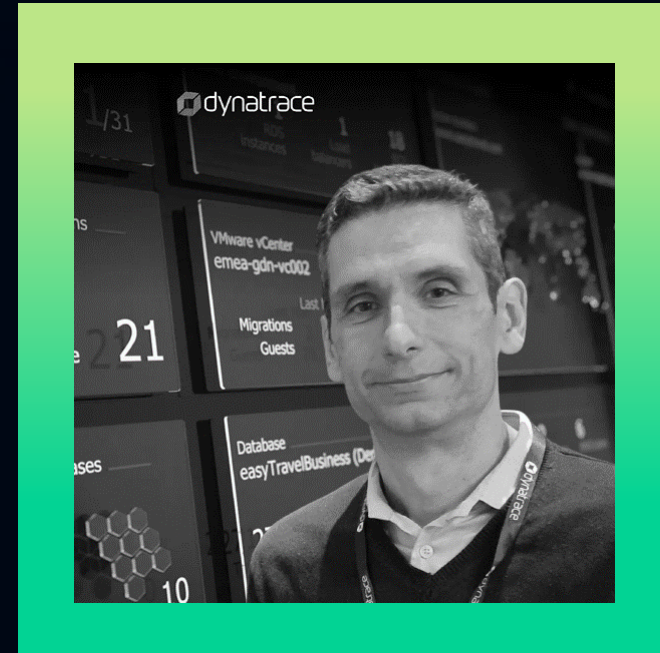


# EL PODER DEL DATO: AGILIDAD SIN SILOS



Pablo  
Vellido

SOLUTIONS ENGINEER  
DYNATRACE

# 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 is required.



# WE'VE REACHED THE LIMITATIONS OF THE DATA PLATFORMS USED BY TODAY'S TOOLS

- The costs are outweighing the value, especially in the area of log monitoring

events topology  
files relational dependencies  
graph metadata timeseries

**Doesn't scale**  
**Too cumbersome**

**Too expensive**

**Too slow**

**Too rigid**



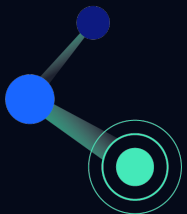
# GRAIL – OUR CAUSATIONAL DATA LAKEHOUSE



Siloed and incompatible data



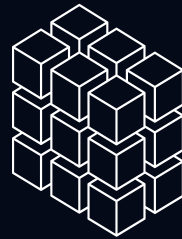
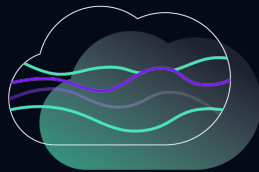
Causal AI, context



Data lake



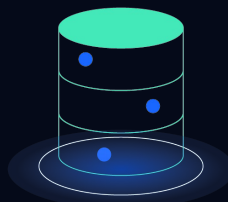
petabytes cost effective



Data warehouse



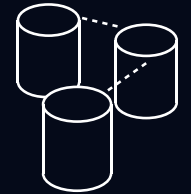
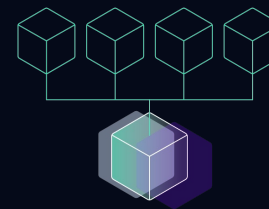
Instant schema-on read



Indexes cost time, money and their lack can inhibit queries



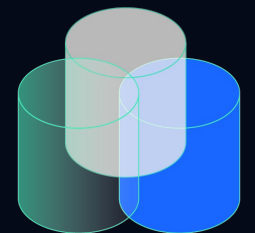
Query at scale with massively parallel processing (MPP)



Generic storage



Observability and security analytics



# DEMO

Case 1: Logs Management

# LOGS MANAGEMENT

- Other solutions:
  - Identify Logs → Identify Fields → Indexing → Hot/Cold Storage → Query
- Dynatrace:
  - Logs automatically ingested to Grail → Pre-processing or ingest all → Hot Storage → DQL



# DEMO

Case 2: Business Events

# BUSINESS EVENTS

- Other solutions:
  - Identify requests → Change code to save business info to Logs or DB → Prepare DW cubes → Execute scripts → Query data
- Dynatrace:
  - Identify requests → Create capture rules → Ingested automatically to Grail → DQL



# DEMO

Case 3: Explore observability & security  
data

## EXPLORE OBSERVABILITY & SECURITY DATA

- Other solutions:
  - Select metrics → Create complex scripts → Create execution environments
- Dynatrace:
  - Integrated Notebooks and Workflows

# LIMITLESS USE CASES...

## Join Dynatrace and external data

Department	InstanceType	costs	InstanceHours	hourly_rate
team.us	m6a.xlarge	5,059.58	29,280	0.17
team.others	m6a.8xlarge	21,399.55	15,480	1.38
team.them	m6a.metal	62,208	7,500	8.29
team.somebody	m6a.24xlarge	15,054.34	3,650	4.15
team.rest	m6a.large	149.04	1,725	0.09

## Detect sensitive data in logs

timestamp	content	log_source
11/15/2023, 6:55:33 AM	["severity":"info","time":170002733751,"pid":1,"hostname":"payment-service-6b898786f5-26kxt","name":"payment-service-server","dt.trace_id":"e77a71ddc6d51585cbf9355fd610ad1","dt.span_id":"cae5fc6f84c391f","dt.trace_sampled":true,"message":"PaymentService#Charge invoked with request ({\"amount\": {\"currency_code\":\"USD\",\"units\":\"138691\",\"nanos\":346307082},\"credit_card\":{\"credit_card_number\":\"14532-8015-6152-0454\",\"credit_card_cvv\":\"592\",\"credit_card_expiration_year\":\"2039\",\"credit_card_expiration_month\":\"1\"},\"v\":\"1\"}");	/var/log/pods/online-boutique_pay
11/15/2023, 6:55:35 AM	["severity":"info","time":170002735754,"pid":1,"hostname":"payment-service-6b898786f5-26kxt","name":"payment-service-server","dt.trace_id":"e77a71ddc6d51585cbf9355fd610ad1","dt.span_id":"cae5fc6f84c391f","dt.trace_sampled":true,"message":"PaymentService#Charge invoked with request ({\"amount\": {\"currency_code\":\"USD\",\"units\":\"138691\",\"nanos\":346307082},\"credit_card\":{\"credit_card_number\":\"14532-8015-6152-0454\",\"credit_card_cvv\":\"592\",\"credit_card_expiration_year\":\"2039\",\"credit_card_expiration_month\":\"1\"},\"v\":\"1\"}");	/var/log/pods/online-boutique_pay

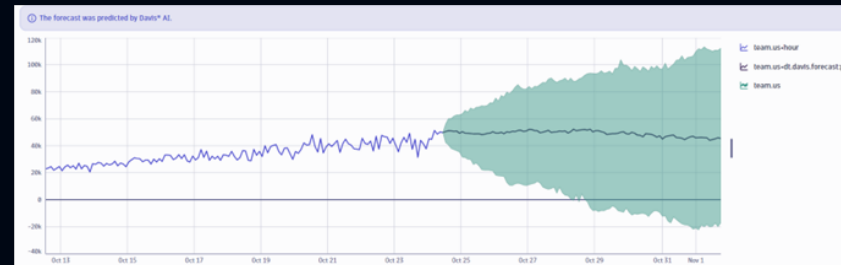
## Compare metrics in different time ranges

host	CPU last week	CPU this week	Difference
i-0ac7daa0950d5910e	27.19	35.65	8.46
dw1sdwk0001V5	16.47	18.74	2.27
dw0sdwk0000C8	21.15	25.14	1.99
lr-atx-i08-clab.dynatrace.org	19.23	21	1.77
CCA	5.76	7.44	1.69
i-0b046099511f2b0d4	21.45	22.84	1.39
CCA-mysql	7.02	8.28	1.26
EC2AMAZ-BFHGR3B	6.74	7.87	1.13

## Who calls to my backend \$\$ (db,mainframe,..)?

source	service	num_calls
storeBooking	BookingService	12
authenticate	AuthenticationService	8
getFullName	AuthenticationService	6
getLoyaltyStatus	AuthenticationService	6
getUserRoles	AuthenticationService	6
findJourneys	JourneyService	5.88

## Forecasting and preventive alerts



## Unified dashboard: observability & security

## Trace analytics

I want to know the endpoint requests split by URL that are served within my environment/kubernetes namespace/...

URL	Request Count	Response Time
/api/v1/users	100	150ms
/api/v1/orders	80	120ms
/api/v1/products	60	100ms
/api/v1/cart	40	90ms
/api/v1/checkout	20	180ms

## Privileged users behavior

Amorosa usuarios privilegiados | Marc(10.55.106.0) en PRO - Increase in actions in last hour 200.00 over average 30 days 156.13

Affected applications: 1 impacted application

Comments: Comment on this problem

# EVEN MORE WITH APPENGINE





# IMMERSE

📍 MADRID

📅 21.11.23