
AWS
re:Invent

EMB046

Introducing Amazon Managed Service for Prometheus (AMP)

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Agenda

Observability and open source

What is Prometheus?

Amazon Managed Service for Prometheus (AMP)

Exporters and OpenTelemetry

Demo

Recap



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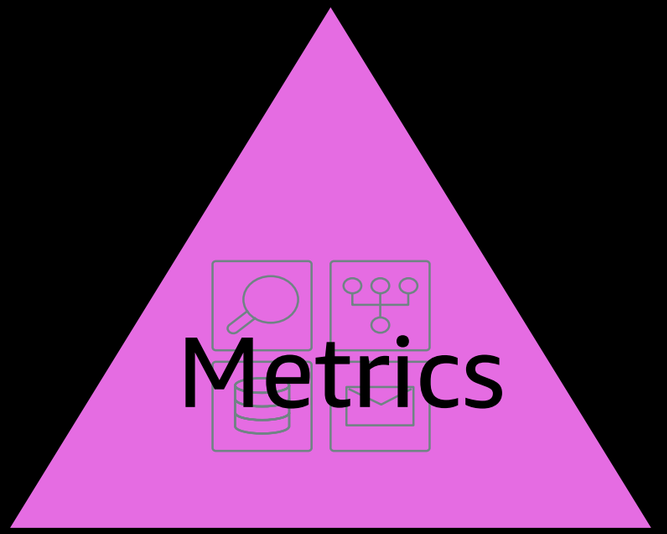
Working with the open source community

CLOUD NATIVE COMPUTING FOUNDATION

kubernetes

Prometheus

cortex



What is Prometheus?

Prometheus

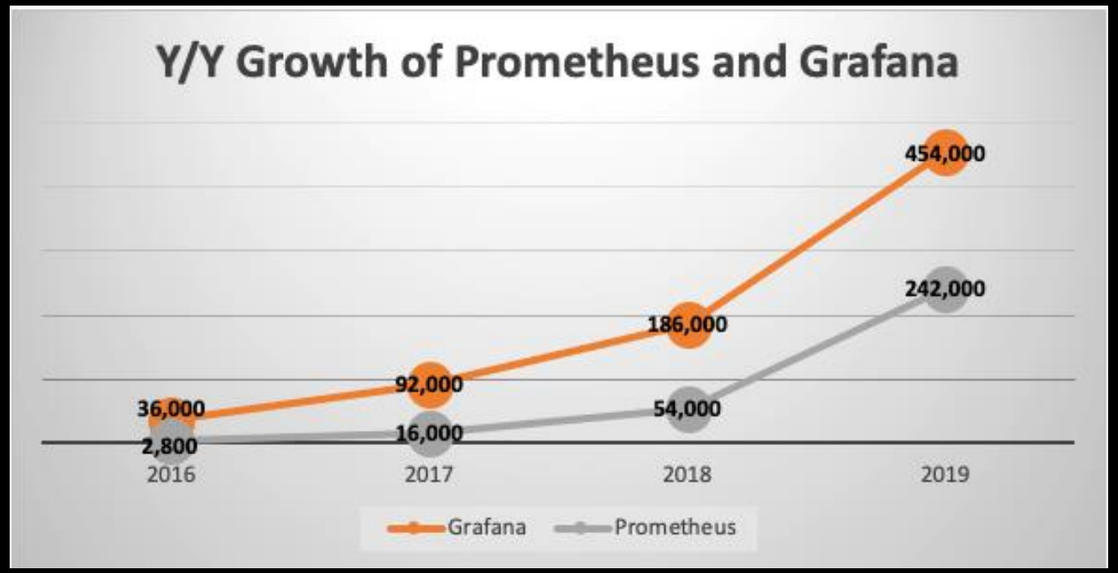
150+ exporters maintained by the open source community

Java/JMX, NGINX, Redis, Memcached

6.3K	13.5K	7.2K	113K	723
contributors	code commits	pull requests	contributions	contributing companies

cortex

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 # OF SERVERS INSTALLED

Prometheus

SELF-MANAGED



Securing, operating, integrating, and maintaining a highly available Prometheus server is time-consuming, adding cost and operational complexity

Containers are short-lived, share resources, are continuously deployed, and have many metrics labels that make them hard to monitor



CHALLENGES

Announcing

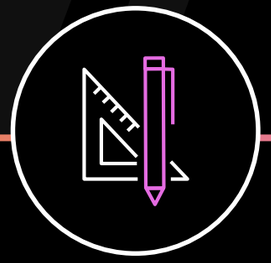
Amazon Managed Service for Prometheus

FOR DEVOPS

HIGHLY AVAILABLE, SECURE, AND MANAGED MONITORING FOR YOUR CONTAINERS

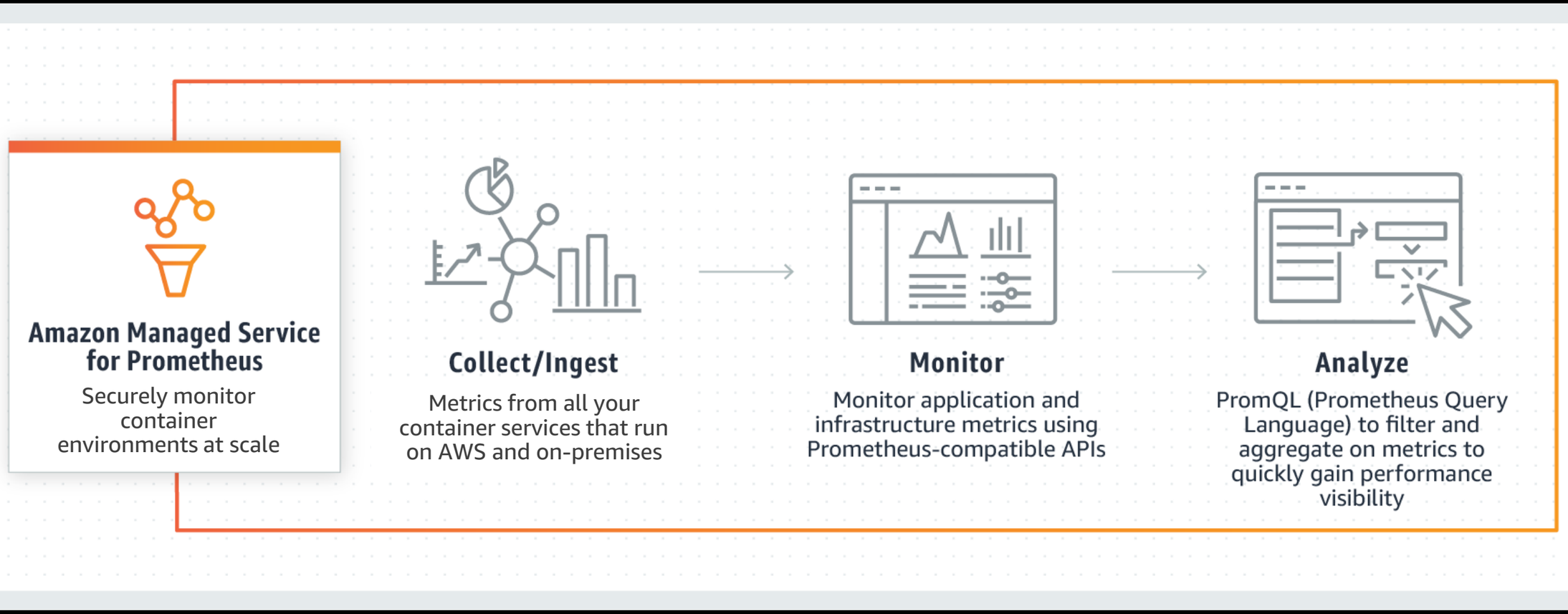
Fine grained access control, private and secure ingest and query, access auditing, fully managed and highly available (multi availability zones)

A serverless Prometheus-compatible monitoring service for metrics to securely monitor container environments at scale



SOLUTION

How it works



AMP exposes Prometheus-compatible API endpoints to ingest and query Prometheus metrics. Your existing Prometheus server and visualization tools such as Grafana can securely connect to AMP.

Access and access control

Access control

- IAM Proxy using Signature Version 4 signing process
- Amazon EKS: IAM roles for service accounts (IRSA)

AMP IAM actions

Data plane

- aps:RemoteWrite
- aps:QueryMetrics
- aps:GetLabels
- aps:GetSeries
- aps:GetMetricMetadata

Control plane

- aps:CreateWorkspace
- aps:UpdateWorkspaceAlias
- aps:DeleteWorkspace
- aps:DescribeWorspaces
- aps:ListWorkspaces

HTTP APIs

Action	HTTP verb	URI
RemoteWrite	POST	/workspaces/{workspaceId}/api/v1/remote_write
QueryMetrics	GET, POST	/workspaces/{workspaceId}/api/v1/query /workspaces/{workspaceId}/api/v1/query_range
GetLabels	GET, POST	/workspaces/{workspaceId}/api/v1/labels /workspaces/{workspaceId}/api/v1/label/{name}/values (only supports GET)
GetSeries	GET, POST	/workspaces/{workspaceId}/api/v1/series
GetMetricMetadata	GET	/workspaces/{workspaceId}/api/v1/metadata

Exporters and custom instrumentation

- 19 Programming Languages
- Web and RPC Frameworks
- HTTP Servers and Proxies
- Databases
- Caches
- Messaging Systems
- Container Platforms and Cloud Native

INTRODUCING

AVAILABLE NOW

AWS Distro for OpenTelemetry

A SECURE, PRODUCTION-READY, OPEN-SOURCE DISTRIBUTION SUPPORTED BY AWS



Vendor-agnostic metric, trace, and log instrumentation for applications and infrastructure

Backed by AWS security, performance, and support

Support for AWS and partner observability services

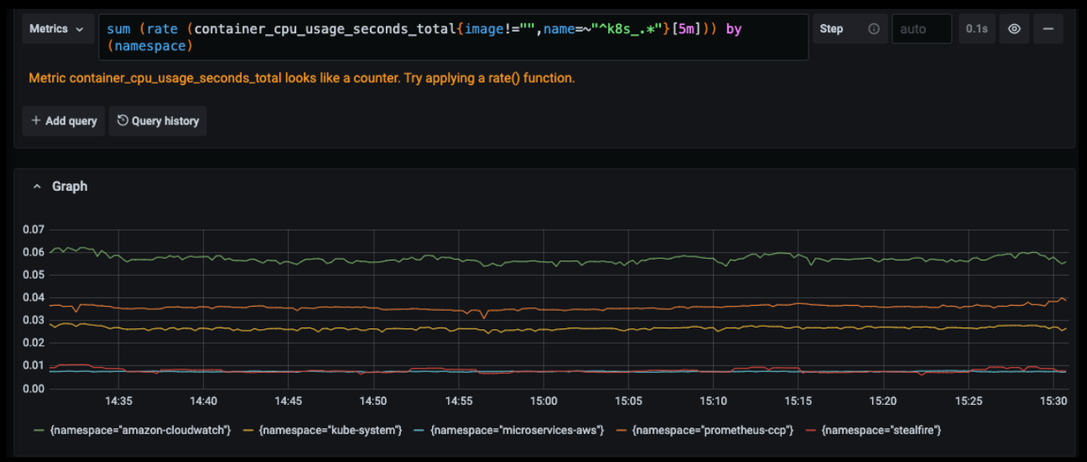
LEARN MORE | Session OPN301 – Open-source observability at AWS

AMP: Getting started

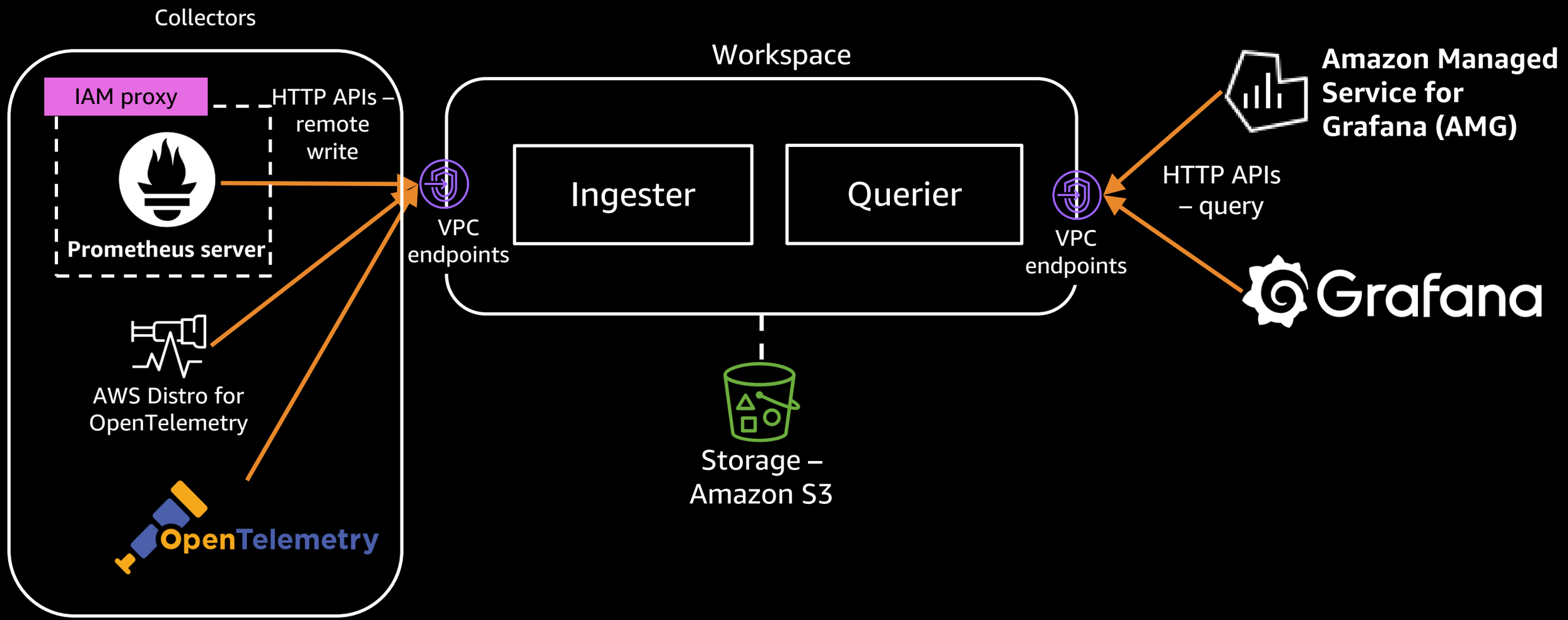
1. Create Prometheus workspace
2. Ingest Prometheus metrics
3. Monitor / analyze: Query HTTP APIs, visualize Prometheus metrics in Grafana

Result: Enterprise-ready Prometheus-compatible service





Amazon Managed Service for Prometheus (AMP)



Demo



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Recap

01

Modern apps need modern ops

To maintain and improve the performance, availability, and governance of applications

02

Amazon Managed Service for Prometheus (Preview)

Easily run Prometheus at scale with seamless security, and monitor containers on AWS and on-premises

03

AWS Distro for OpenTelemetry

Instrument once for multiple monitoring destinations, extend visibility, and triage faster

04

Amazon Managed Service for Grafana (Preview)

Visualize, analyze, monitor, and alarm on metrics, logs, and traces across multiple data sources in a scalable, secure way

Working with the open source community



Thank you!



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