

Synchronicity- A Mandate for Today's Information Architectures

The Briefing Room with Equalum
Live Webinar Starts at 2 ET



The Bloor Group

Today's Speakers



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DATA INTEGRATION AT-SCALE: NEW RULES FOR THE ROAD

Let's talk Data!

The background of the slide is a dense, close-up photograph of numerous seashells. The shells are in various colors, including white, cream, light pink, and grey, and are scattered across the entire frame. In the center, there is a white rectangular box with a thin black border, containing the main text.

The Move to Modernization

What is the role of batch? Is it alive and well?

When to move to real-time? Is it an inevitability?

Or... should you virtualize instead?



Extract, Transform, Load!

The mantra of data movement since the 1990s.

A full-page background image of a surfer riding a large, curling wave. The water is a vibrant turquoise color, and the wave's crest is breaking into white foam. The surfer is positioned in the lower-left quadrant of the frame, riding the base of the wave's face. The overall scene conveys a sense of power and momentum.

Stream Processing

Real-time ETL is gaining momentum

A photograph of two white ibis birds on a paved road. One bird is on the left, facing left, and the other is on the right, facing right. They have long, dark beaks and large, pinkish-red feet. The background shows a paved road with a curb and some greenery and parked cars in the distance.

Change Data Capture

Only pay for what you need!



Data Virtualization

Clever caching strategy!

Very effective in certain complex use cases.

But there's a reason only the largest enterprises used this approach: It's expensive, and can be rather difficult to maintain over time.

Data Ingestion

vs

Data Virtualization



Triple Bullseye?





Batch

Advantages:

- Is well understood by both business and IT
- Can handle very large data sets
- Suitable for easily defined, repeatable data frameworks

Limitations:

- Latency with data = stale data
- Slows source systems | usually executed after hours
- Operational nightmare that gets worse
- Another batch window? Think straw & camel

Challenges:

- Scaling out to accommodate growing data



Streaming

Advantages:

- Low Latency and near real-time = fresh data & better insights
- Easier to operate from Operational standpoint

Limitations:

- Processes in increments so not a full data set

Challenges:

- To facilitate real-time streaming, you need a system to detect changes in source systems
- How do you join data in real-time?
- How do you aggregate data in real-time?



Change Data Capture

Advantages:

- Low latency data extraction
- Non-intrusive on operational systems
- Only processing changes to data

Limitations:

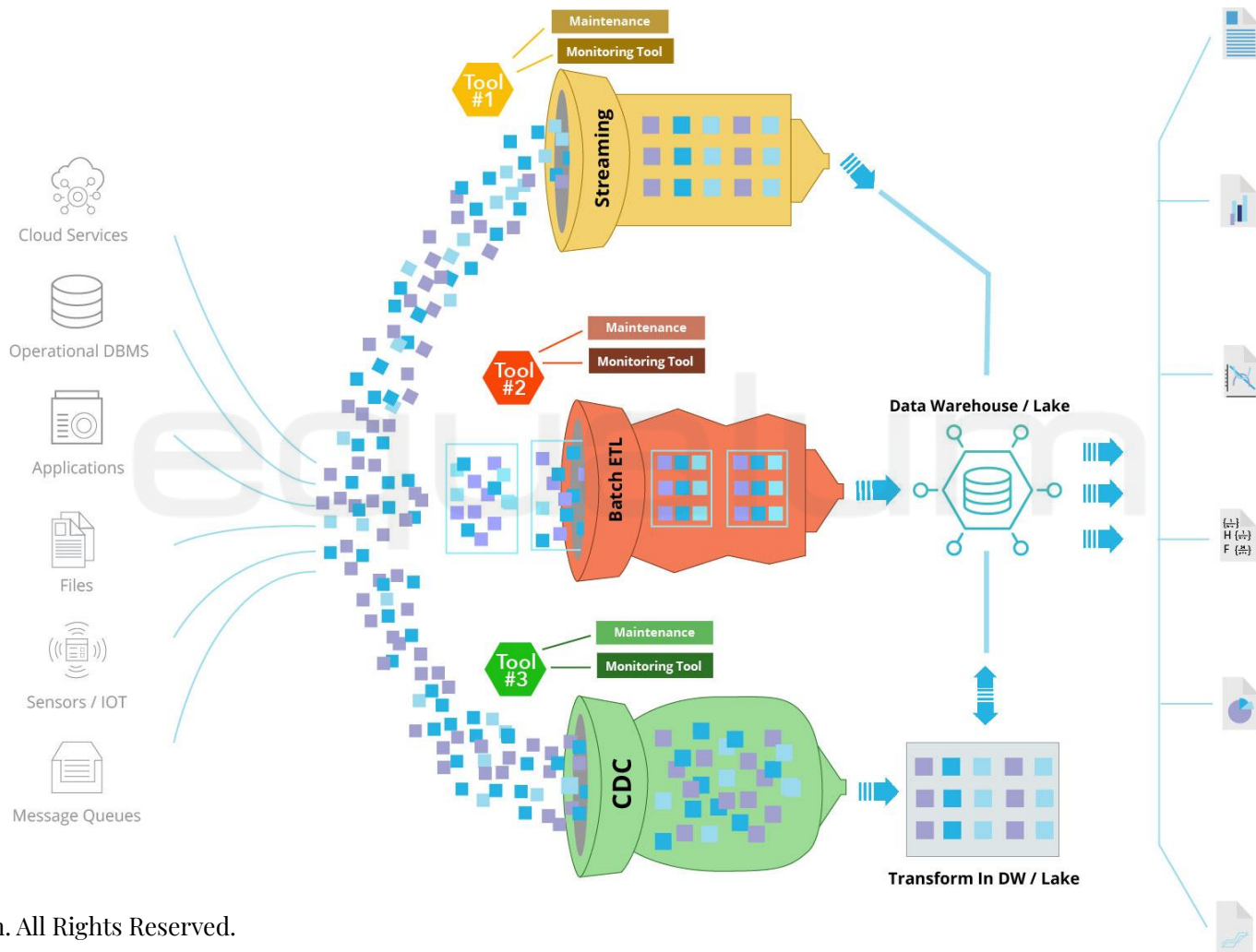
- Not all source systems support CDC
- Usually facilitates data replication only
- Requires careful orchestration across systems

Challenges:

- CDC should be very efficient to handle extreme loads on source systems
- Support a wide variety of technologies : databases, files, message queues, APIs etc..

For a full solution,
you need all
3 capabilities:

- CDC
- Streaming ETL
- Batch



Choosing the First Real-Time project

#1 -Why?

What are the mission critical objectives for your Data Architecture?

How will a Streaming-First Data Architecture expedite business value?

#2 -Consider a Green Field Project | Think Ahead

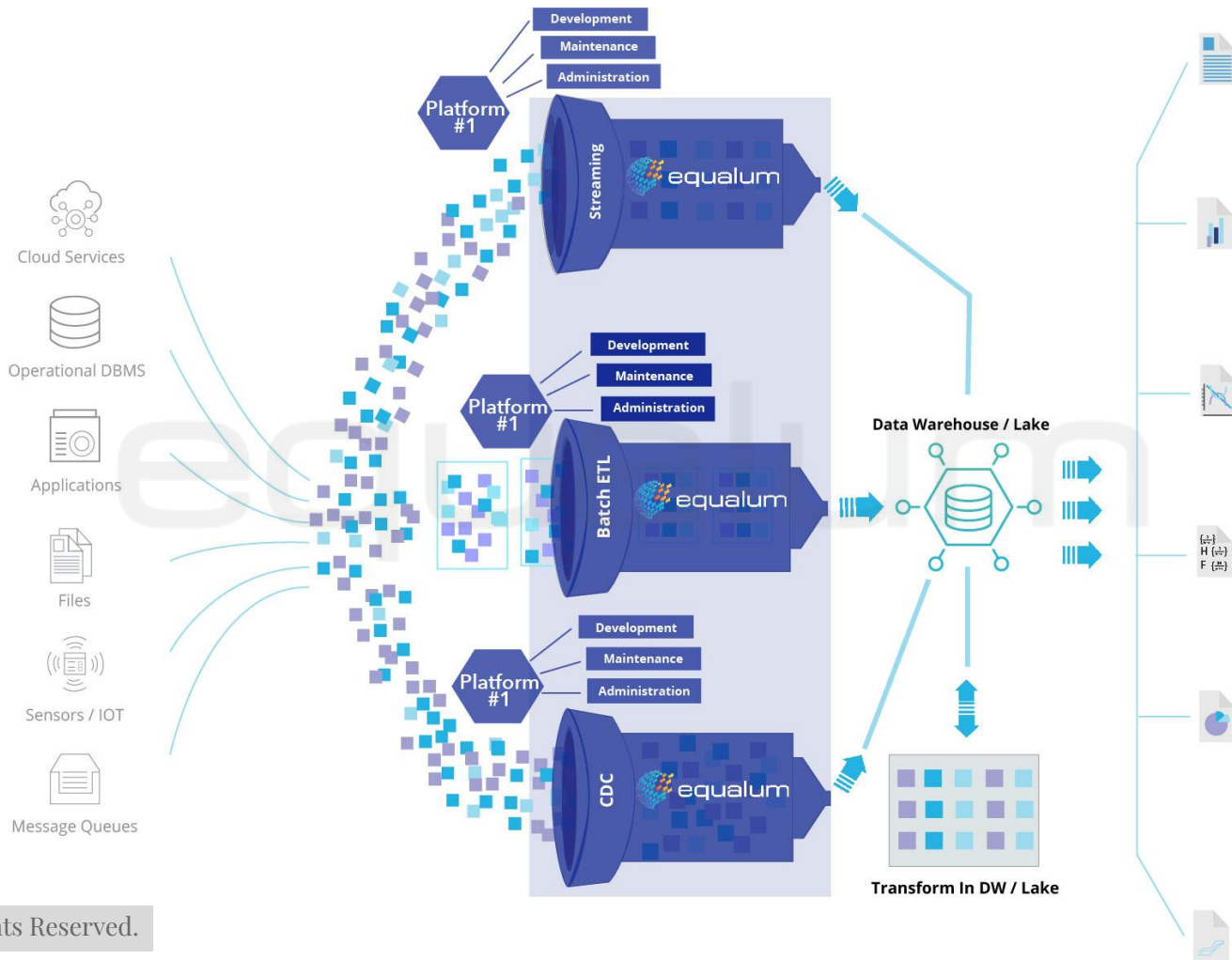
Transforming your Data Architecture can be both a technical lift and a cultural one. Explore new revenue opportunities where a Streaming-First Architecture can be tested. Once the results are proven, then extend to other areas of your organization.

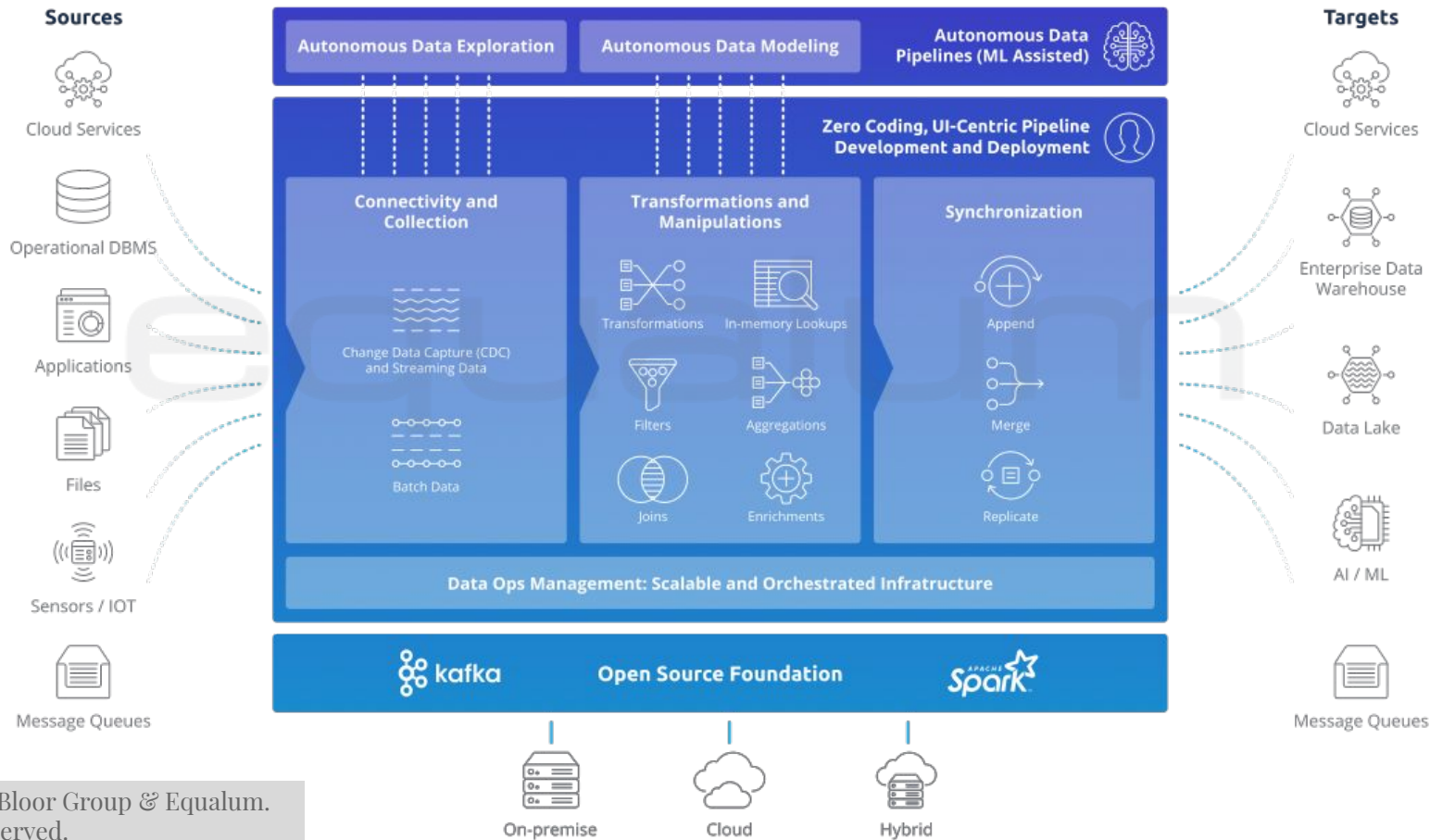
#3 -Integrate Streaming to Complement Batch

There can be well defined roles for both types of data in your architecture. When you understand your strategic objectives, you can put these two approaches to work in tandem.

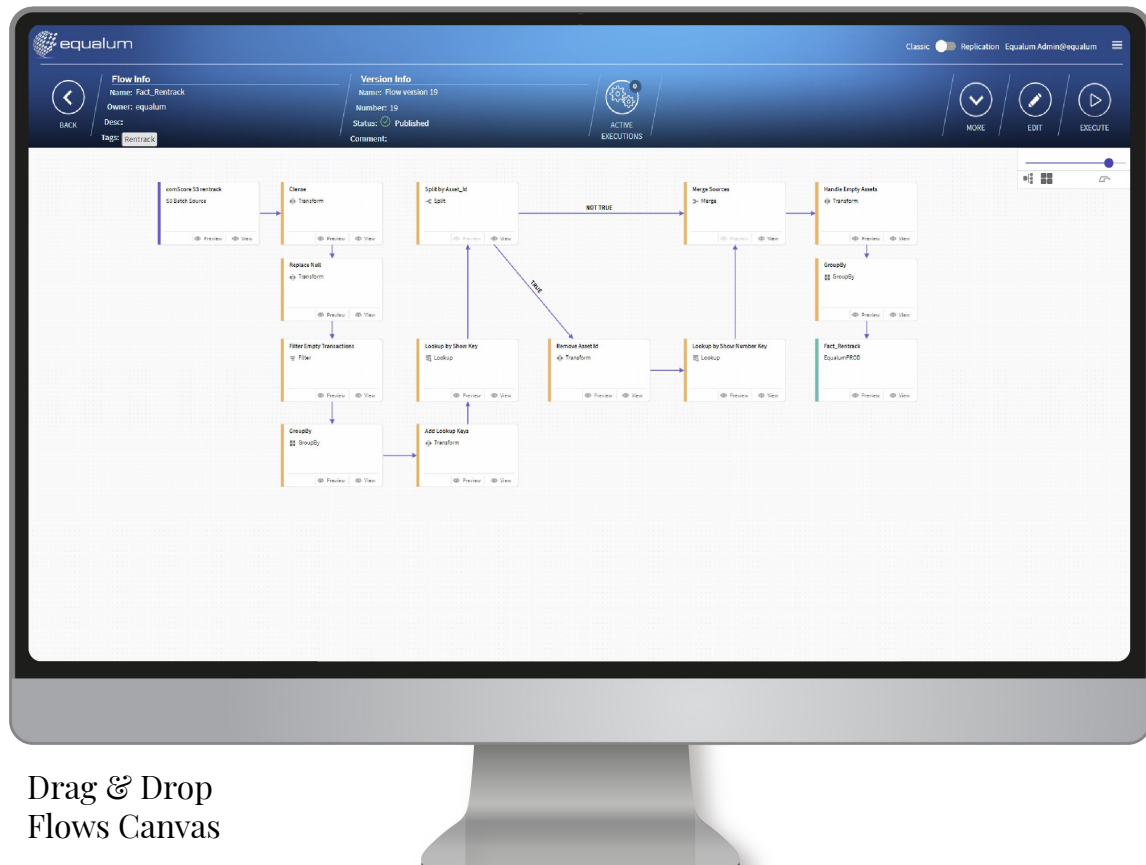
Equalum offers a powerful, native solution for **ALL** of the modern, data ingestion capabilities:

- CDC
- Streaming ETL
- Batch

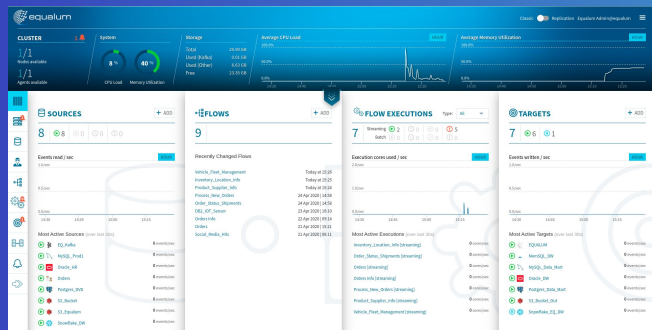




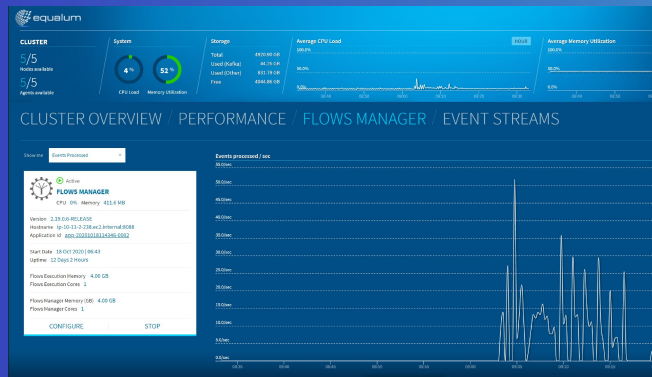
Zero Coding, Self-Service UI



Drag & Drop
Flows Canvas



Main Equalum Dashboard



Cluster Overview Dashboard

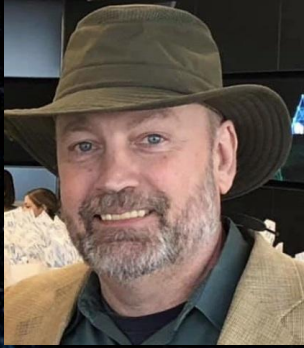
'Future Proof' your data platform:

Change-Data-Capture

Streaming ETL

Batch

... All via no-code UI



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About Me:

Career Entrepreneur
Evangelist for Open Government
Inspired USA Act of Congress:
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New Media Designer, creator of:

- DM Radio
- The Briefing Room
- AOL Government Series on Federal Spending
- InsideAnalysis
- World Matters with Richard Kerby
- #theChainGang with Evren Sel Cakir