Become a

Sumo Metrics Analyst

Metrics Mastery Certification

sumo logic

Become a Sumo Metrics Certified Analyst

1. Learn how to use a unified Logs and Metrics solution
2. Learn about Metrics and their properties
3. Learn how to collect Metrics data
4. Develop a toolset for basic and advanced Metrics analytics
5. Apply knowledge through Labs to solve common use cases

Course Agenda

10 min.	Course Logistics
20 min.	Reviewing the Basics: Demo and Data Flow
10 min.	Collecting Metrics
10 min.	Analyzing Metrics
40 min.	Use Cases
20 min.	Monitoring Metrics
10 min.	Summary and Next Steps
60 min.	Examination

Logistics

How do I get access to the training?

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Tutorial: Hands-on Exercises

Training Environment:

Go to: service.sumologic.com

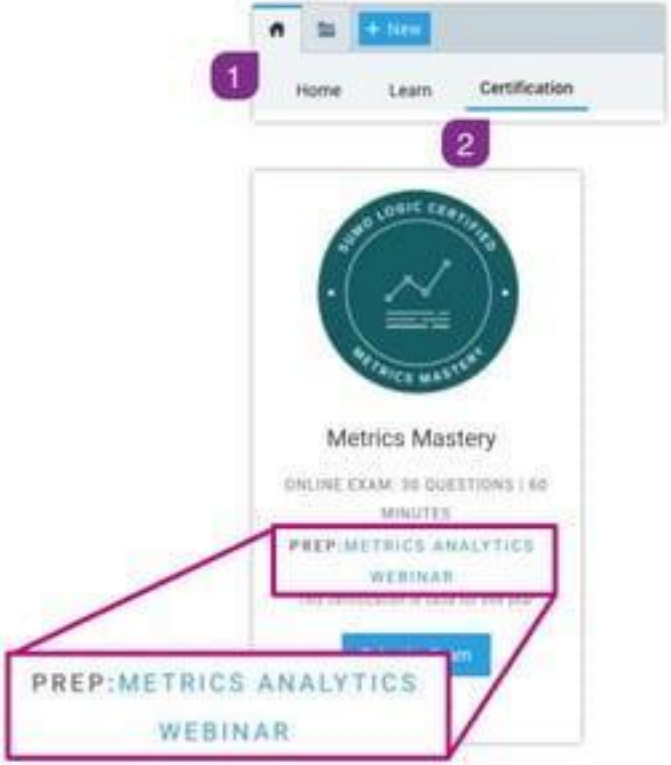
username: training+user###@sumologic.com

password: Sum0Labs!

will be a number between 001 and 600

Hands-on Labs:

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



Reviewing the Basics

Demo & Dataflow

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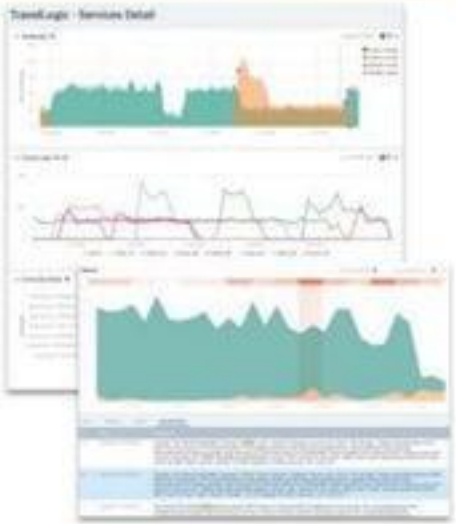
Demo: Monitor and Troubleshoot

ALERTS
notify of a critical event

METRICS
to identify what's going on



LOGS
to identify why it's happening

Intro to Metrics

A metric is a set of **data points** that **measure the value** of something **over time**.

Everyday Metrics:

- Measurements of temperature on an hourly basis
- Your weight once a week
- The height of your child every 6 months

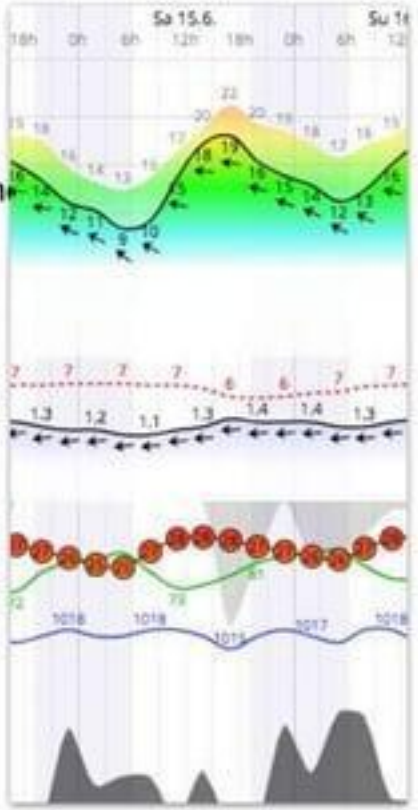
Examples of how Metrics can be used in your Environments:

- Track KPIs over time to gain end-to-end visibility into application performance.
- Determine if an outage has occurred and restore service.
- Determine why an event occurred and how it might be prevented in the future.

Metrics versus Logs

How are Logs different from Metrics?

- **METRICS** → Numeric measurements of data collected over tim
- **LOGS** → Records of events that occured.



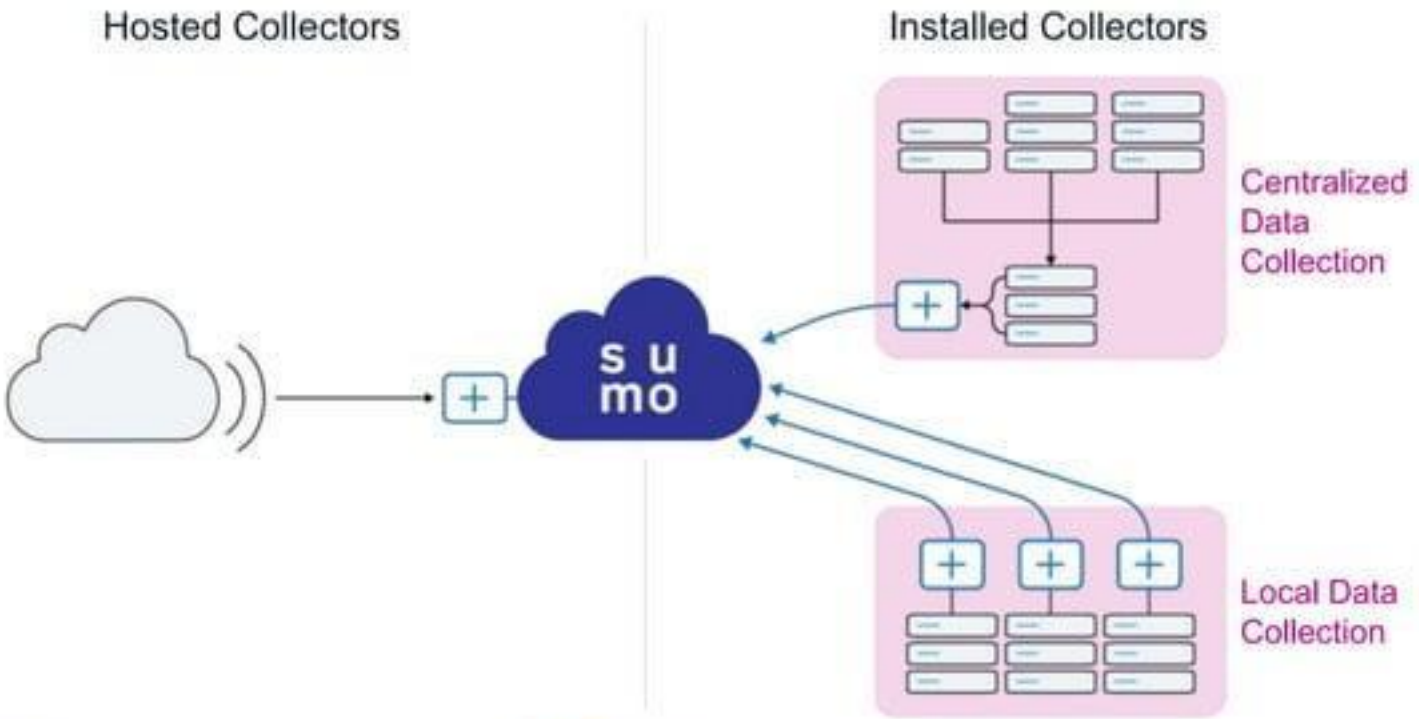
Review - LOG or METRIC?

- Wind patterns for the last 24 hours
- Every time wind exceeded 20 knots
- Number of server errors on an hourly basis
- CPU Uptime for the last 15 min
- Failed login

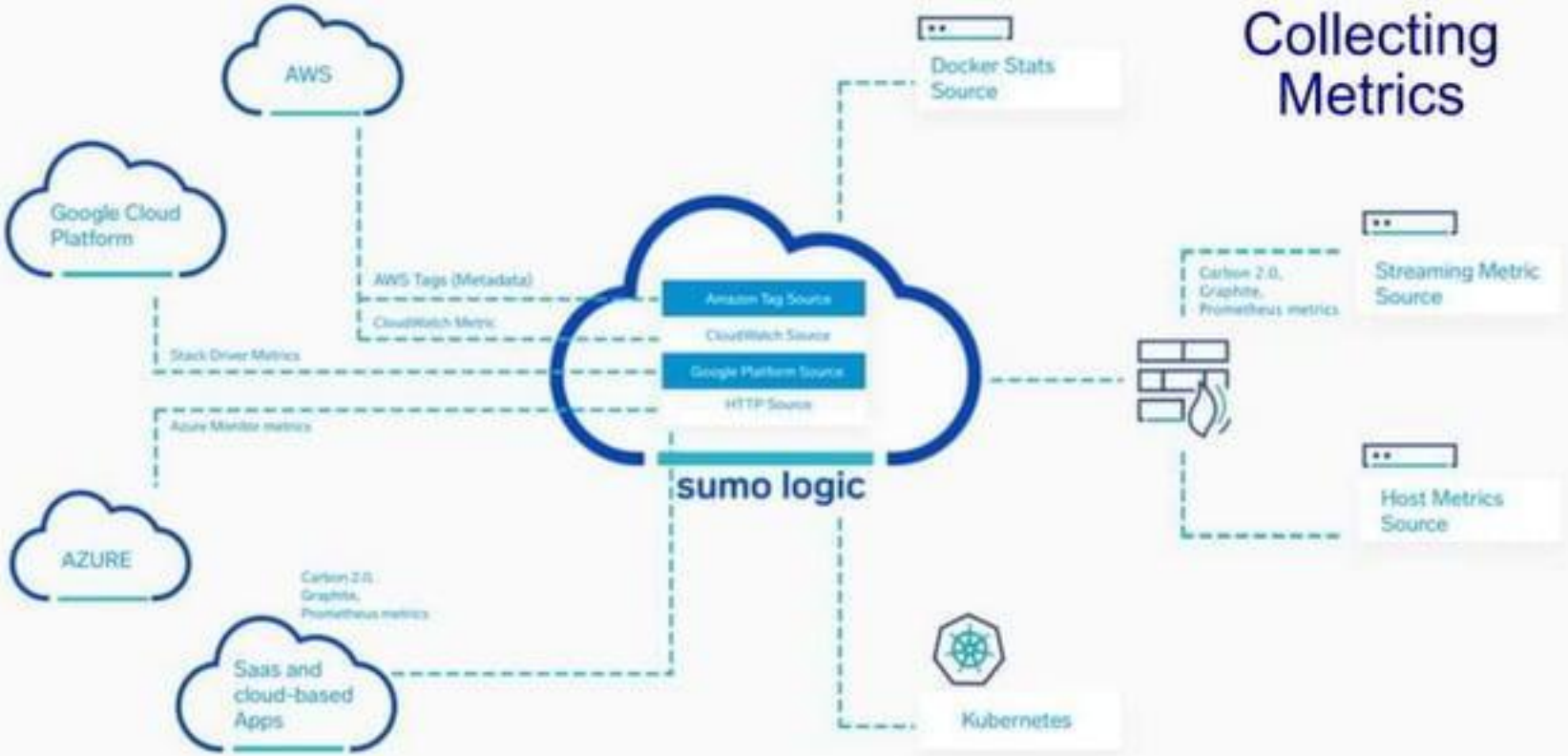
Sumo Logic Data Flow

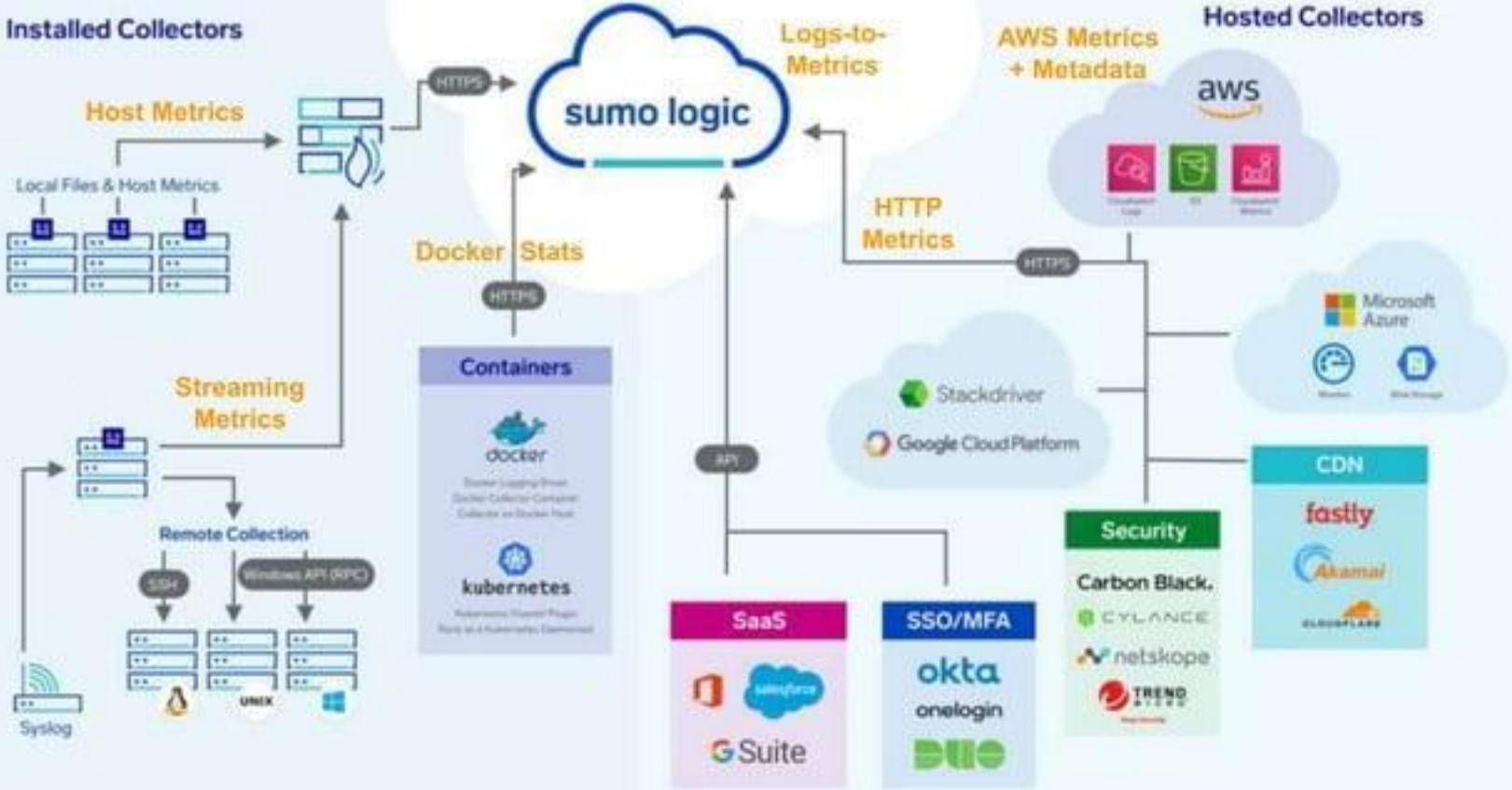
Collecting Metrics

Collector and Deployment Options



Collecting Metrics





Metric Ingestion and Storage

Metric Ingestion

- Sumo does not ingest metric data that is more than **one week** old.

Metric 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

Analyzing Metrics

Analyzing Metrics

You can easily query metrics using a **key-value pair format.**

Let's say we are looking to analyze the wind speed in Spain for the last 24 hours.

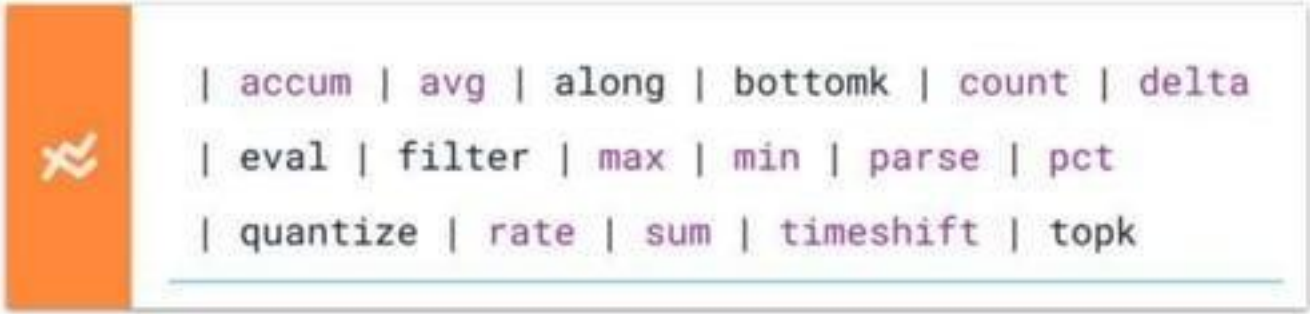
Your initial query can look like this:

- If you have 255 stations across Spain, this will plot all 255 stations over time:

- If you care for only the 3 stations **in Valencia**:

- If you want to see the **average** of these 3 stations:

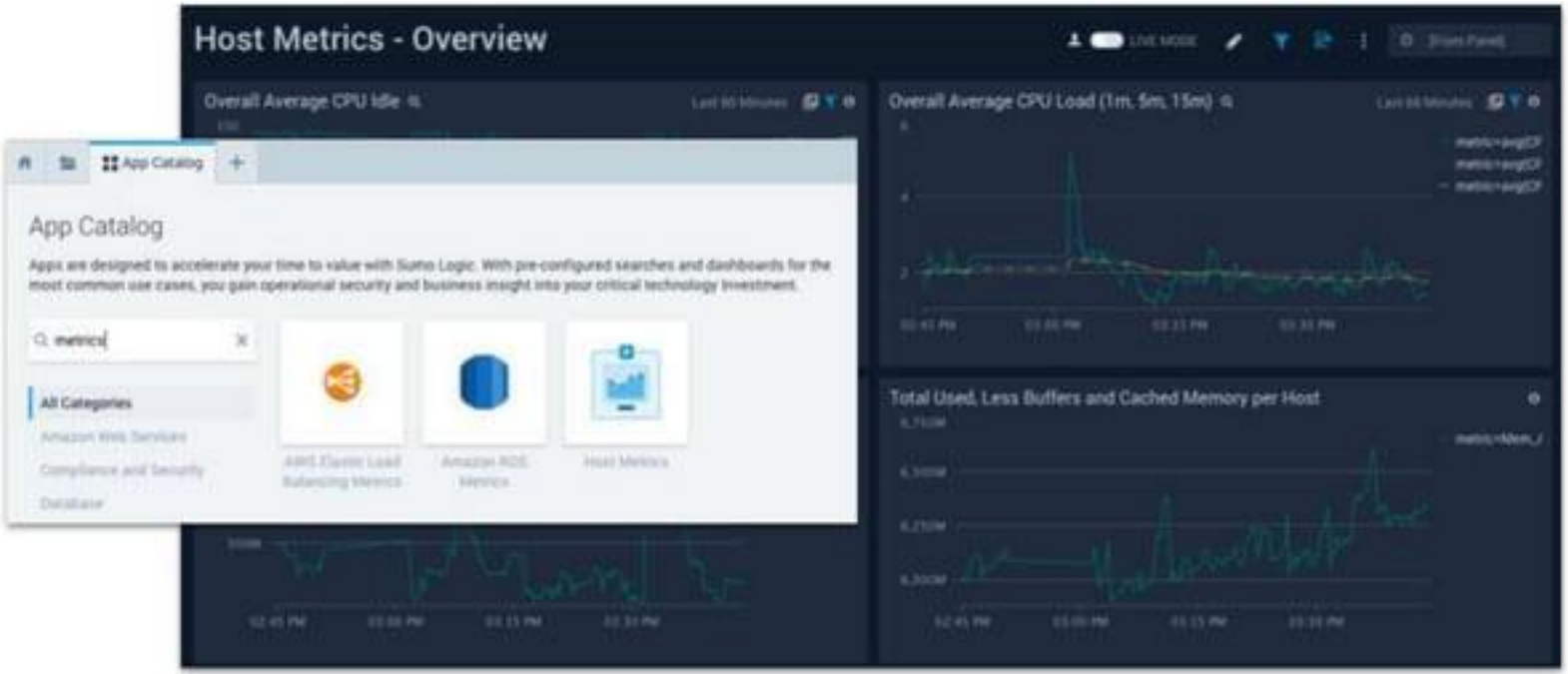
Analyzing Metrics - Operators



https://help.sumologic.com/Metrics/Metric-Queries-and-Alerts/03Metrics_Operators

Use Case 1: Host Metrics

Metrics Apps: Out-of-the-Box Content



Metrics Certification: Hands-on Labs

Using Sumo Logic

Use Case 1: Host Metrics (Labs 1-4)

- Install a Collector
- Create a Metrics Source
- Query your Metrics
- Install the Host Metrics App

Optional Labs (Labs 5-6)

- Joining Metric Queries
- Filtering Results

Use Case 2: AWS Metrics

AWS Metrics

AWS metrics are collected via CloudWatch

AWS Documentation » Amazon CloudWatch » User Guide » AWS Services That Publish CloudWatch Metrics

AWS Services That Publish CloudWatch Metrics

The following AWS services publish metrics to CloudWatch. For information about the metrics and dimensions, see the specified documentation.

Service	Namespace	Documentation
Amazon API Gateway	AWS/ApiGateway	Monitor API Execution with Amazon CloudWatch
AppStream 2.0	AWS/AppStream	Monitoring Amazon AppStream 2.0 Resources
Amazon Athena	AWS/Athena	Monitoring Athena Queries with CloudWatch Metrics
AWS Billing and Cost Management	AWS/Billing	Monitoring Charges with Alerts and Notifications
ACM Private CA	AWS/ACMPrivateCA	Supported CloudWatch Metrics
Amazon CloudFront	AWS/CloudFront	Monitoring CloudFront Activity Using CloudWatch
AWS CloudHSM	AWS/CloudHSM	Getting CloudWatch Metrics
Amazon CloudSearch	AWS/CloudSearch	Monitoring an Amazon CloudSearch Domain with

[AWS Docs]

Detail of each Metric, by source:

https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/aws-services-cloudwatch-metrics.html

Collecting AWS Metrics

AWS metrics are collected via CloudWatch

Name* AWS ALB Metrics - Training

Maximum name length is 128 characters.

Description Training Example to set up a CloudWatch Metrics Source

Regions * Select All | Select None

- eu-west-3
- sa-east-1
- us-east-1
- us-east-2
- us-west-1
- us-west-2

Namespaces Select All | Select None

- AWS/EFS
- AWS/ELB
- AWS/ES

AWS Tag Filters Enter keys and values below to add filters to your metrics. Separate multiple values for the same key with semicolons. Tag filtering for extended AWS namespaces, (other than AWS/EC2) is in beta. Please read our documentation for more information.

Namespace	Key		Values
AWS/ELB	environment	=	prod
Select Namespace		=	

Custom Namespaces

Enter a comma-separated list of custom namespaces from which you would like to collect logs. Custom namespaces must not be an AWS namespace, i.e. the namespace must not be prefixed with AWS/

Source Category Training/AWS/ALB/Metrics

Category metadata to use later for querying, e.g. prod/web/apache/access . This data is queried using the '_sourceCategory' key name.

Collecting and Analyzing AWS Metrics

Tips and Tricks

Only send necessary metrics (use filters):

Choose the right scan intervals:

AWS reports CloudWatch metrics at different granularities (1-minute, 3-minute, and 5-minute intervals), so setting a scan interval that's too short could lead to excessive querying. Setting an interval that's too long can delay the update frequency of new metrics appearing in Sumo Logic.

Bring your AWS Metadata into Sumo:

Sumo Logic allows you to collect tags you have assigned to selected AWS resources. Create an AWS Metadata Source and bring in your tags straight into Sumo.

For EC2, save $$ with an installed Collector:

EC2 metrics have high latency and can increase the costs of your AWS account. For EC2 metrics, consider Installing a Collector with a Host Metrics Source. The advantage is near zero latency and more information at a lower overall cost.

When querying, choose the right Statistic:

CloudWatch generates the following 5 statistics for all metrics:
- Minimum
- Maximum
- Average
- Sum
- SampleCount

AWS docs recommend the relevant statistic for each metric.

Use Case 2: AWS Metrics (Lab 7)

- Query the AWS ALB Metrics
- Install AWS ALB Metric App
- Reverse-engineer Advanced Metrics Queries

Use Case 3:
Metric Formats

Review: Query Metrics

You can easily query metrics using a **key-value pair format.**

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Supported Metric Formats

Carbon 2.0

```
cluster=cluster-1 node=node-1 cpu=cpu-1 metric=cpu-idle 97.29 1460061337
```

Prometheus

```
# HELP cpu-idle Total system cpu idle time.
# TYPE cpu-idle counter
cpu-idle{cluster="cluster-1" "node=node-1" "cpu=cpu-1"} 97.29 1460061337
cpu-idle{cluster="cluster-1" "node=node-1" "cpu=cpu-1"} 94.12 1460242839
```

Graphite

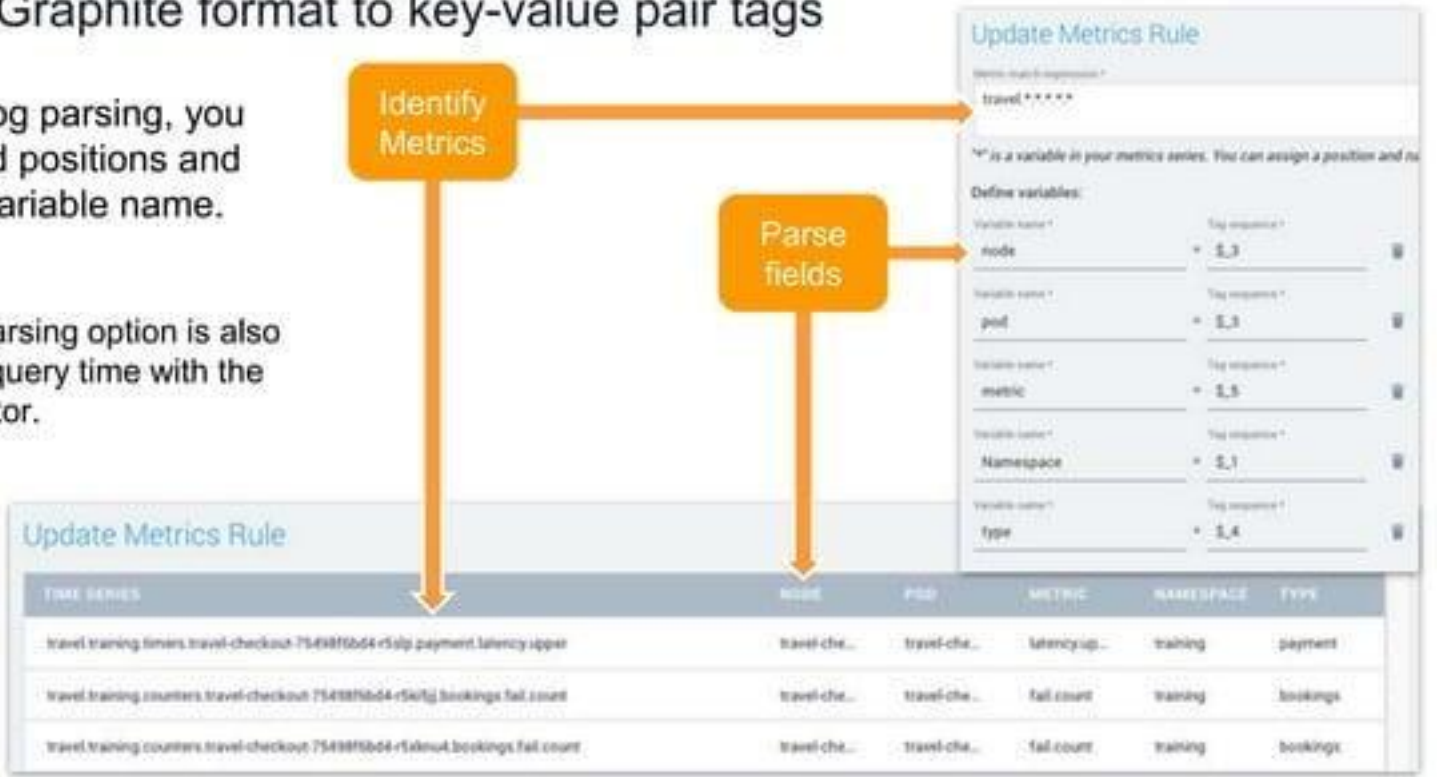
```
cluster-1.node-1.cpu-1.cpu-idle 97.29 1460061337
```

Metrics Rule Editor

Convert Graphite format to key-value pair tags

Similar to log parsing, you specify field positions and provide a variable name.

Note: This parsing option is also available at query time with the **parse** operator.



Use Case 3: Metric Formats (Lab 8)

- Test existing Metrics Rule
- Query your Custom TravelLogic Metrics

Use Case 4:
Logs to Metrics

Logs-to-Metrics

What is it?

Logs-to-Metrics is a feature that converts the results of a log search to a metric view.

Logs-to-Metrics

Why do this?

1 Performance	2 Retention	3 Alerting
		
Analyzing time-series data is much faster than parsing and querying unstructured data.	Metrics are retained for 13 months by default. Good for long-term KPIs or operational trends.	High-performing, near real-time alerts optimized for time-series data.

Use Case 4: Logs to Metrics (Lab 9)

- Review your existing Apache Logs for count of 404s
- Create a Logs-to-Metrics Rule
- Query your new Apache Metrics

Monitoring Metrics

Monitoring your Metrics

Charts >> Panels >> **Dashboards**

Metric Monitors >> **Alerts**

Monitoring your Metrics (Lab 10)

- Create a Dashboard using metrics charts from previous labs
- Create an Metric Monitor that Alerts on a given threshold

- **IMPORTANT:**
  - **DELETE your Metric Monitor so you do not receive notifications after this training**

Where do I go from here?

Training, Docs, Community, Support

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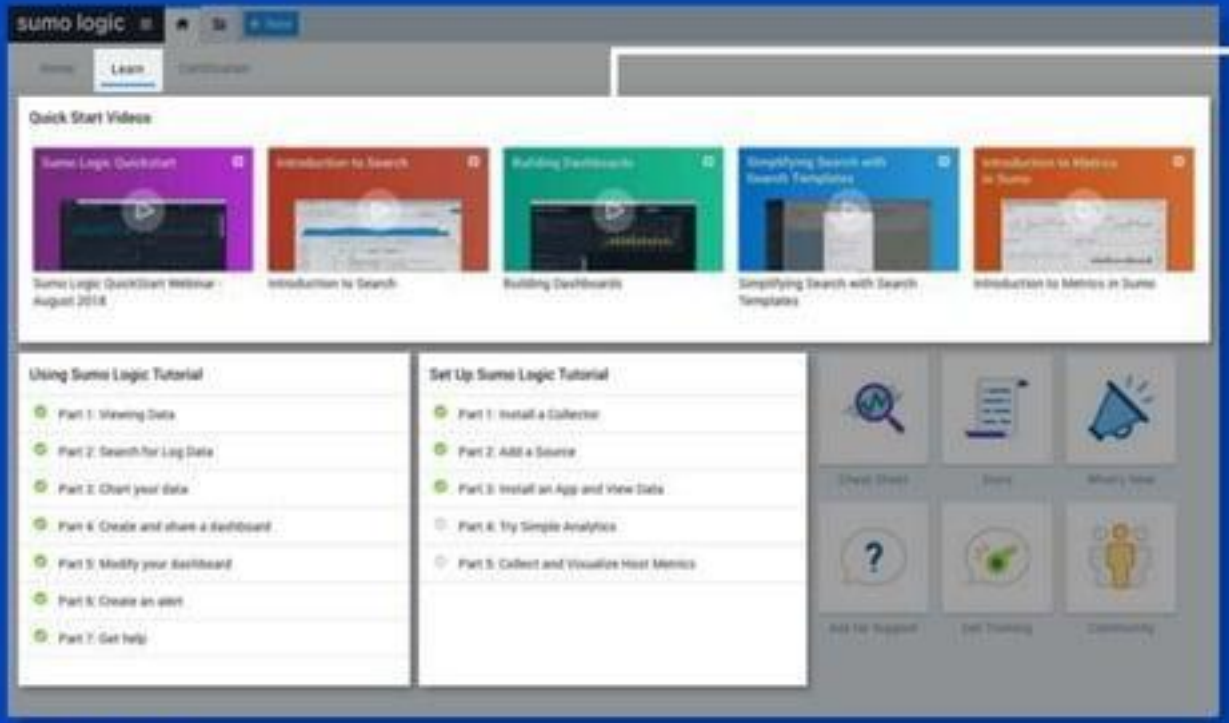
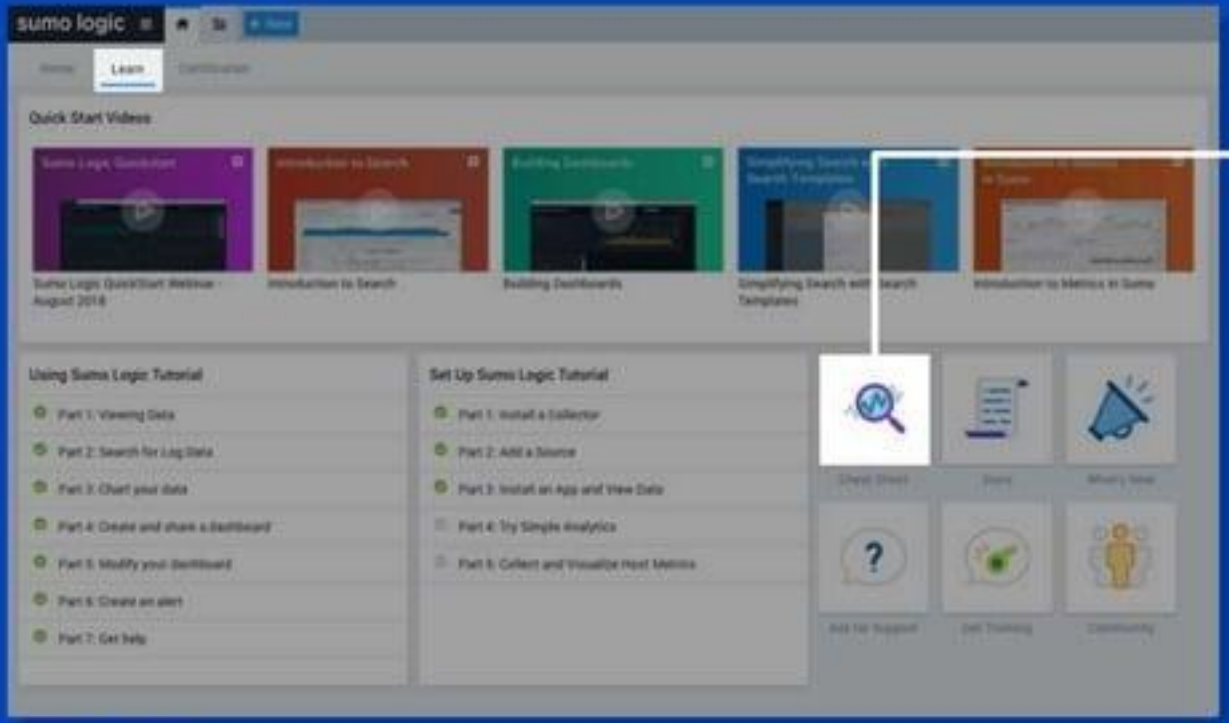
Need knowledge? ⇨ try the **Learn** tab



Explore the tutorials

Need knowledge? ⇨ try the **Learn** tab



Explore the tutorials

Access comprehensive lists of operators and more

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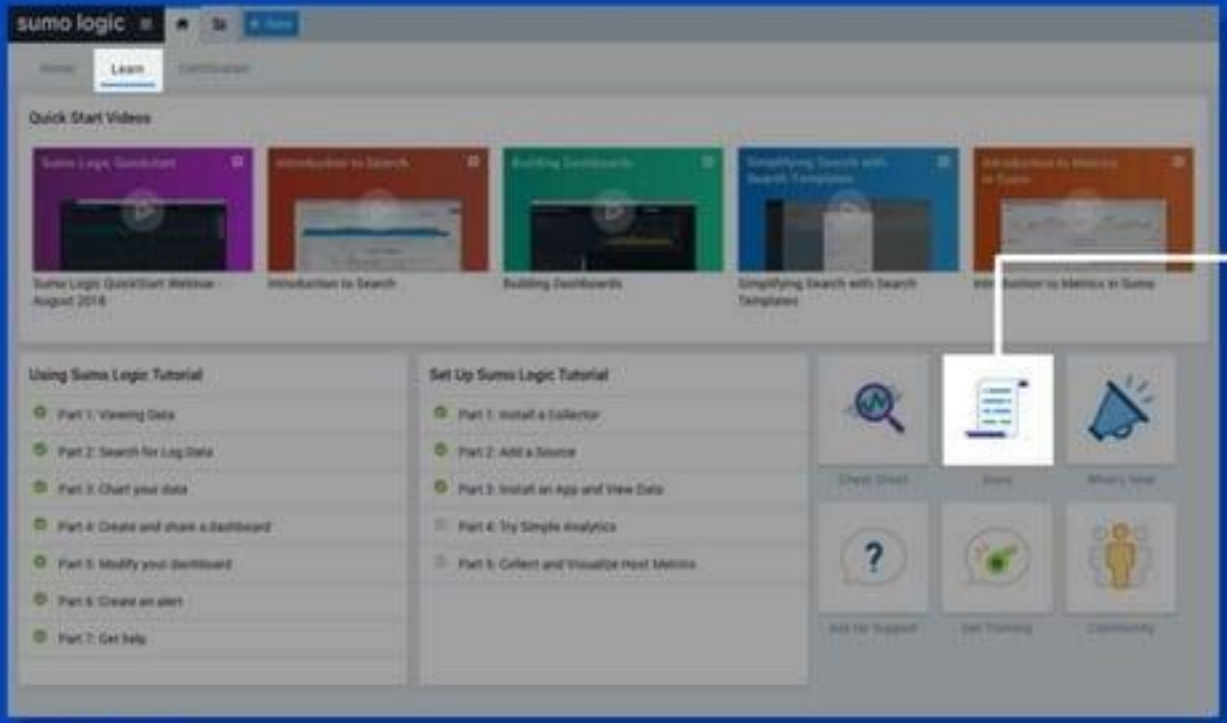

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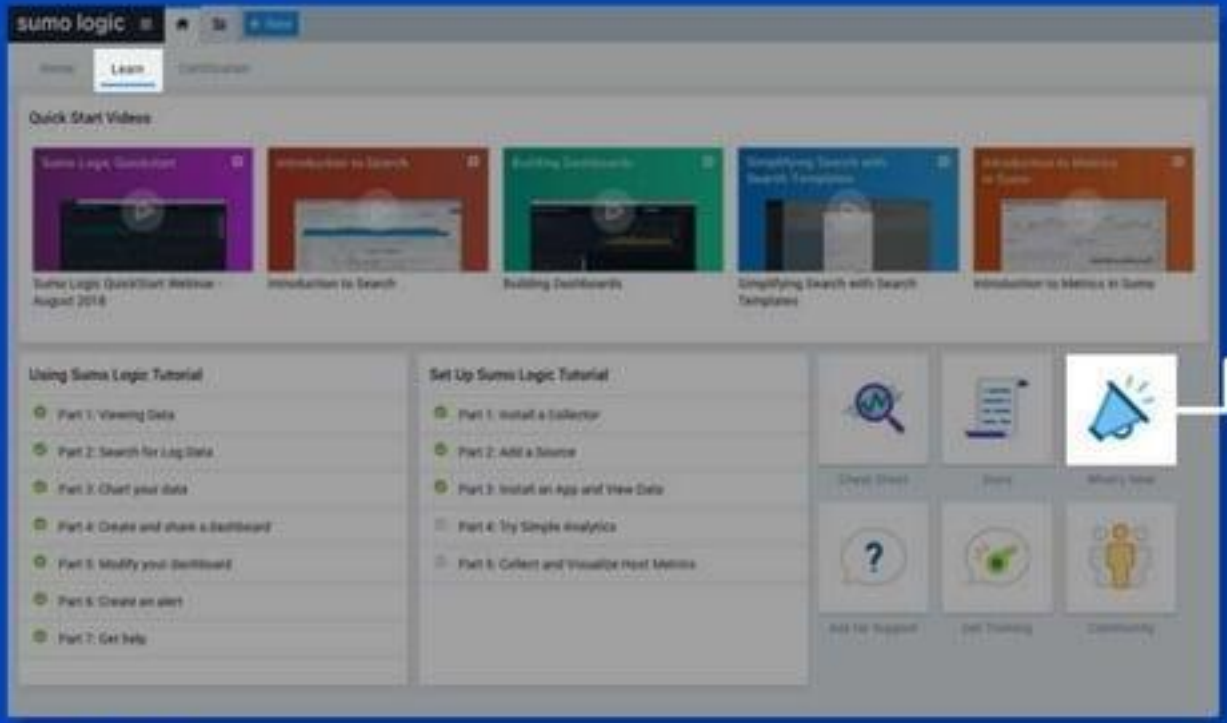

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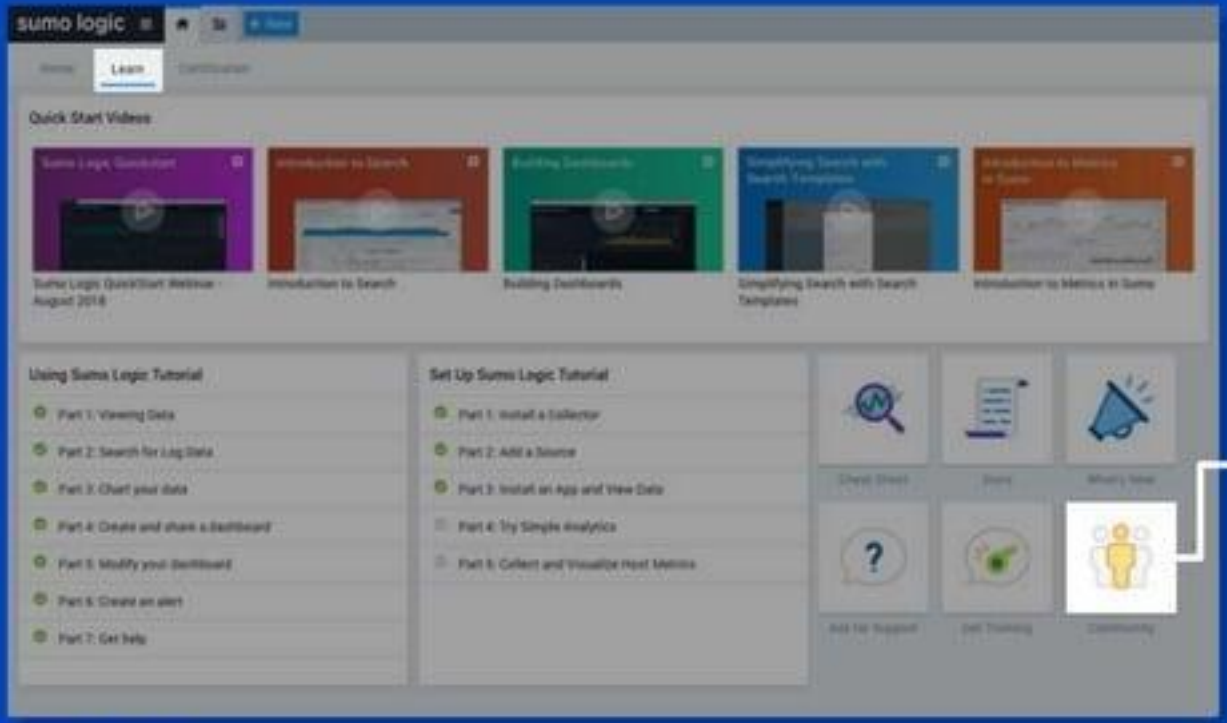

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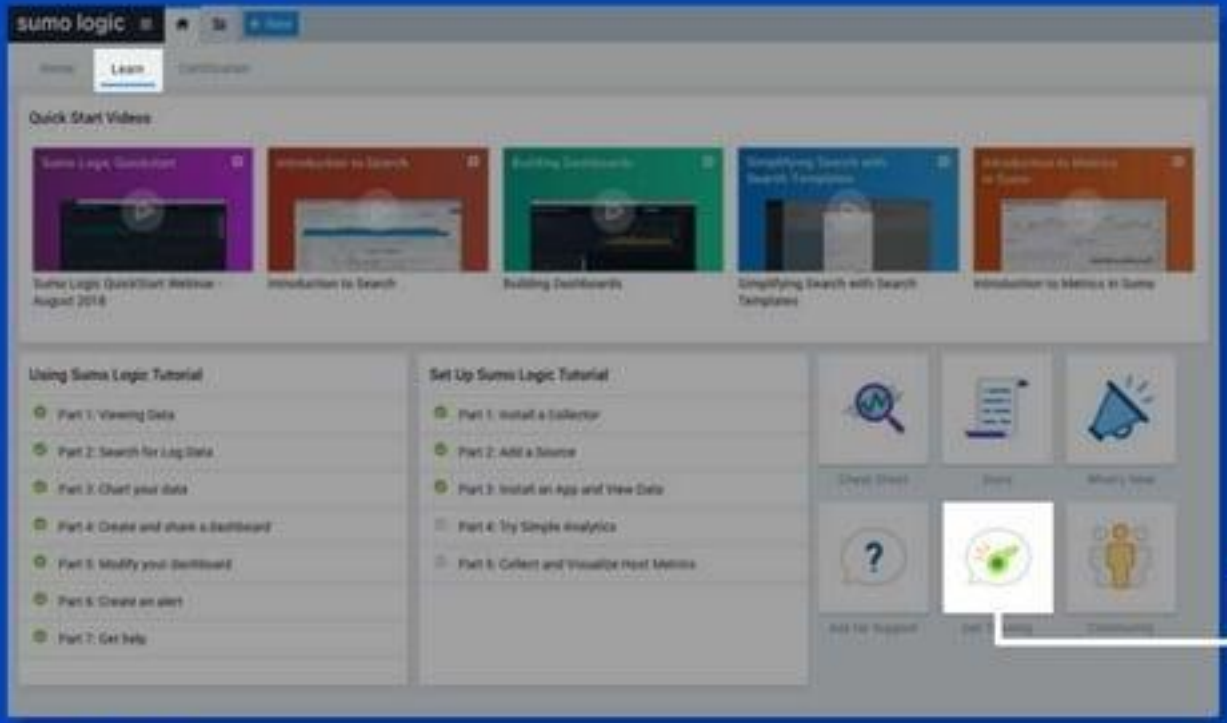

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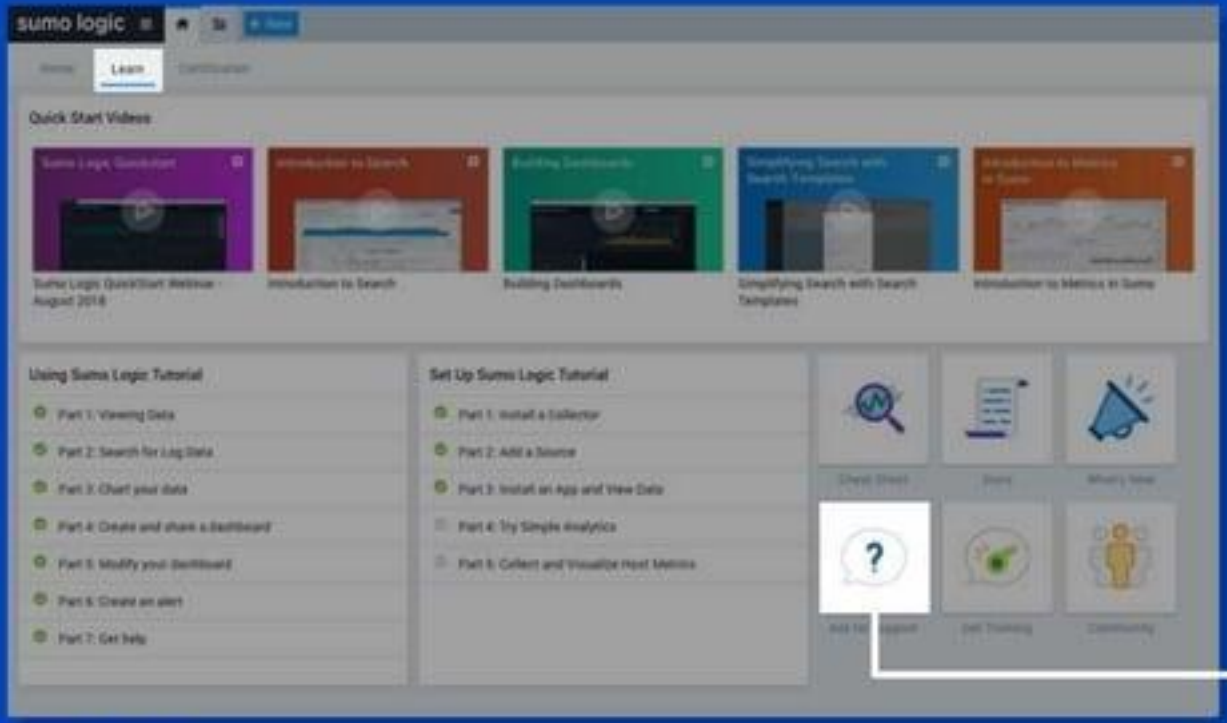

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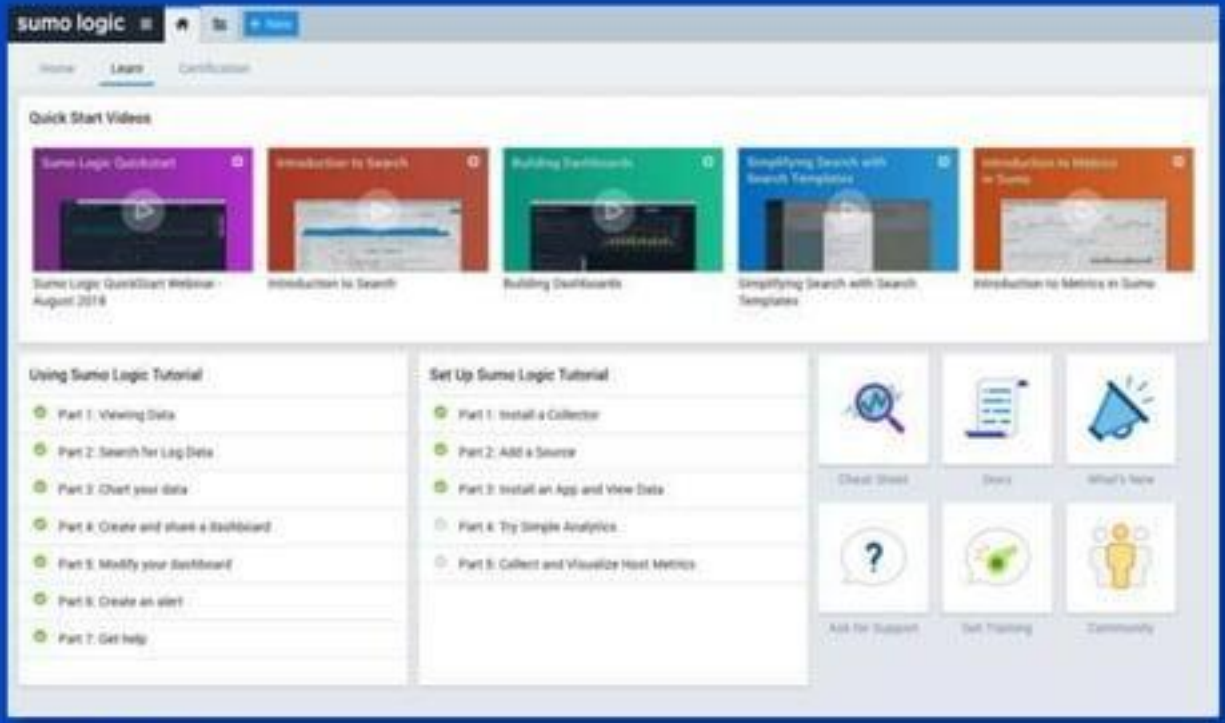

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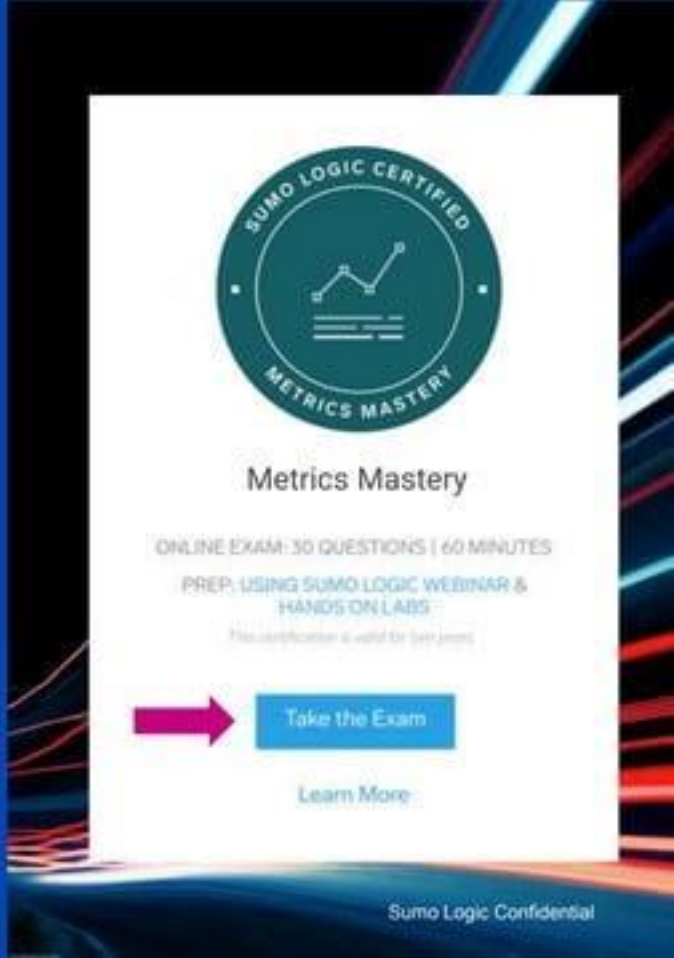
Questions?

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



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Empowering the people who power modern business

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