Journeying through the Tales of Open Telemetry

A Dive into the OpenTelmetry Framework

Feb 2024

SigLens

I'm Siddhant 👋

Developer Advocate @ SigLens

Co-Organizer at CNCG Nashik

Community Manager

Geek about: Tech, Health, Books

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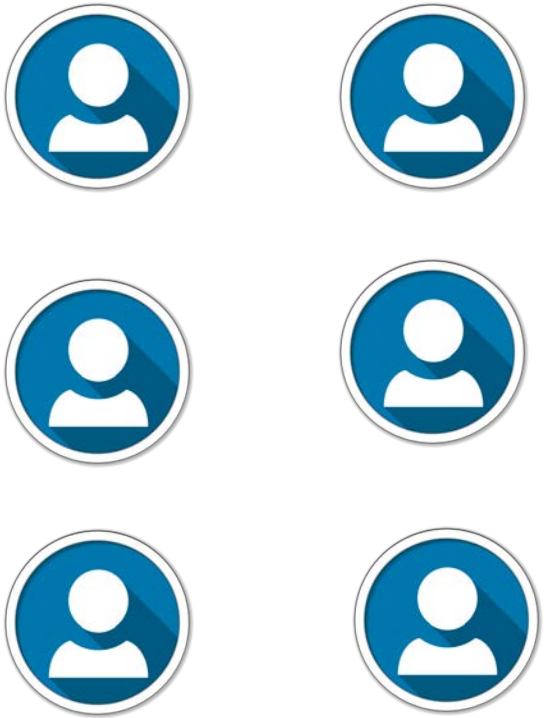
Siddhant Khisty

@SiddhantKhisty

Imagine this



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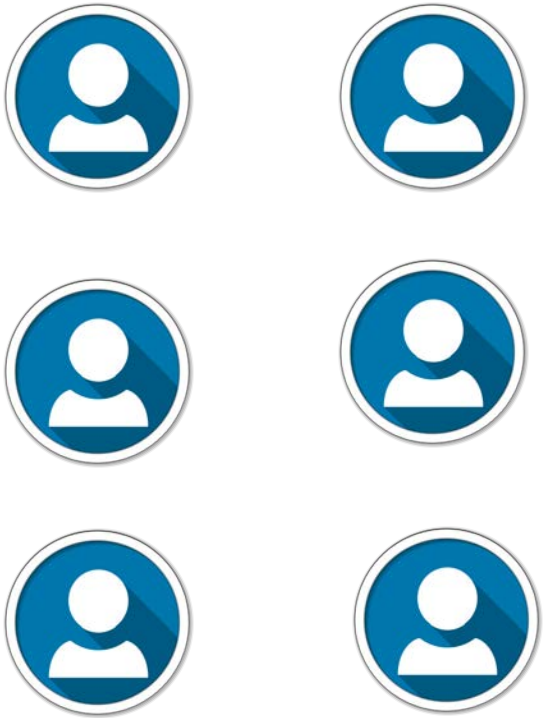

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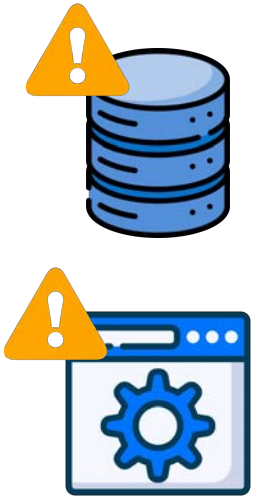

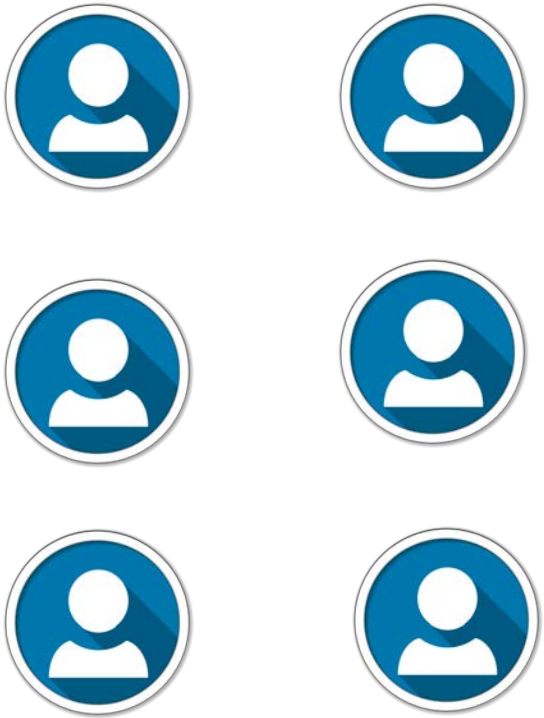

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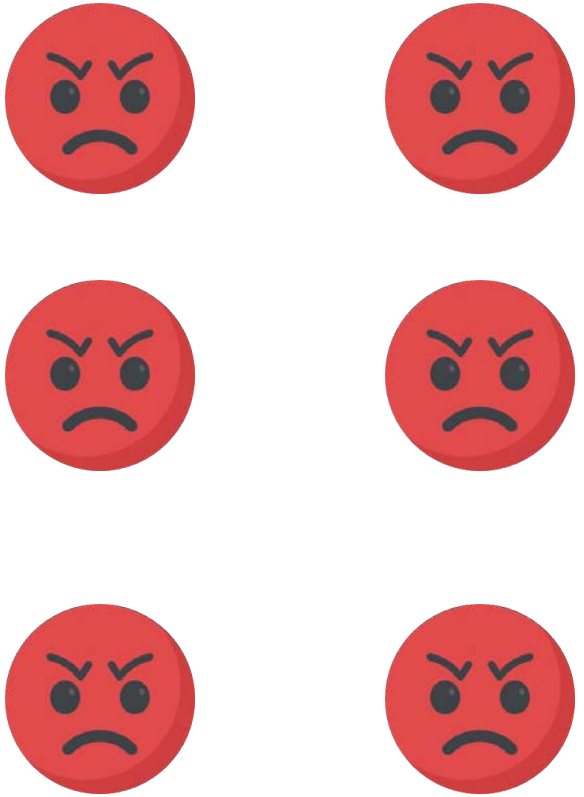
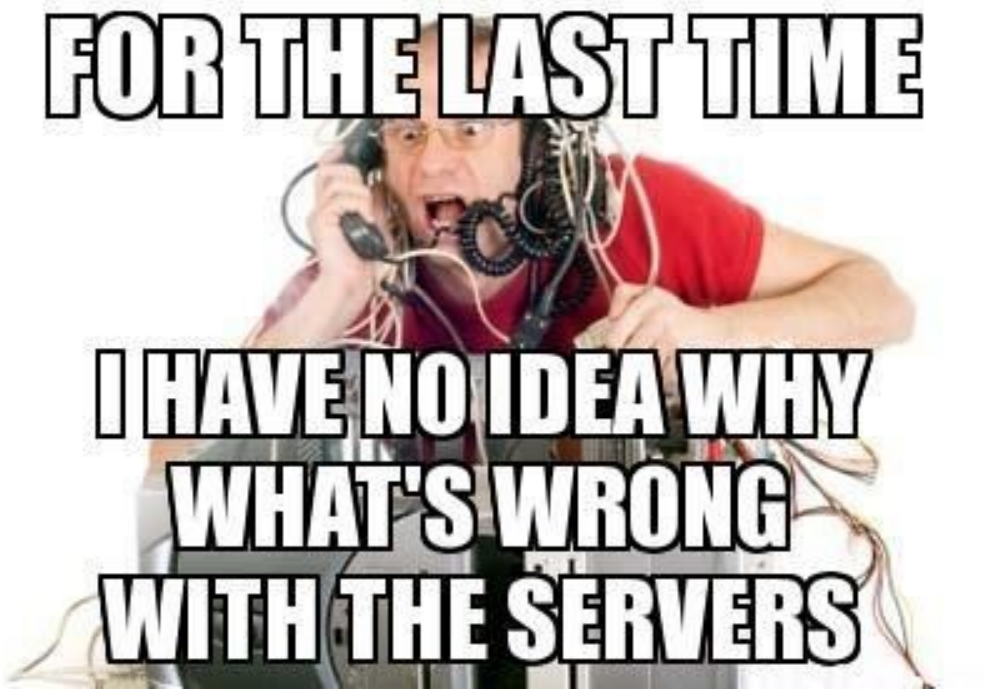



FOR THE LAST TIME
I HAVE NO IDEA WHY
WHAT'S WRONG
WITH THE SERVERS

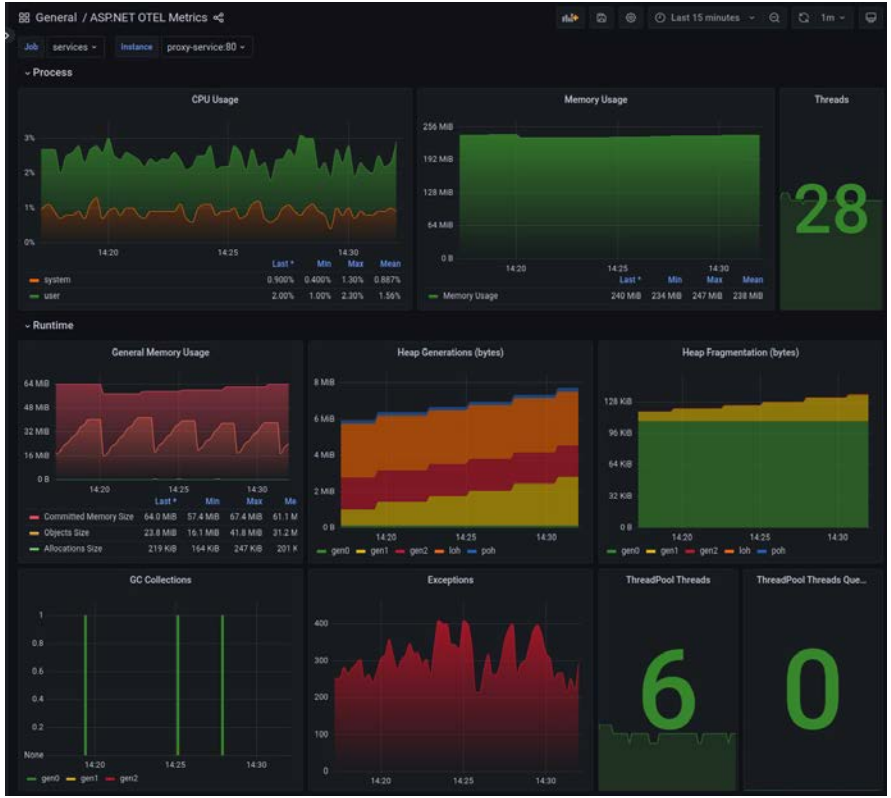
Getting Familiar with **Observability**

- Get insights into your systems
- Use this data to evaluate and improve performance
- Useful for debugging and predicting issues
- 3 main pillars of Observability

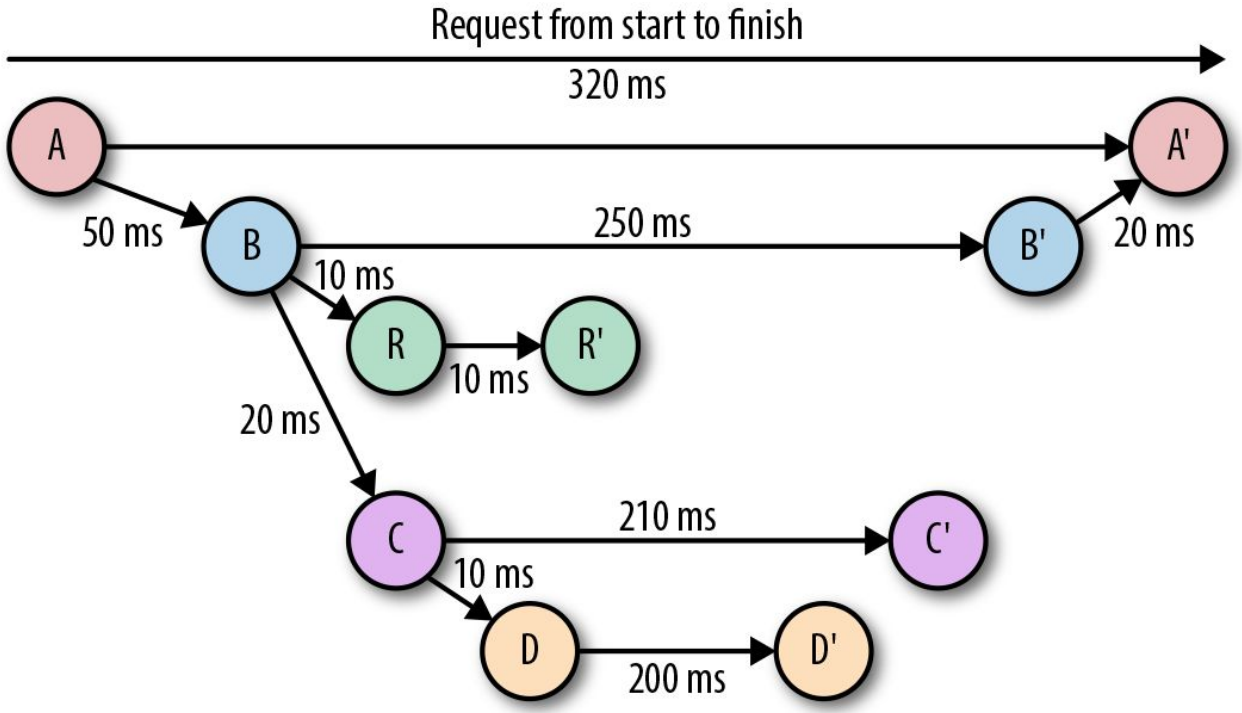
Logs

timestamp	_index	address	app_name	app_version	batch	city	country
Feb 21st, 2024 @ 14:00:19	ind-0	5066 Walk chester, Buffal...	Yakmay	1.4.2	batch-911	Buffalo	Central African Republic
Feb 21st, 2024 @ 14:00:19	ind-0	255 East Summit fort, Oa...	Jellyfishdid	1.18.12	batch-816	Oakland	Netherlands
Feb 21st, 2024 @ 14:00:19	ind-0	85638 Key view, Louisville...	Gerbilcrawl	2.7.6	batch-382	Louisville/Jefferson	Faroe Islands
Feb 21st, 2024 @ 14:00:19	ind-0	547 Common borough, Hi...	Armymight	3.19.20	batch-708	Hialeah	Tonga
Feb 21st, 2024 @ 14:00:19	ind-0	71355 Lake Hollow berg, ...	Antelopecan	2.10.3	batch-441	Chesapeake	Bahamas
Feb 21st, 2024 @ 14:00:19	ind-0	4764 South Plains fort, Ci...	Cackleride	5.10.2	batch-977	Cincinnati	Tunisia
Feb 21st, 2024 @ 14:00:19	ind-0	4763 New Land ton, Tucs...	Waspeat	4.16.17	batch-108	Tucson	Viet Nam
Feb 21st, 2024 @ 14:00:19	ind-0	59051 New Fields port, L...	Rainsit	4.15.16	batch-831	Los Angeles	Mozambique
Feb 21st, 2024 @ 14:00:19	ind-0	58953 Bridge shire, Jacks...	Bookstoreclap	1.15.1	batch-93	Jacksonville	Cambodia
Feb 21st, 2024 @ 14:00:19	ind-0	76053 North Motorway fo...	Grasshopperthrow	2.7.1	batch-149	Boise	Saint Helena, Ascension ...
Feb 21st, 2024 @ 14:00:19	ind-0	889 Corners fort, New Orl...	LightPinkbody	4.5.1	batch-174	New Orleans	Jordan

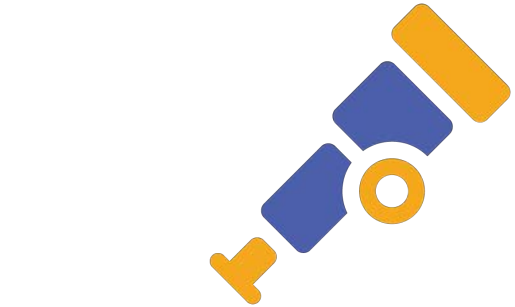
Metrics

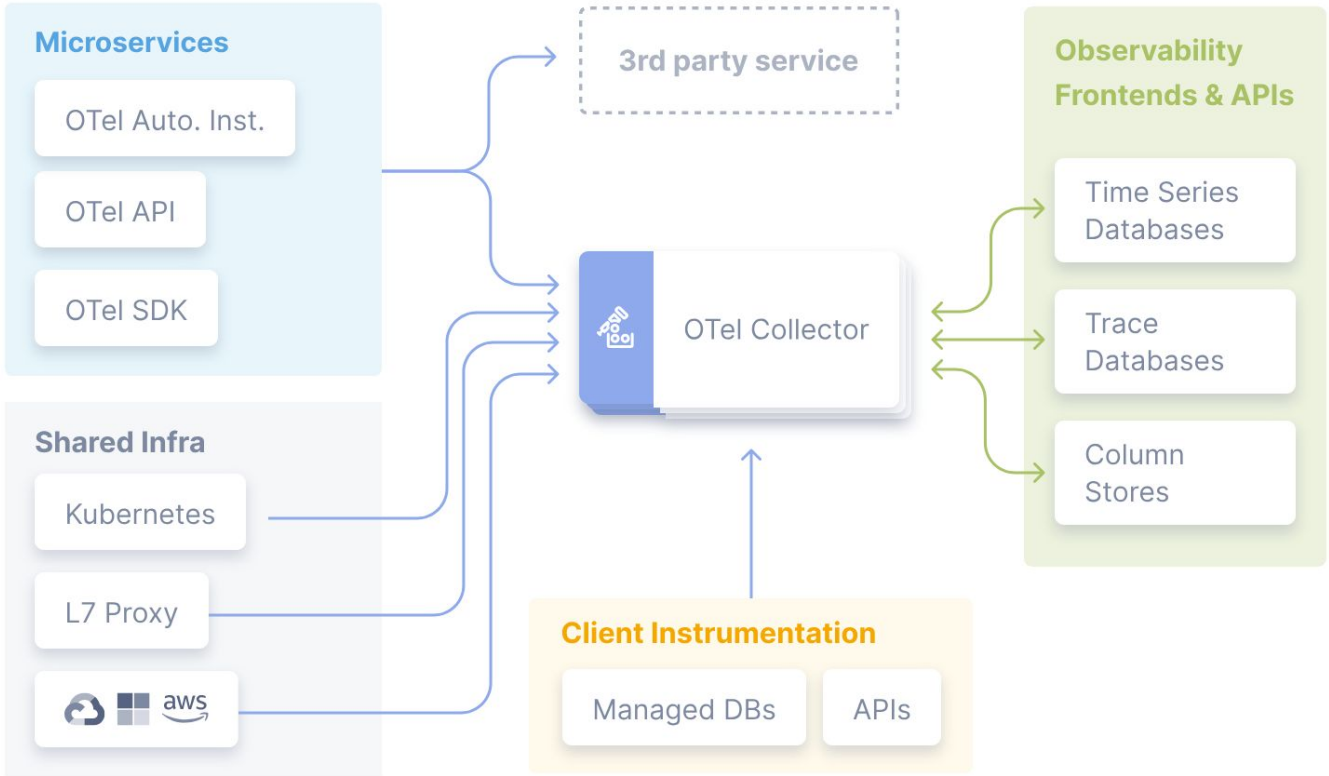

General / ASP.NET OTEL Metrics
Last 15 minutes
1m
Job
services
Instance
proxy-service:80
Process
CPU Usage
Memory Usage
Threads
28
Runtime
General Memory Usage
Heap Generations (bytes)
Heap Fragmentation (bytes)
GC Collections
Exceptions
ThreadPool Threads
6
ThreadPool Threads Que...
0

Traces

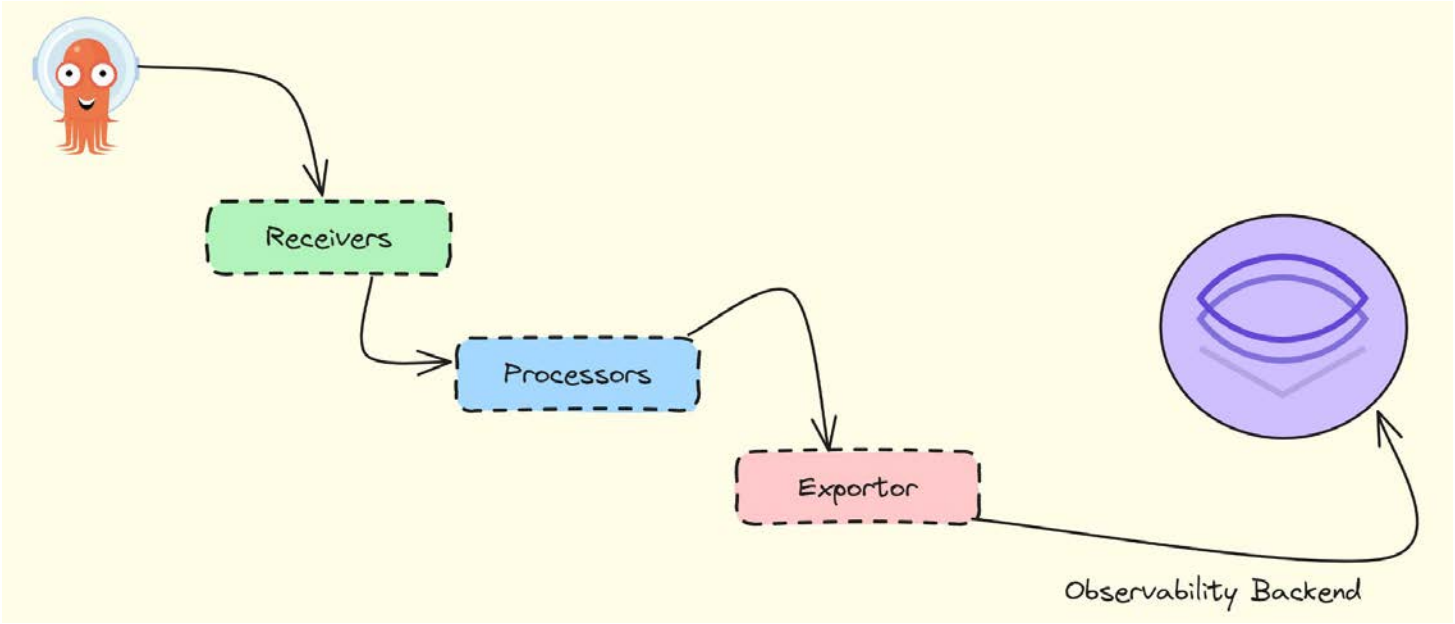

Request from start to finish
320 ms
A
A'
50 ms
B
250 ms
B'
20 ms
10 ms
R
R'
10 ms
20 ms
C
210 ms
C'
10 ms
D
D'
200 ms

What is Open Telemetry?

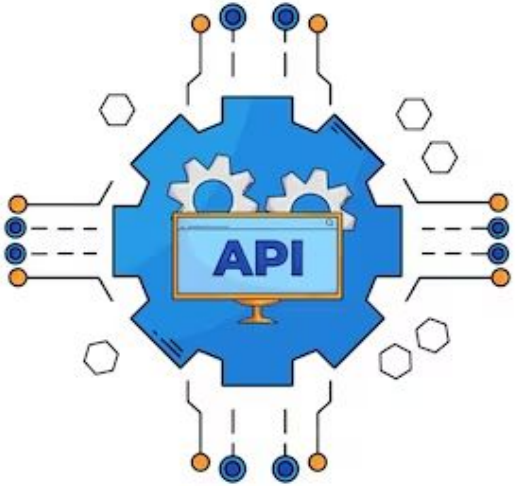



Microservices
OTel Auto. Inst.
OTel API
OTel SDK
Shared Infra
Kubernetes
L7 Proxy
aws
3rd party service
OTel Collector
Client Instrumentation
Managed DBs
APIs
Observability Frontends & APIs
Time Series Databases
Trace Databases
Column Stores

How does it work?

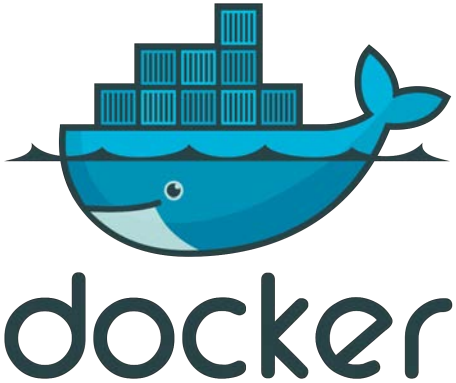


How to get started?



ADMINISTRATOR

2 ways to install

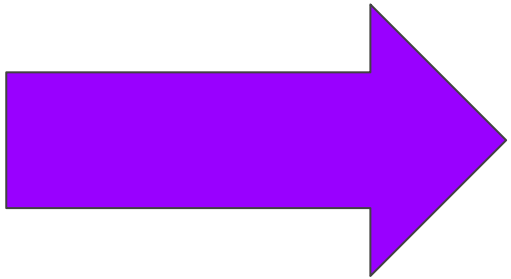


```yaml
receivers:
  otlp:
    protocols:
      grpc:
        endpoint: 0.0.0.0:4317
      http:
        endpoint: 0.0.0.0:4318
processors:
  batch:

exporters:
  otlp:
    endpoint: otelcol:4317

extensions:
  health_check:
  pprof:
  zpages:

service:
  extensions: [health_check, pprof, zpages]
  pipelines:
    traces:
      receivers: [otlp]
      processors: [batch]
      exporters: [otlp]
    metrics:
      receivers: [otlp]
      processors: [batch]
      exporters: [otlp]
    logs:
      receivers: [otlp]
      processors: [batch]
      exporters: [otlp]
```

Thanks for attending

Try SigLens as the O11Y Backend