

COMBINING CLOUDWATCH ACROSS ACCOUNTS AND REGIONS

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WHAT IS CLOUDWATCH?

A family of sub-services, not one thing:

- **Metrics, Logs, Alarms, Dashboards**
- EventBridge, Synthetics, RUM, Contributor Insights,
...

Cross-account support differs **per sub-service**.

This talk: Metrics only (and not `GetMetricData`).

TWO BOUNDARIES

- **Account** — billing, security, blast radius. Invisible to others by default.
- **Region** — physical isolation. CloudWatch is **regional**: a metric in `us-east-1` doesn't exist in `eu-central-1`.

$N \text{ accounts} \times M \text{ regions} = \text{fragmented visibility}$

THE DEMO SETUP

3 real AWS accounts, 2 regions, 1 EC2 instance each:

Account	Region	Role	Instance
account_a	us-east-1	monitoring account	i-01c26eedadfd81489
account_b	us-east-1	source, same region	i-0d8eb892991961cac
account_c	us-west-2	source, different region	i-0471d5a973730b195

account_c sits in another region on purpose.

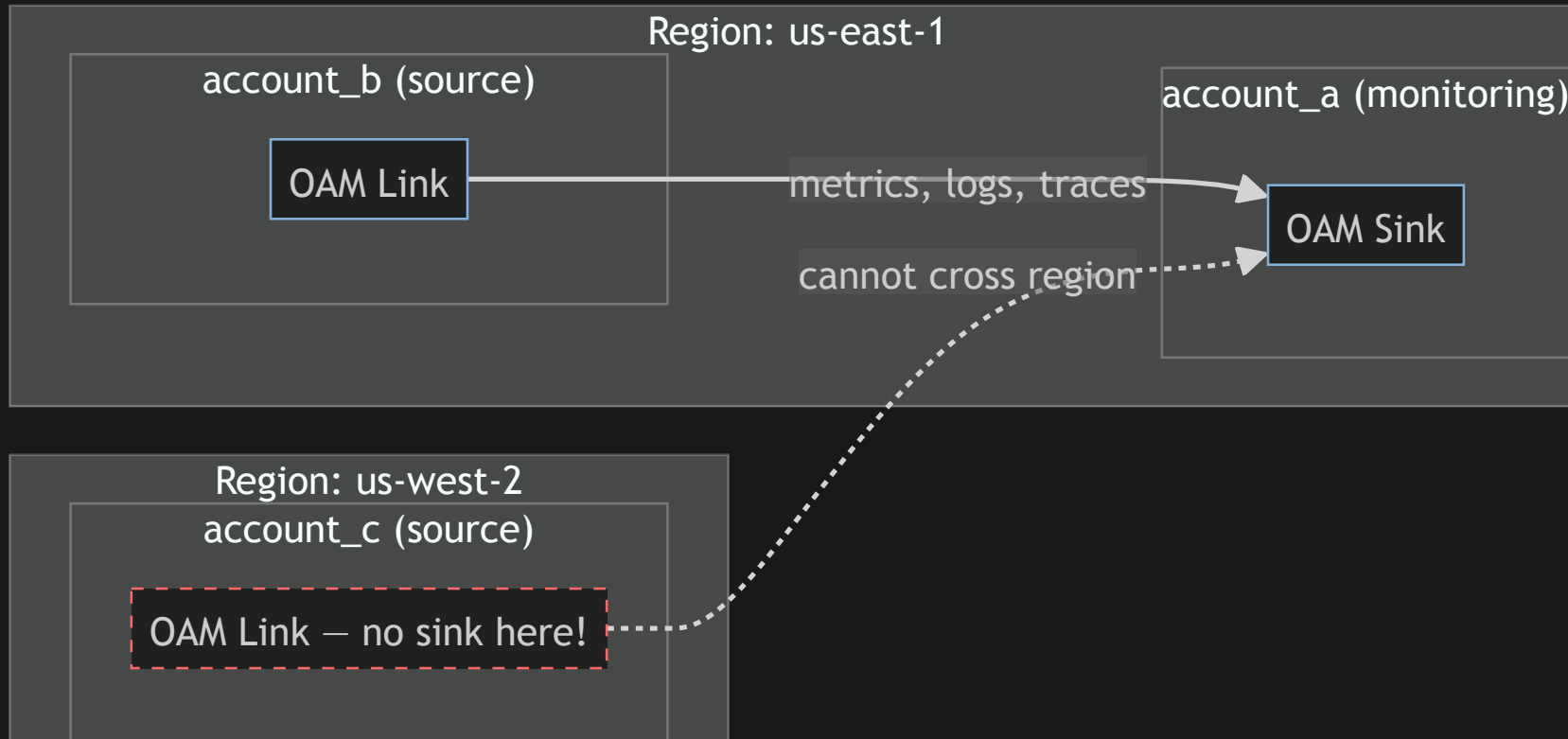
APPROACH 1: OAM

Observability Access Manager — AWS's recommended default

- Sink — monitoring account, one per region
- Link — each source account, one per region
- Metrics, logs, traces — the richest picture

Catch: sinks/links can't cross regions.

APPROACH 1: OAM, DIAGRAMMED



APPROACH 1, LIVE

Dashboard "1: OAM Cross-Account View" [open in Grafana](#) ↗

- account_b shows up on account_a's dashboard via the link
- account_c is **missing** — different region

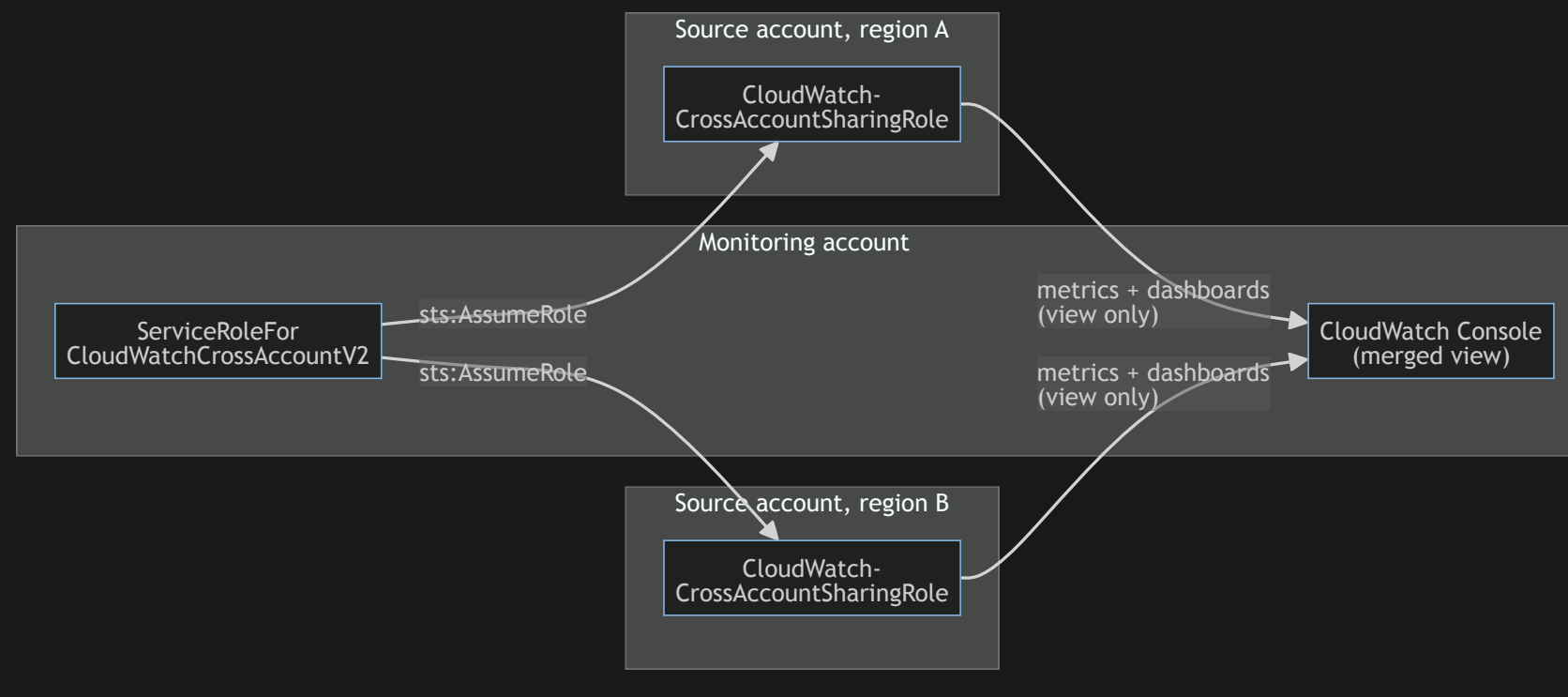
APPROACH 2: CROSS-ACCOUNT, CROSS-REGION CONSOLE

Older IAM-role mechanism (CloudWatch–
CrossAccountSharingRole)

-  Metrics + dashboards, automatic cross-region
-  No logs, view-only alarms

Cross-region for free — but confusing to set up.

APPROACH 2: CONSOLE, DIAGRAMMED



APPROACH 2, LIVE — OR RATHER, NOT

No Grafana dashboard on purpose:

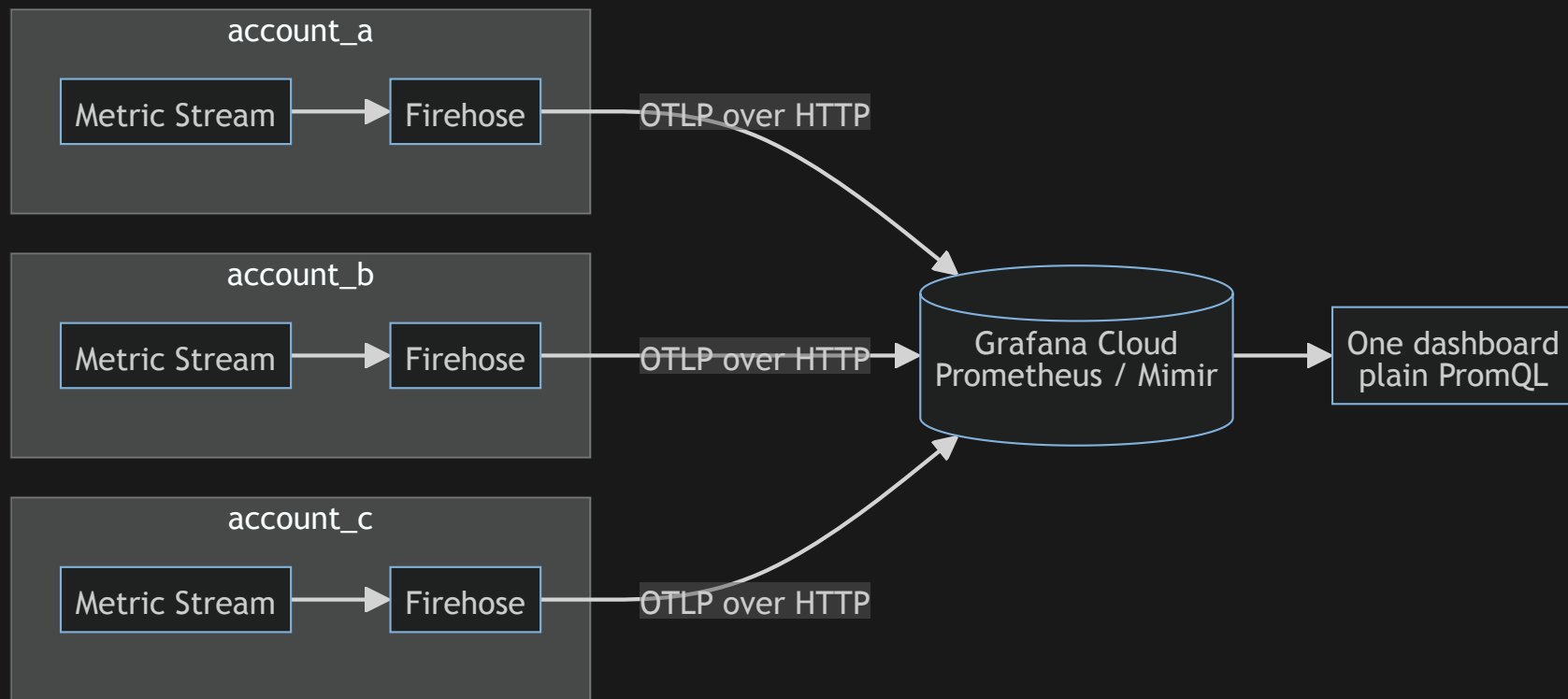
- The merged view only renders **inside the AWS Console**
- No API for it — nothing a third-party tool can call
- In the console: all 3 accounts, both regions 

APPROACH 3: EXPORT / STREAM IT OUT

Metric Streams → Kinesis Firehose → S3 or a third-party sink

- **True consolidation** of AWS service metrics (AWS/EC2, ...) into one store
- Long retention, external tools (Grafana, Datadog, ...)
- One stream per account/region, shared destination

APPROACH 3: EXPORT, DIAGRAMMED



APPROACH 3, LIVE

Dashboard "3: Metric Streams (OTLP)" [open in Grafana](#) ↗

- All 3 accounts, both regions, one PromQL query
- No CloudWatch data source at all

APPROACH 4: CENTRALIZATION

Newest built-in option (June 2026) — **copies** metrics into one account + region

-  Custom metrics: PutMetricData, EMF, OTLP
-  AWS service metrics (AWS/EC2, RDS, ...) — not supported
-  Cross-account **and** cross-region; alarms, PromQL, dashboards on the copy
-  Needs AWS Organizations · all metrics or nothing · no history

First copy free.

WHICH ONE, WHEN?

Need	Pick
Metrics + logs + traces	OAM
Cross-region view in the AWS Console	Console feature
One store in a tool you already run	Metric Streams
Custom metrics in one account, org-wide	Centralization

They compose — mix and match.

THEY COMPOSE — AWS DOES IT TOO

Database Insights (RDS / Aurora) cross-account, cross-region needs both:

- **OAM** — the telemetry, set up in every region
- **Console feature** — the cross-region reach, set up once (global)

Fleet view: up to 3 regions at a time, read-only.

WHAT IT COSTS

Approach	Cost	Why
1: OAM	\$0	query-time read
2: Console	\$0	query-time read
3: Metric Streams	~\$21/month	write-time: every update re-emitted

Demo: 582 metrics, 235,616 updates/day at \$0.003 / 1,000. Filtering to AWS/EC2 would cut it 5-10x.

CONCLUSION

- **Start with OAM** — easy: 3 resources, free, metrics + logs + traces
- **Console feature** — cross-region, but confusing and hard to set up
- **Stream out** if you already run the infra for it (Grafana, Datadog, ...)
- **Centralization** for custom metrics, org-wide — not AWS service metrics
- **Region** is the real boundary, not the account

TAKE IT HOME



Terraform for all 3 approaches, docs, and this deck. Questions?