risk areas are hitting your site.

## User behavior

A Scheduled View can be used to parse logins by user ID across your entire deployment, so you can answer audit-related questions quickly. Faster query results on this dataset allow for high-level investigations, such as checking to see if users have logged in during the past 60 days (or as far back as your retention period).



# Optimization Tools



# Overview and Data Management

sumo logic



# Account Overview

Account Overview

Data Management

Upgrade

## Organization

Name: Sumo Logic Training [Edit](#)

ID: 0000000000227D47

## Plan Type

Sumo Logic Logs and Metrics Analytics Service - Enterprise Edition (Cloud Flex)

## Current Billing Period ⓘ

08/26/2018 - 09/25/2018

## Total Storage (Current Billing Period)

Usage (Average): Using 4,501.6 GB of 36,000 GB capacity ⓘ

You can upgrade your Total Storage or reduce your storage consumption by [editing the retention period of your indexes](#).

40K

-----

30K

-----

0

Aug 26

Sep 25

Total Storage (GB)

## Daily Log Ingest

Capacity: 400 GB | Usage (Average): 13.7 GB

## Total Storage

Capacity: 36,000 GB | Usage (Average): 4,501.6 GB

## Metrics

Capacity: 5,000 DPM | Usage (Average): 10 DPM

## Live Dashboard Panels and Real Time Alerts

Usage: 131

# Data Management

Account Overview

Data Management

Upgrade

## Data Volume

Select this checkbox to enable data volume tracking for your account. You can access details about reported account volume in the Data Volume Index. For details, see [Help](#).

☒ Enable

# Ingest Budget Monitoring and Control

## How They Work

- Collectors monitor total ingested data
- Collector usage is aggregated to a namespace
- Usage is monitored as a percentage of a total capacity you set for each namespace
- Use **Stop** or **Keep** actions for a namespace when capacity is reached

## Use Cases

- Teams may ingest data unevenly. Some teams more than others. Sometimes by a lot. Use ingest budgets to set guardrails for overconsumption and cost sharing

## Best Practices

- Assign or recognize collectors owned by a given team
- Allocate ingest budget by namespace (Dev, QA, Security, etc.)



# Global Security Settings

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# Password Policy

Password Policy

Service Whitelist Settings

Access Keys

Policies

SAML

Passwords expire in

365 Days

Password reuse after

4 Changes

Users locked out after

10 Failed Attempts

Within 10 Minutes

For 30 Minutes

2-Step Verification for My Org

Optional

Remember Browser

30 Days

Cancel

Update

# Service Whitelist Settings

Password Policy

Service Whitelist Settings

Access Keys

Policies

SAML

⚠ Your current IP Address is 64.129.65.219, which isn't in the Service Whitelist.

No IP Addresses and CIDRs are currently whitelisted.

## Service Whitelist

### ☐ Enable Login / API Whitelist

If enabled, access to Sumo Logic is granted only to IPs/CIDRs added to the whitelist.

### ☐ Enable Dashboard Whitelist

If enabled, dashboards can be shared to users connecting from IP addresses or CIDRs in this whitelist without logging in.

## IP Address or CIDR

Reset

Add

Cancel

Save

# Access Keys

[Password Policy](#)[Service Whitelist Settings](#)[Access Keys](#)[Policies](#)[SAML](#)

Label	Access ID	Creator	Created	Status
macaccesskey-j	sub2V7j1L9UYvq	Labs User Training	07/16/2018	Active
uffandreasson	suJHLR0TN8CvE	Labs User Training	07/17/2018	Active
macaccesskey	suwmaDDRwydLe	User Removed	07/24/2018	Disabled
user215key	suNvp958WILSt	User Removed	07/24/2018	Disabled
digital00ts	sub3Gd7dnyX	Labs User Training	07/30/2018	Active
jb-clk	sum9Up6dOETw5k	Labs User Training	08/06/2018	Active
demoLambdaTest	su9V806Gehfab0	Labs User Training	08/06/2018	Active
Temp Key	suXHqcdnvh80Dw	Kevin Kerlan	08/09/2018	Active
Test Key	supt8GgnCAqqQk	Sumo Logic Training	08/21/2018	Active
accesskey1	suCoFD0QRMQz2J	Labs User Training	08/21/2018	Active
jbcollector	sub1XTBt5fEsp	Labs User Training	08/30/2018	Active

# Policies

Password Policy

Service Whitelist Settings

Access Keys

**Policies**

SAML

## Sumo Logic Auditing

Select this check box to enable audit records for your account. You can access details about reported account events in the Sumo Logic Audit Index. [Learn More](#)

☒ Enable

## Support Account Access

Select this check box to grant permission to approved Sumo Logic support agents to access your account.

☒ Enable

## Share Dashboards Outside of the Organization

Select this check box to allow users to share the dashboard with view only privileges outside of the organization (capability must be enabled from the Roles page). Uncheck this box to temporarily disable all dashboards that have been shared outside of the organization.

☒ Enable

# SAML Single Sign On

[Password Policy](#) [Service Whitelist Settings](#) [Access Keys](#) [Policies](#) [SAML](#)

Configuration List

NAME	DEBUG	SP INITIATED LOGIN	ISSUER
Azure AD			https://

☐ Require SAML Sign In

All users must log in using one of the SAML integrations unless they are allowed to bypass SAML and use password based sign in.

Allow these users to sign in using passwords in addition to SAML

NAME	STATUS	EMAIL	CAN MANAGE SAML	LAST LOGIN
Labs User Training		training+labs@sumologic.com	Yes	9/7/18 3:11 PM

# User and Role Management

sumo logic



# Adding New Users

Add a New User

Using 830 of 9999 allotted users

First Name \*

Last Name \*

Email \*

Roles \*

☐ Administrator

☐ Analyst

☐ Apache Only

☐ auditor

☐ firewall\_team

☐ iHealth customer - Changgi Airport

☐ interns

[Privacy Policy](#)

Cancel

Add New User

# Default User Roles

---

## Administrator

- Manage users and roles
- View and manage collectors

## Analyst

- Full data access
- No user and collector management

# Users and Roles - Capabilities

The screenshot displays the 'Edit Apache Only Role' configuration page in the Sumo Logic interface. The 'Capabilities' tab is selected, showing a list of permissions categorized by function. Each item has a checkbox to the left, indicating whether the capability is enabled for the role.

**Capabilities**

- ☐ Manage connections
- Data Management**
  - ☐ Manage Collectors
  - ☒ View Collectors
  - ☐ Manage data volume feed
  - ☐ Manage field extraction rules
  - ☐ Manage indexes
  - ☐ Manage SI data forwarding
  - ☐ Manage Content
- Metrics**
  - ☒ Manage Monitors
- Security**
  - ☐ Manage password policy
  - ☐ Whitelist IP addresses
  - ☐ Manage access keys
  - ☐ Manage support account access
  - ☐ Manage audit data feed
  - ☐ Manage SaaS
  - ☐ Manage Share Dashboards outside of Organization
- Dashboards**
  - ☐ Share Dashboards with the World
  - ☐ Share Dashboards with the Whitelist
- User Management**
  - ☐ Manage users and roles

# Users and Roles - Role Details

Users

Roles



Edit Apache Only Role

Details

Users

Capabilities

Role

Apache Only

Description

Access to Apache data only

Search Filter 

\_sourceCategory= Labs/Apache\*

# Taking Advantage of Apps

- Deliver out-of-the box dashboards, saved searches, and field extraction rules for popular data sources
- When an app is installed, pre-set searches and dashboards are customized with your source configurations and populated in a folder



# Recommended Apps

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- Data Volume
  - Need to enable Data Volume index
  - View your account's data usage volume by category, Collector, Source name, and hosts
- Audit
  - Need to enable the Audit Index
  - Analyze audit events to provide insight into overall Sumo Logic usage

# Content Sharing

sumo logic



# Sharing and Recommending: Searches and Dashboards

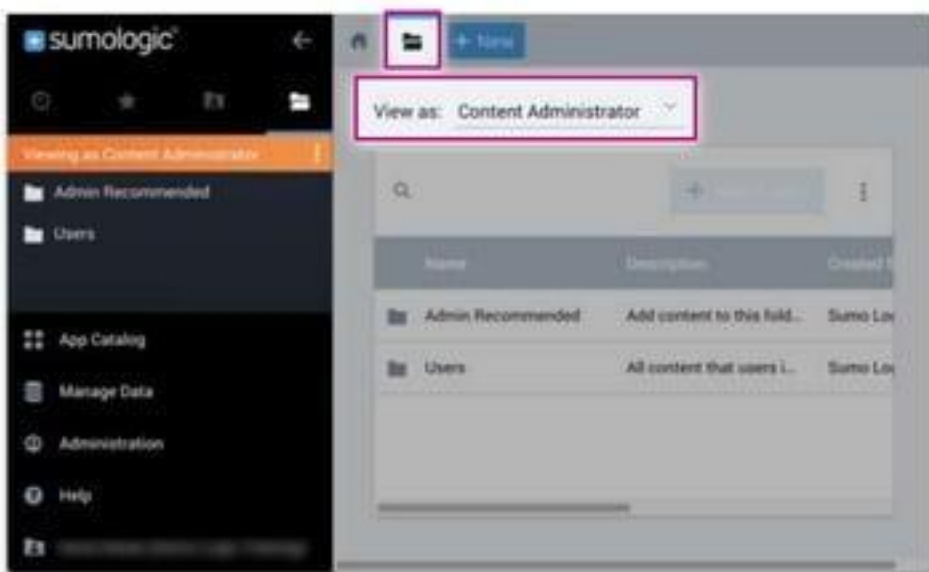
Enable your users by sharing and recommending content that is meaningful to them

## Share Content

- Grant View, Edit, Manage

## Admin Recommended

- Call attention to content



Install an app and create an alert

**Do Labs 3 and 6**

## In Summary, you can...

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- Ingest any type of logs (structured and unstructured)
- Select a deployment option that best fits your sources
- Develop a robust naming convention for your metadata
- Start sharing and recommending content that is useful to your users
- Take advantage of Optimization Tools
- **Call to Action:**
  - Set up a **collector** deployment option that best fits your environment
  - Ensure you have a robust **\_SourceCategory** naming convention
  - At the very least, set up **field extraction rules** for your popular data sources
  - Set up your general index into useful **partitions**

Questions?

# Tutorial: Hands-on Exercises

## Training Environment:

[service.sumologic.com](https://service.sumologic.com)

username: [training+user###@sumologic.com](mailto:training+user###@sumologic.com)

password: Sum0Labs!

## Hands-on Labs:

- Follow along using the labs found under **Home > Certifications >**

TUTORIAL





In order to get credit for the exam,  
In YOUR OWN INSTANCE, go to  
Certification Tab.

- Online Exam
- 30 Multiple choice questions
- 60-minute time limit
- 3 attempts



#### Administration

ONLINE EXAM: 30 QUESTIONS | 60 MINUTES

PREP: SETTING UP SUMO WEBINAR &  
TUTORIAL

*This certification is valid for one year*



Take the Exam

[Learn More](#)

# Sumo Logic Certification

- Make sure to log out of the training account you were using and sign in with your own account
- If you do not have a working login, go to [sumologic.talentlms.com](https://sumologic.talentlms.com) to sign up for an account



If you find your login is cycling back to the exam screen, do the following:

- Click on Help in the black left bar
- Click Community in the black left bar
- An email verification should be sent
- Once you verify, you should be able to take the exam without any issues

# For passing the exam, you will earn:

- SWAG
- A Certificate
- An invitation to our LinkedIn Group
- The respect of your peers
- Fame, Fortune and more...



# How did we do?

Please take our survey:

<https://forms.gle/2KMtxPuD9cSYV8SJ6>

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# Tutorial: Hands-on Exercises

## Training Environment:

[service.sumologic.com](https://service.sumologic.com)

username: [training+labs@sumologic.com](mailto:training+labs@sumologic.com)

password: Sum0Labs!

## Hands-on Labs:

- Follow along using the labs found under **Home > Certifications >**

TUTORIAL



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