
AWS
re:Invent
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PRT235

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Powering cloud modernization with log observability in context & at scale

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AWS Well-Architected and observability

Data collection and analysis

Digital experience

Infrastructure, services & application consumption

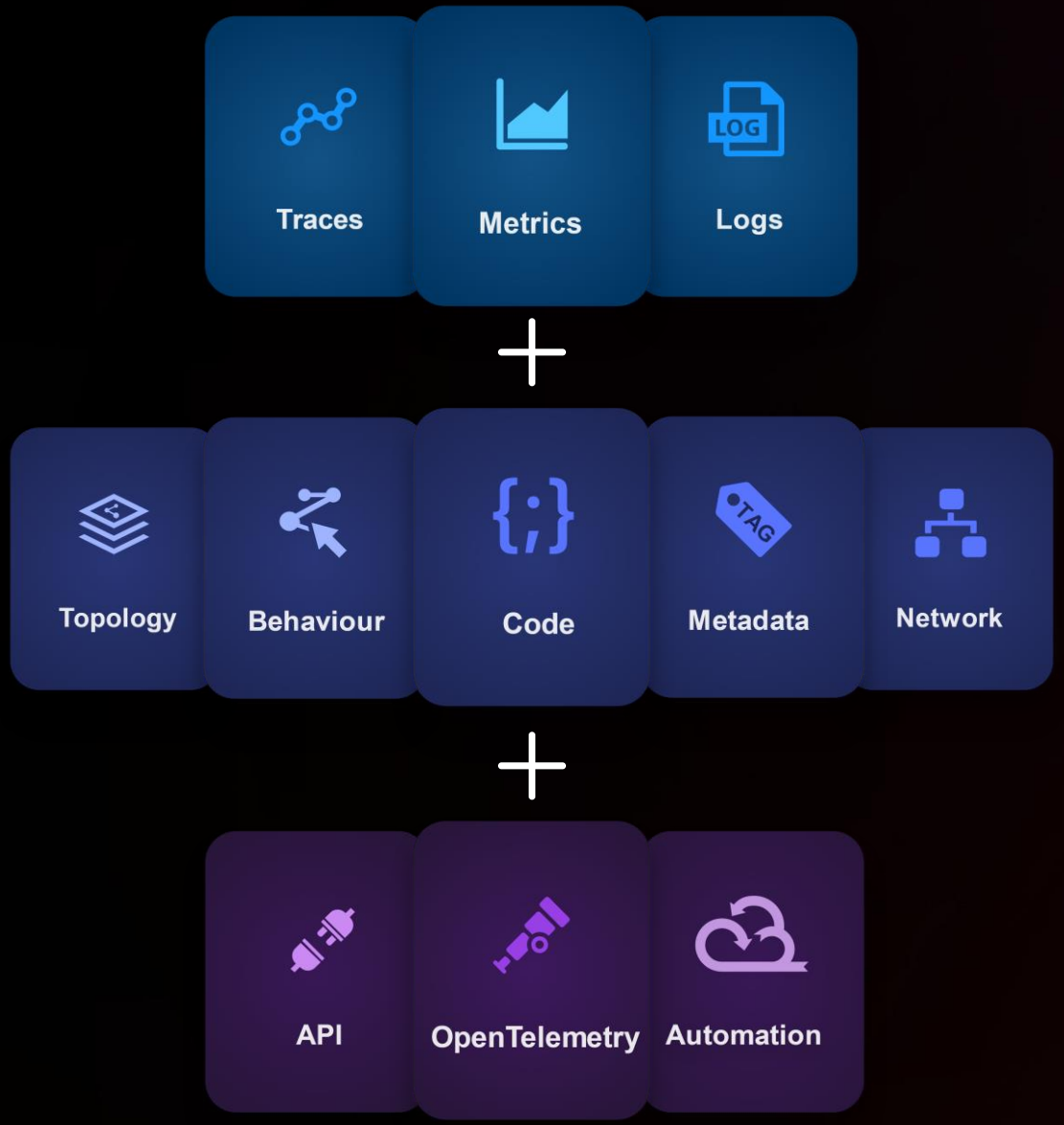


Managed risks across transaction flows

Service-level management (SLOs)

Minimize required resources

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Observability is much more than traces, metrics, and logs

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Observability is growing fast

The importance of observability is increasing, use cases are more diverse, and “observe everything” is the mindset



Infrastructure monitoring

- Hybrid cloud observability
- Fault domain isolation
- Serverless, container, pod & network

Applications & microservices

- Hybrid cloud distributed tracing
- Automatic code-level root cause and profiling
- Frontend & backend availability and performance

Digital experience

- Mobile, web browser, and API
- Feature adoption analysis
- Visual session replay

Application security

- Run-time vulnerability detection
- Impact analysis
- DevSecOps automation

Cloud automation

- Closed-loop remediation
- Quality gate, service level, and delivery
- DevOps, SRE lifecycle

Digital business

- Real-time business insights
- Impact and conversion
- BizDevOps integration and automation

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There’s a problem

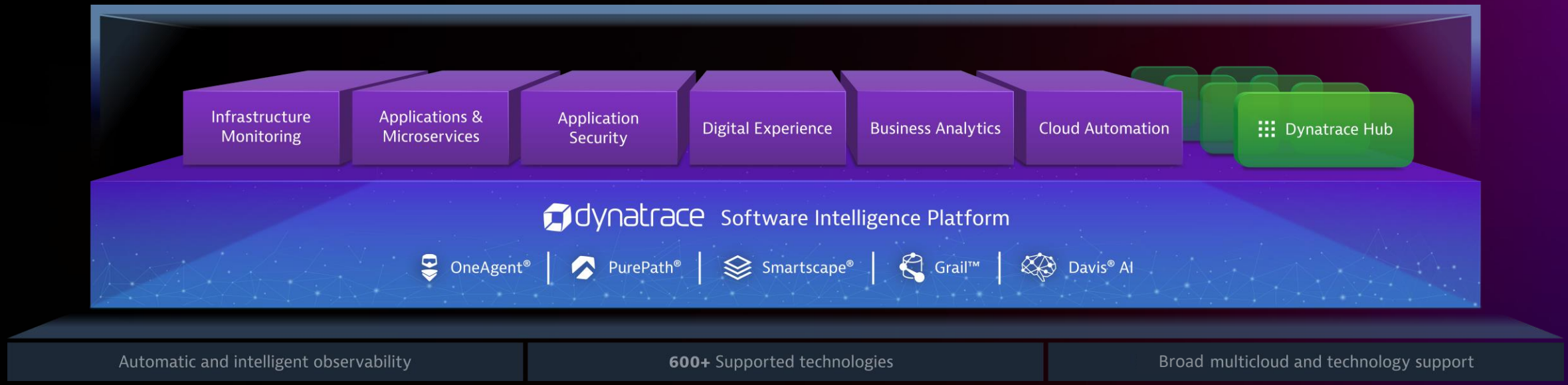
The volume, variety, and velocity of data will exceed the scalability of the observability solutions

Finding answers and root cause will be impossible with human-powered correlation – automated answers and causation are required



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The Dynatrace software intelligence platform



Simplify cloud complexity and innovate faster and more efficiently with observability, AIOps, and application security in one platform

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Strong collaboration with AWS

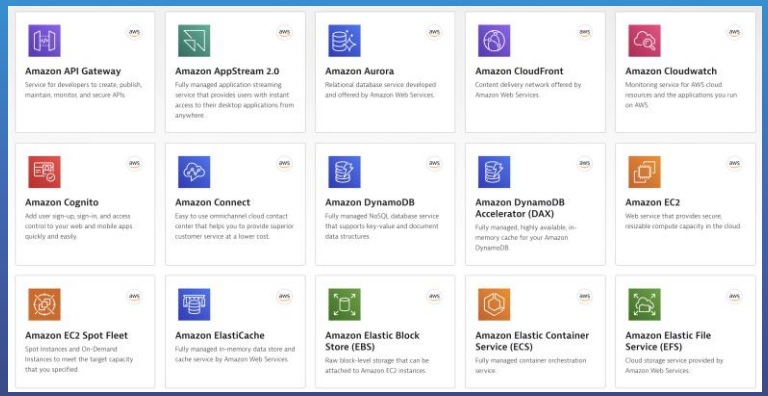
aws PARTNER

- AWS Lambda Ready
- AWS Outposts Ready
- AWS Graviton Ready
- ML Software Competency
- Govt. Software Competency
- DevOps Software Competency
- Containers Software Competency
- Migration & Modernization Software Competency

Dynatrace real-time observability into dynamic AWS environments

Amazon EC2
AWS Lambda
Amazon EKS
Amazon ECS
AWS Outposts
AWS Elastic Beanstalk
AWS Fargate

Integrated with Amazon CloudWatch (AWS and hybrid cloud)



and more…

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Who is Dynatrace

Top-tier — Intelligent and automated observability for digital transformation

#1





3,000+ customers

BT · ADP · SAP · TOYOTA · Cigna · dish · experian

25 — Major releases per year

Publicly traded

NYSE

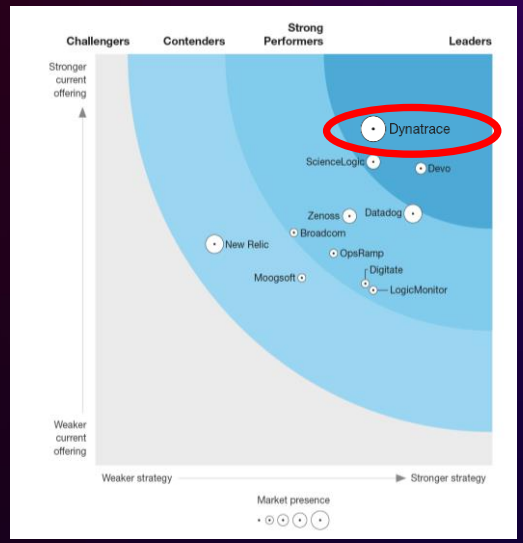




Leader, ISG Provider Lens Cloud-Native Observability



Leader, Forrester Wave Artificial Intelligence for IT Operations (AIOps)



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“All day, everyday, all I do is tag. I just tag, tag, tag. That’s my job. I’m a tagger.”

– Cloud architect at major airline

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Demo 1

Ability to use computing resources efficiently to meet system requirements, and to maintain that efficiency as demand changes and technologies evolve.



Pillars of the AWS Well-Architected Framework

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Logs and events Powered by Grail™

Explore your log data and Kubernetes events in simple mode. For deeper analysis, or to query business events, switch to advanced mode powered by DQL

Advanced mode

Filter by

Run query

Search attributes...

Attribute counts are estimated based on sampled data.

Favorites

Available attributes

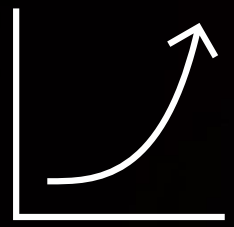
- Main
- Dynatrace
- Cloud services
- AWS
- Azure

Search results

Create processing rule | Create metric

timestamp	status	content
2022-11-11 13:29:49	INFO	2022-11-11 10:26:53 WebLaunche DEBUG [HeadlessVisitRunnable] finished closing visit 55.235.179.2 on WINDOWS (32094bc77befad9472e2e456854c6f86)
2022-11-11 13:29:49	INFO	2022-11-11 10:26:53 WebLaunche DEBUG [DriverEntryFactory] validateObject: com.dynatrace.diagnost iverEntry@2500cfc0 useCnt: [3] drv: [ChromeDriver: chrome on WINDOWS (32094bc77befad9472e2e45685 t:60463] proxy: [org.littleshoot.proxy.impl.DefaultHttpProxyServer@45248242 /127.0.0.1:50030] ch
2022-11-11 13:29:49	INFO	2022-11-11 10:26:53 WebLaunche DEBUG [DriverEntryPool] pool.returnObject: useCnt: [3] drv: [Chro DOWS (32094bc77befad9472e2e456854c6f86) http://localhost:60463] proxy: [org.littleshoot.proxy.im er@45248242 /127.0.0.1:50030] chrome_driver: [http://localhost:60463] debug port: [50034] ip: [5
2022-11-11 13:29:49	INFO	2022-11-11 10:26:53 WebLaunche DEBUG [Simulator] Headless Customer Scenario: visitcount: 137483
2022-11-11 13:29:49	NONE	{"timestamp":"1668191273.683246613","source":"routing-api","message":"routing-api.api-mtls-serve _level":1,"data":{"method":"GET","request":"/routing/v1/routes","request-headers":{"Accept-Encod Type":["application/json"],"User-Agent":["Go-http-client/1.1"]},"session":"10.4912001"}}

Barriers to the goldmine of answers in logs



Data explosion

Hybrid cloud environment, serverless architecture, etc. result in vast data increase

How can I address the data ingest barrier?



Increasing costs

More data means higher costs – **can I afford data retention?**

Why do I have to decide which data will be relevant for my business?



Cost/value pain

I need better analytics – which insights do I get for (paid) data?

Rehydration is inefficient and slow – how to manage data?

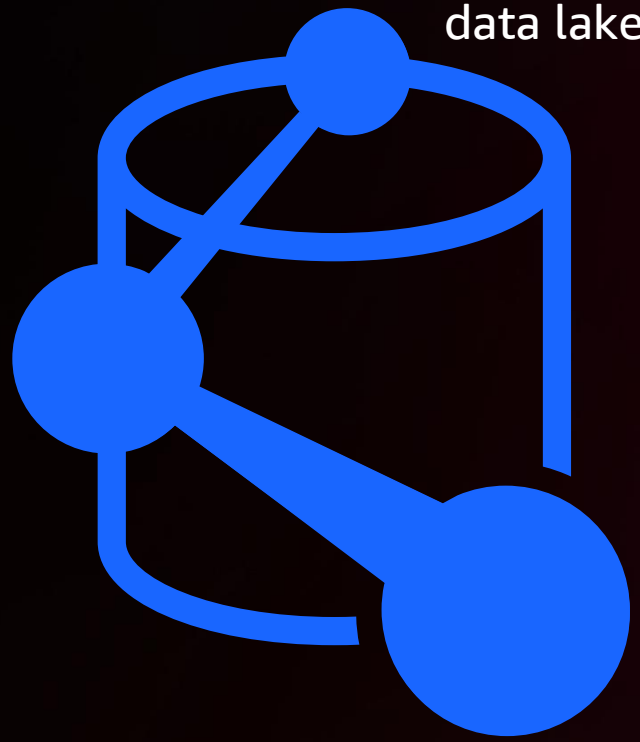
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Overcome cloud complexity and data growth

All without schemas, indexes, or storage tiers to manage

Massively parallel processing (MPP) data lakehouse



Grail

Purpose-built to ingest, store, and run lightning-fast analytics on observability, security, and business data

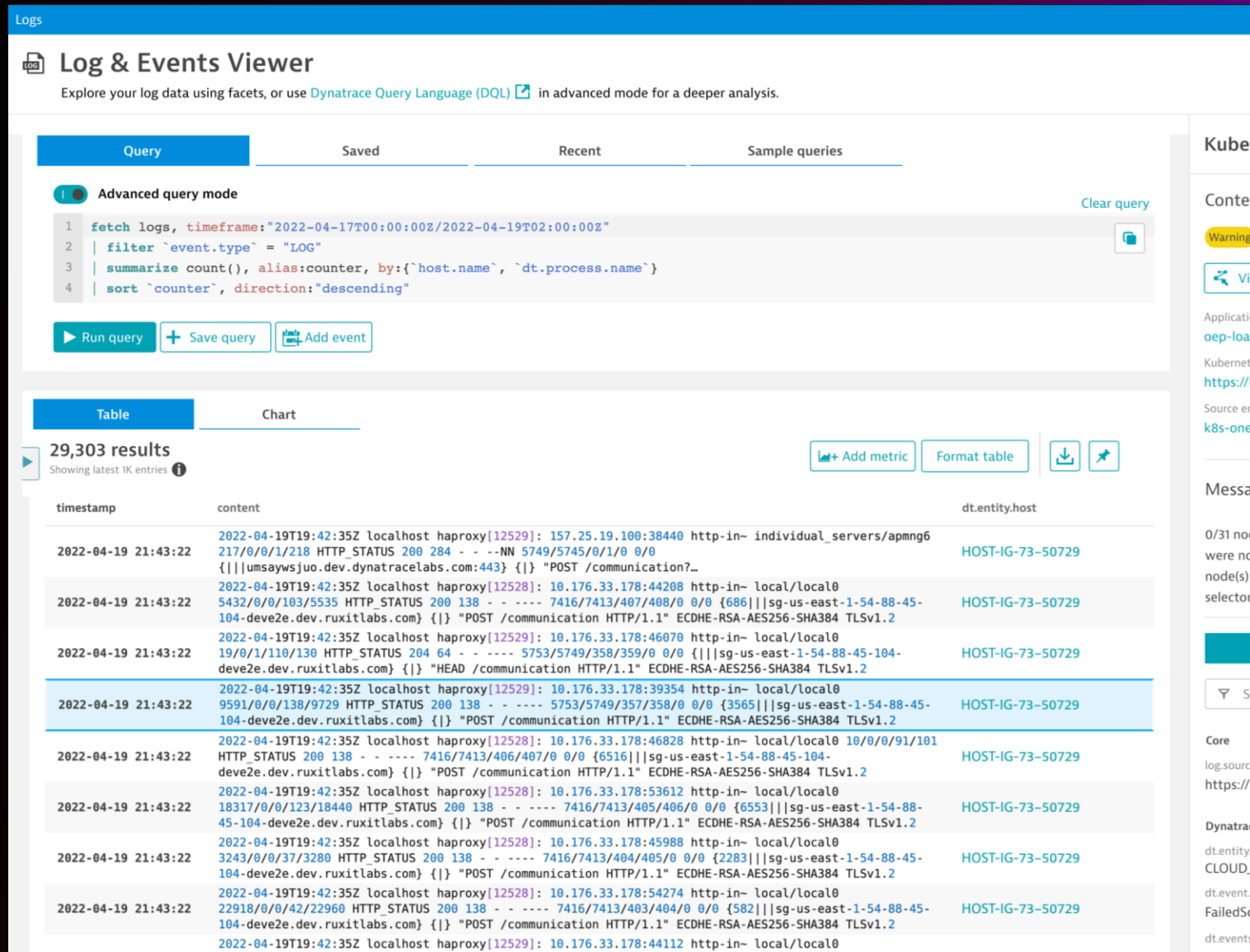
With high performance and at scale

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Log management and analytics use cases

- Log to metrics
- Troubleshooting
- Application optimization
- Audit and forensics



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The power of Grail

100TB/day per tenant
ingest processing performance
toward Q1 CY23

Instant
No rehydration
No index generation
No schema admin

Up to **100x faster***
Blazing performance & massive scale
~1 TB in ~1 sec at 1,000 cores

Easy ingest into processing
pipeline via
OneAgent & API

Retention
Up to 3 years

MPP
Massive parallel
processing

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*For many advanced queries on large data volumes

Supported AWS log sources

Service name	CloudWatch log forwarding	Log enrichment	Entity linking
AWS Lambda	✓	✓	✓
AWS App Runner	✓	✓	✓
AWS CloudTrail [1]	✓	✓	-
Amazon API Gateway	✓	✓	-
Amazon SNS	✓	✓	✓
Amazon RDS	✓	✓	✓
All services that write to CloudWatch	✓	✓	-

Dynatrace documentation

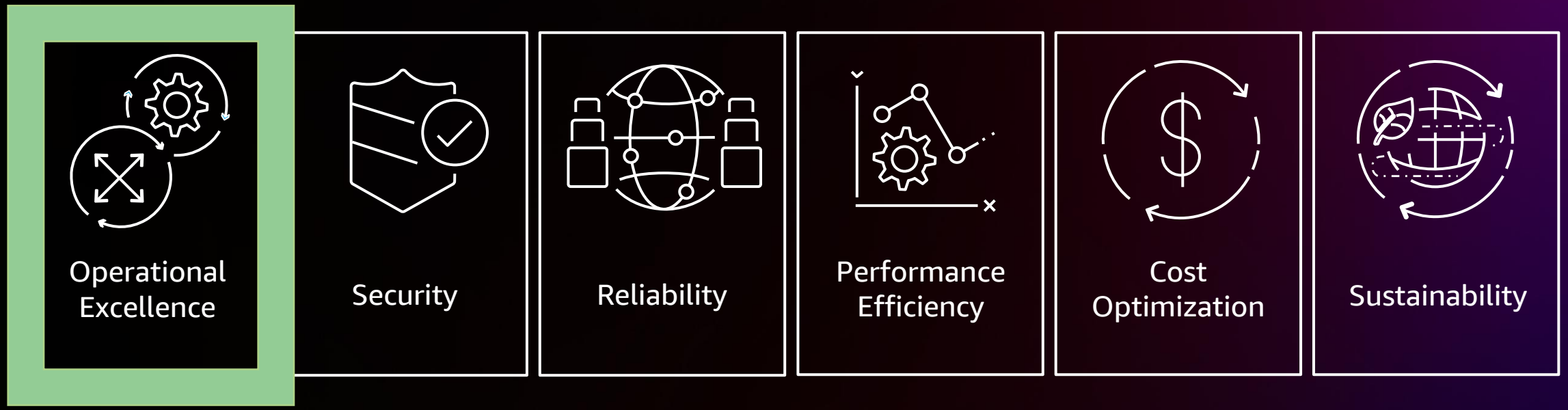


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Demo 2

Ability of a workload to perform its intended function correctly and consistently when it's expected to



Pillars of the AWS Well-Architected Framework

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2 applications: Multiple application problems

Problem P-22111817 detected at 10:00 (open for 20 minutes).

Share feedback | Close problem

Affected applications
4

Affected services
1

Affected infrastructure
–

Affected SLOs
4

DAVIS ®
analyzed dependencies
across 21,335 monitored entities

Business impact analysis

Davis observed the following number of service calls and affected real users during the first 30 minutes of the problem timeframe.

192 / 273
affected users

263k
affected service calls

Show more

4 impacted entities

27.4+ User actions per minute impacted

angular easytravel booking
Synthetic monitor

Browser monitor local outage - 2 out of 3 locations affected.

Root cause

Based on time correlation and analysis of all transactions that use these components, this issue has the following root cause

EasytravelService
Web service

Failure rate increase event
Service EasytravelService has failure rate increase

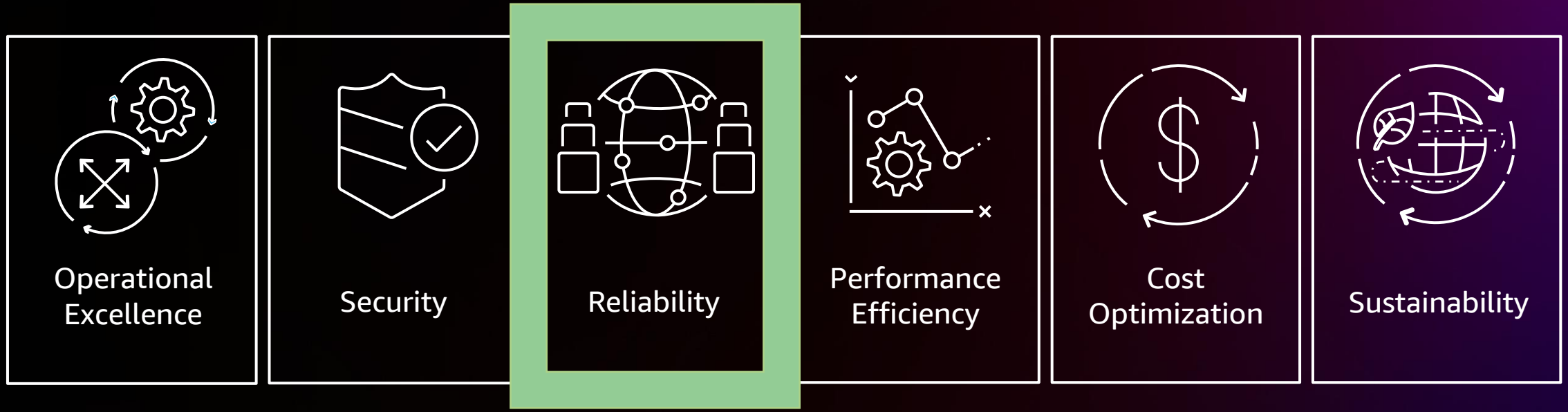
Events on:
Service EasytravelService

Understand which requests fail and the underlying root causes and errors.

Analyze failure rate degradation

Demo 3

Ability to support development and run workloads effectively, gain insight into their operations, and to continuously improve supporting processes and procedures to deliver business value



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Explore your log data and Kubernetes events in simple mode. For deeper analysis, or to query business events, switch to advanced mode powered by DQL

Advanced mode

Filter by loglevel: ERROR | k8s.deployment.name: frontend-* | k8s.namespace.name: prod | Clear all

Run query

Search attributes...

Attribute counts are estimated based on sampled data.

Favorites

Available attributes

Main

loglevel

- INFO 8.87k
- ERROR 108
- NONE 1

log.source

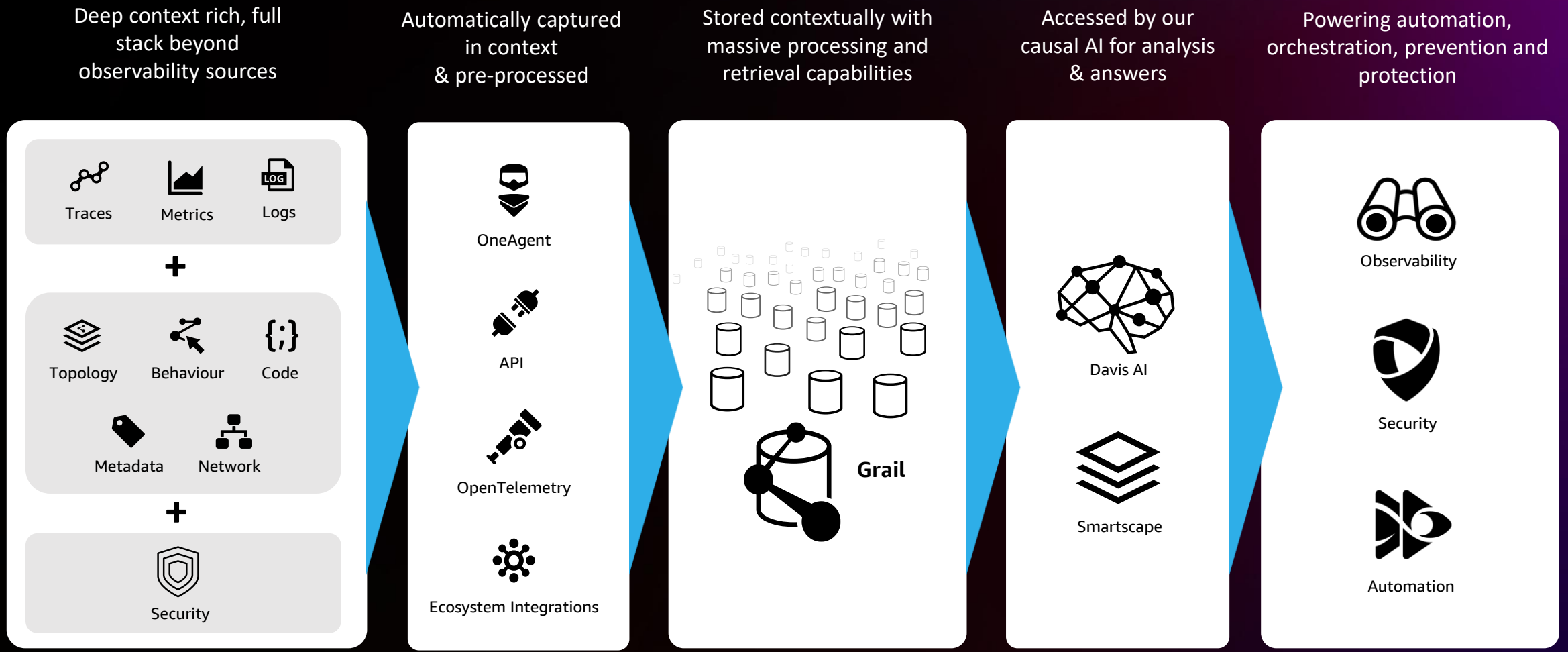
event.type

Search results

Create processing rule | Create metric | Format table | Actions

timestamp	status	content
2022-11-14 16:51:35	ERROR	2022-11-14T21:51:35.301Z error failed to complete the order: rpc error: code = Internal desc = failed to charge card: could not charge the card: rpc error: code = Code(400) desc = Sorry, we cannot process mir credit cards. Only VISA or MasterCar…
2022-11-14 16:50:57	ERROR	2022-11-14T21:50:57.946Z error failed to complete the order: rpc error: code = Internal desc = failed to charge card: could not charge the card: rpc error: code = Code(400) desc = Sorry, we cannot process mir credit cards. Only VISA or MasterCar…
2022-11-14 16:49:52	ERROR	2022-11-14T21:49:52.652Z error failed to complete the order: rpc error: code = Internal desc = failed to charge card: could not charge the card: rpc error: code = Code(400) desc = Sorry, we cannot process mir credit cards. Only VISA or MasterCar…
2022-11-14 16:49:06	ERROR	2022-11-14T21:49:06.644Z error failed to complete the order: rpc error: code = Internal desc = failed to charge card: could not charge the card: rpc error: code = Code(400) desc = Sorry, we cannot process mir credit cards. Only VISA or MasterCar…
2022-11-14 16:45:21	ERROR	2022-11-14T21:45:21.964Z error failed to complete the order: rpc error: code = Internal desc = failed to charge card: could not charge the card: rpc error: code = Code(400) desc = Sorry, we cannot process mir credit cards. Only VISA or MasterCar…

Answers and intelligent automation from data



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Powering modernization through observability





dynatrace

- Innovate faster with higher quality
- Operate efficiently and securely
- Deliver experiences customers love

aws

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Additional resources

Grail resource page
Learn more about how Dynatrace is powering modernization

Try Dynatrace
Sign up for a free trial on AWS Marketplace

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Visit booth #3223 at Expo

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Thank you!

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