



aws SUMMIT

INDIA | MAY 25, 2023

FS1004

Motilal Oswal simplifies capital gain calculation at scale with a data lake on AWS

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SVP of Technology
Motilal Oswal Financial Services Ltd

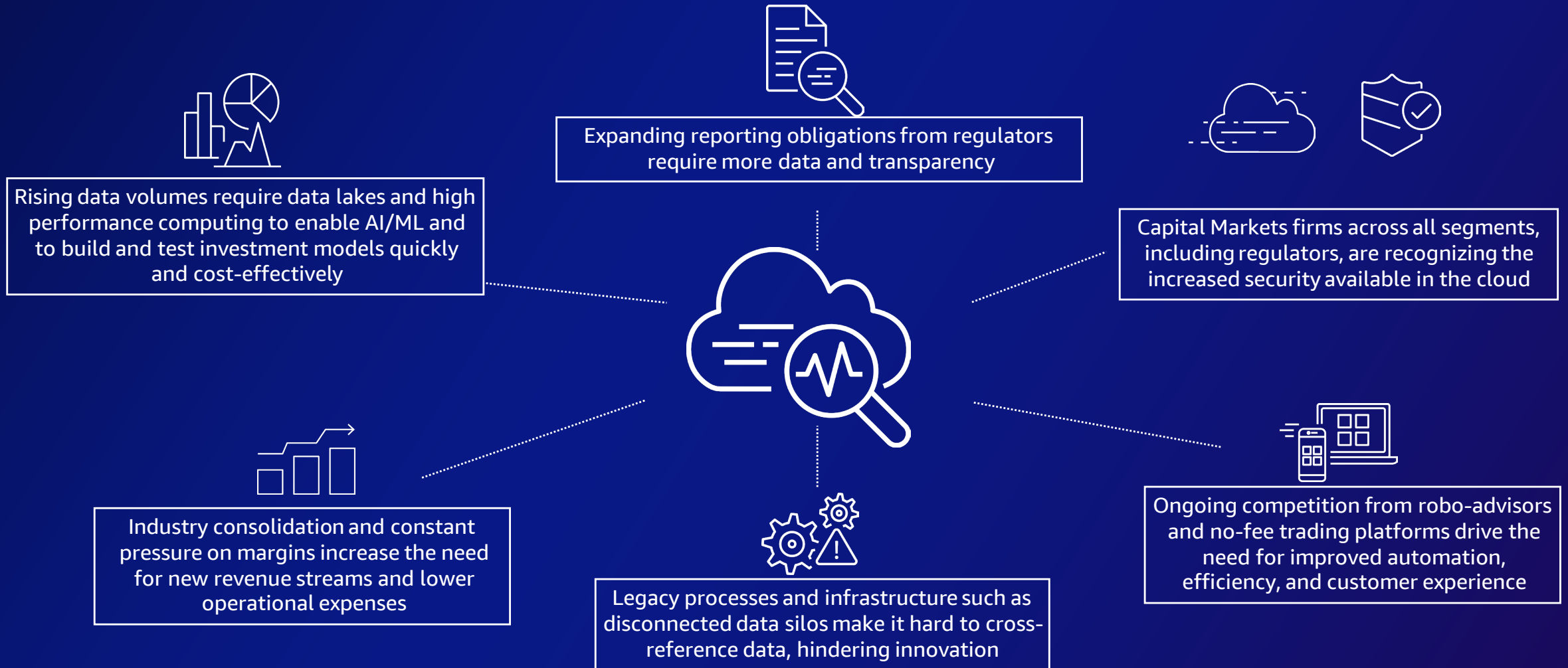
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Solutions Architect
AWS India



Agenda

- Cloud adoption in capital markets
- Modern data strategy
- Data processing with Amazon EMR and Amazon EC2 Spot
- Business need
- Solution
- P&L/Capital gain calculation
- Outcome

Forces driving cloud adoption in Capital Markets



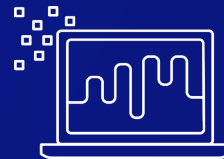
Capital Markets firms embrace the cloud to solve business challenges



Digital Engagement



Data Lakes

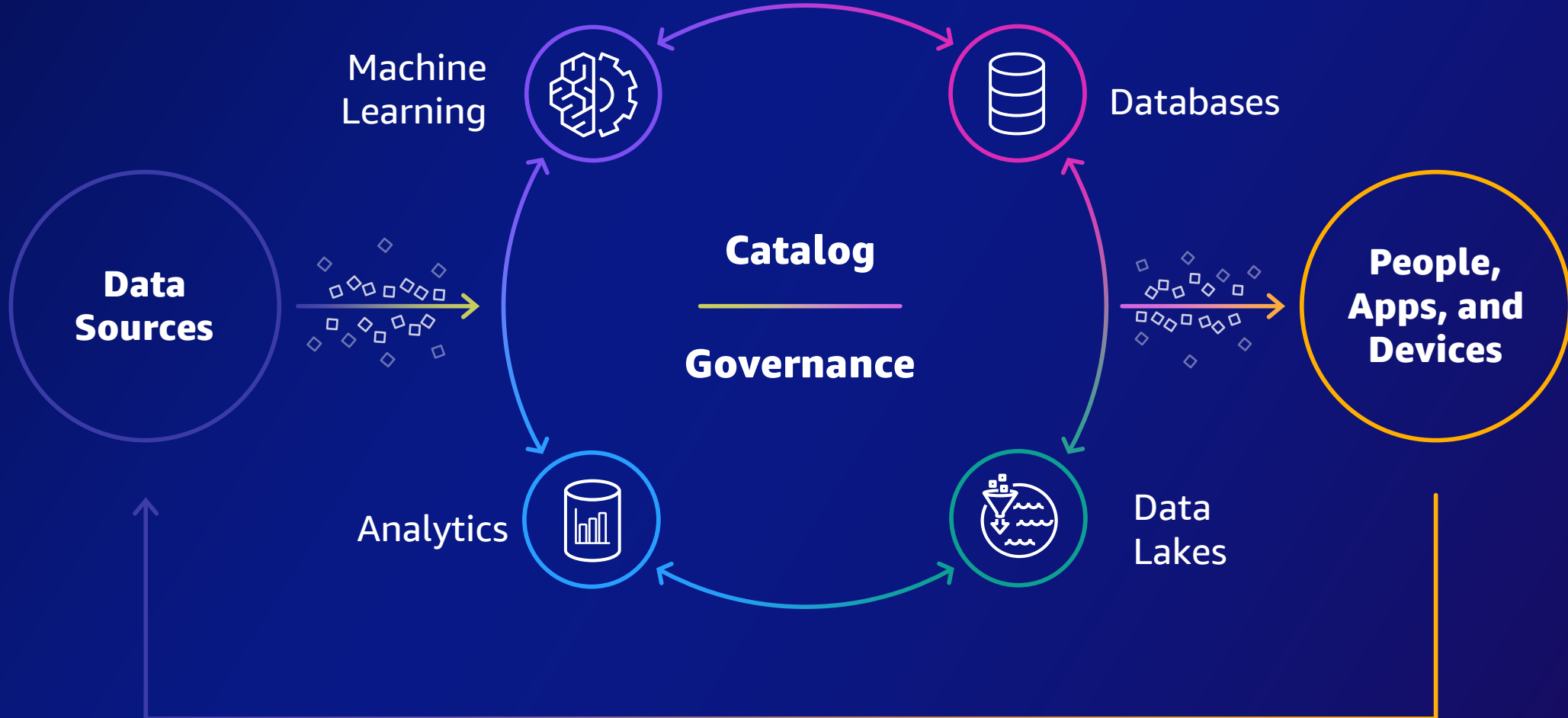


Grid Computing



Machine Learning

Modern data strategy in action



Modern data strategy on AWS





Scalable data lakes

Amazon EMR

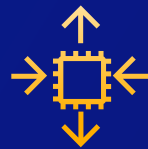
RUN BIG DATA APPLICATIONS
IN THE CLOUD



Fully managed and customizable



Latest open-source releases



Automatically scale up and down



Best price-performance

Amazon EMR on Spot Instances

Offers low-cost scalability and performance

Amazon EMR

- Diverse set of tools (Spark, Hadoop, Hive, etc.)
- Automatically scale and manage clusters
- Scale compute and storage independently

Spot Instances

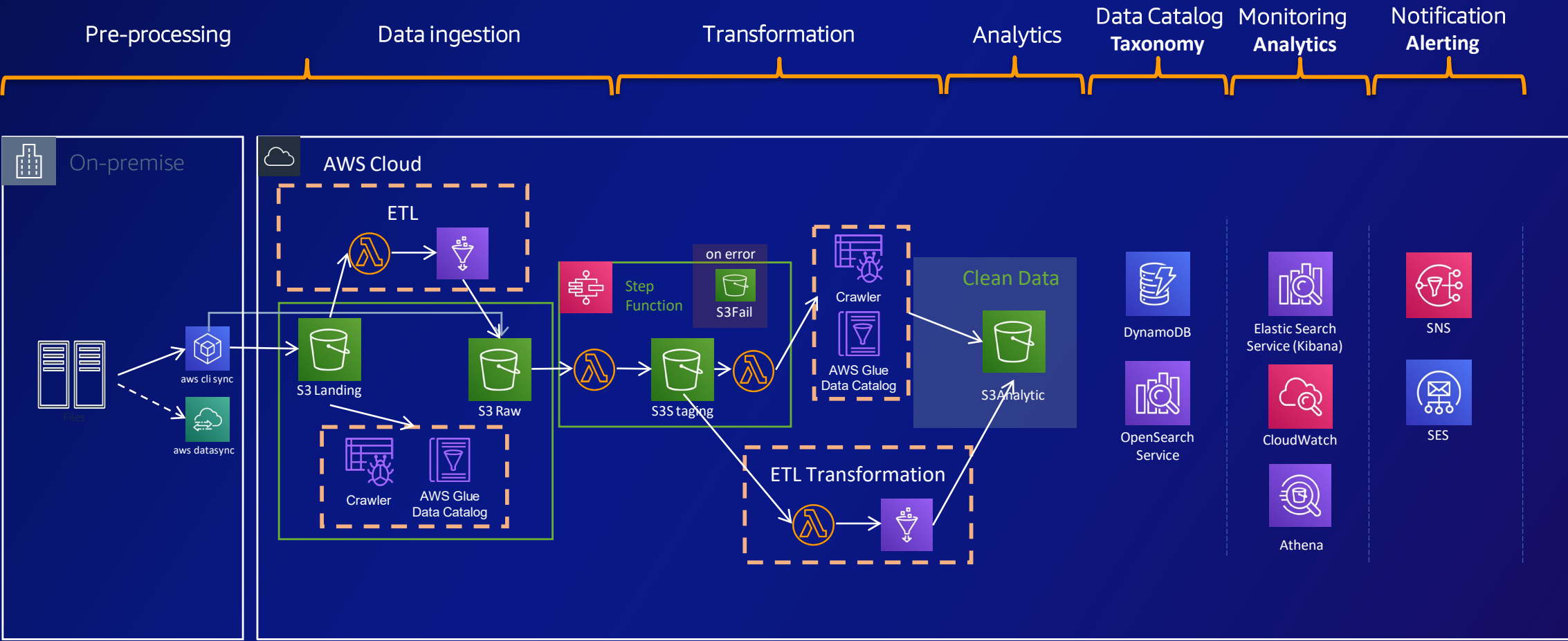
- Up to 90% off vs. On-Demand pricing
- Predictable, bid-free pricing
- <5% interruption rate

EMR on Spot Instances

- ✓ EMR being stateless makes it a great fit for Spot Instances
- ✓ Scale to parallel nodes via instance fleet
- ✓ Process massive amounts of data for a fraction of the cost



Datalake On AWS + Data replication from onpremise





Shishupal Rathore

**SVP – Business IT (Head – Cloud Technologies)
Motilal Oswal Financial Services**

10,500+
Employees

3.2l Cr
AUA*
(as on 30/09/22)



550+
Cities

5.2m+
Happy Customers

4★+
Trading Apps

2500+
Business Locations

10,800 Cr
Market Cap *
(as on 30/09/22)

100+
Awards

Business challenge & Solution

Business need

- Supporting exponential business growth
- Maintain data integrity
- Ontime business reporting
- Enhanced customer experience
- Seamless partner integration

Technology challenges

30+

Data Sources - and consistently growing

5TB +

Daily Data Size and growing

No CDC

5x

Business Growth in <2 yrs

15+

Downstream applications

6+ Hours

EOD processing time

15+

Identified Version for same Master

150+

Identified Business MIS | Shadow MIS

Vision

20x

Data Processing Capability
~100TB

<1Hr

EOD Parallel Processing Time

Data Lake

Consolidation | Consistency | Centralization

Golden Copy
of Masters

MIS

Consolidation with RLS

Master

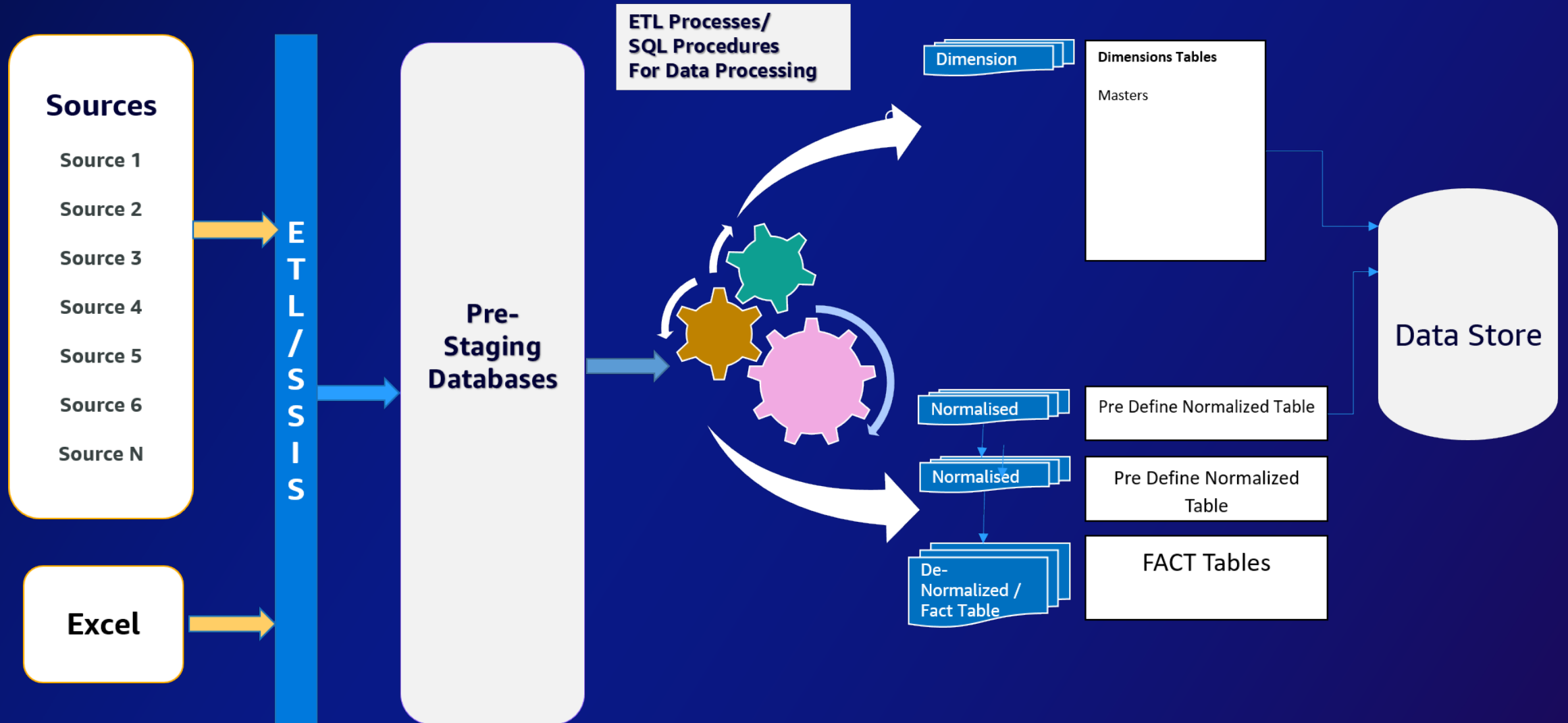
Microservices

Data Science

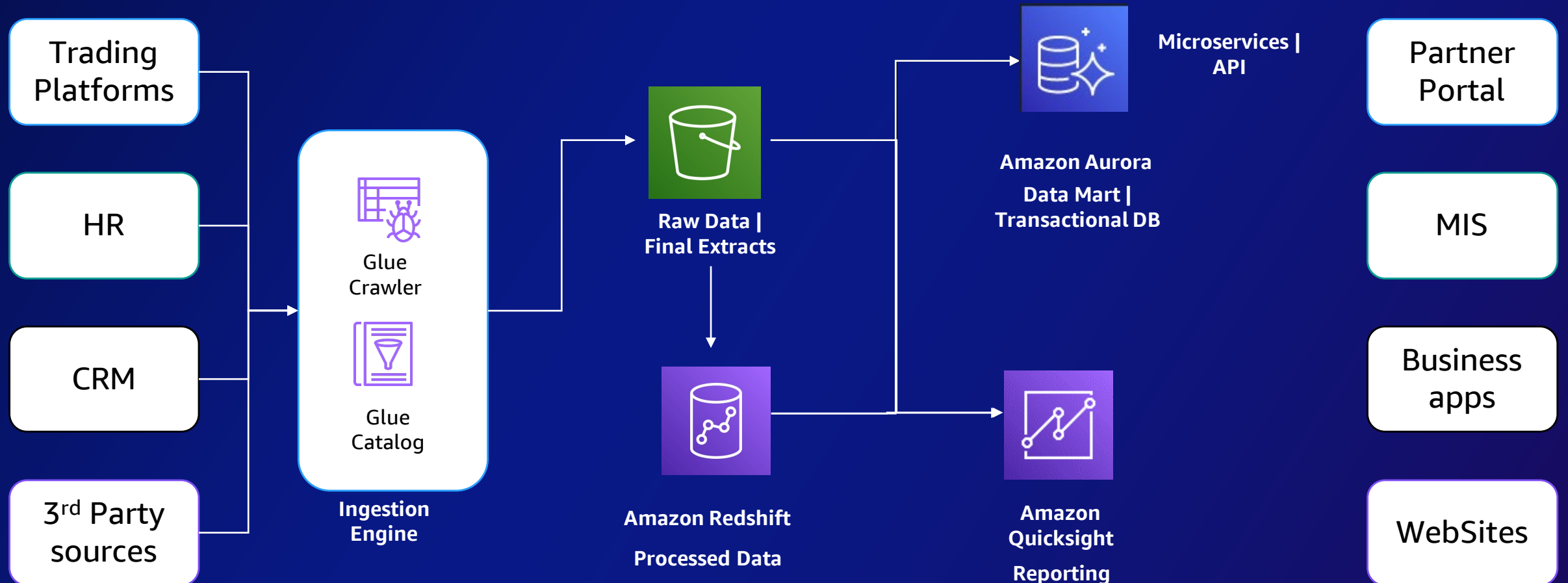
Structured | Unstructured
Data and Compute Source

Solution architecture

IT legacy landscape



Data Lake architecture



Business outcomes

Journey

25+

On-prem sources

8+ TB

Ingested Daily data on P2P
VPN (400~500 Mbps)

40+ TB

One time data load
using DMS on P2P
VPN

1000+

Athena Tables

14+ hrs

Cycle runs from 5.30 pm –
7.30 am. This will be 24*7
in 2023

**Delta
Lake**

implementation for API
Integrated Ingestion

Capital Gain Loss (P&L) calculation

75+

Golden copies of Master
Tables

<30 min

processing time for most complex
data transformations

>10 days

reco processing
enablement for daily
cycles

350m+

records processed for
monthly trail process in

< 1 hr

1000 Cores

Spot Instance for sample size of

400m+ transactions in

<2 hr

Outcomes : Efficiency | Productivity Gain



incorporation in
Quicksight

Crores
and
Lakhs

denomination incorporation

<15

Quicksight reports to replace

100+

MIS

5000+

Daily PDF MIS

7-8

datasets to cater to

90%

of reporting requirements

for **10000+** users

8:45 am

availability of all daily
reports to business users

100%

Regulatory Compliance
and Data Protection

Business benefits

Speed to Market

Reactive to
Proactive

Improved
Vigilance

Single Source of
Truth

Business
Empowerment

Less Noise
More Action

skillbuilder.aws 

Your time is now

Build in-demand cloud skills *your way*

Thank you!

Shishupal Rathore
SVP of Technology
Motilal Oswal Financial Services Ltd

Ajay Shah
Solutions Architect
AWS India



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