PLANTFORMANCE CASE STUDY · INTEGRATION AND DATA

Edge MySQL tables replicated to Azure with no maintenance

A multi-site manufacturing group · Multiple industries

A manufacturing group needed exact cloud copies of its local Ignition tables without touching edge performance. Plantformance built a change-capture pipeline, so turning on sync for a table now takes a 2-minute change request.

15 min
change-check interval

1:50
typical compression ratio

2 min
to build a sync change request

THE PROBLEM

Ignition data usually lives locally and serves many activities. It is often stored in the local edge MySQL database, the default on FactoryBrain, with excellent availability, speed and consistency. The enterprise needs that same data for master-data sync, performance, aggregated data and analytics. The client asked for a solution with no maintenance that would replicate any local schema or table into its Azure cloud.

HOW WE DID IT

Plantformance built a change-data-capture solution based on MySQL internals, with no local data duplication and no performance impact. Every 15 minutes it checks the tables marked for sync and writes the changes, inserts, updates and deletes, into heavily compressed Parquet files, usually 1:50. The files are buffered locally and centrally with NiFi, then shipped to Azure Blob Storage with a strict naming scheme so data scientists can rebuild tables on the fly. Checks detect missing or corrupted data at every stage and allow a resync.

BEFORE

Some data was already streamed, which gave a rough view of local data in the cloud. Streaming did not meet the reliability goal: a perfectly synchronized copy in the cloud of what exists locally.

AFTER

Turning on sync for a table is a change request that takes 2 minutes to build. Implementation takes Plantformance 5 minutes.

RESULTS

- Local data stays at the edge for speed, reliability and performance for plant teams
- Operations do not depend on the cloud
- Enterprise teams get a synchronized copy of local tables in Azure
- Changes compressed about 1:50 before shipping
- Missing or corrupted data is detected and can be resynced

Plantformance products and services: FactoryBrain, Professional Services

PLANT FORMANCE

NEXT STEP

Planning a project like this?

Talk to an Ignition engineer about your sites, timeline and architecture. We will tell you honestly what it takes.

Contact Plantformance

Read this case online and see more Ignition projects: plantformance.com/case-studies/edge-mysql-replication-to-azure · all case studies

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Plantformance is an Inductive Automation Alliance Partner that helps enterprises deploy, secure, and scale Ignition across sites through plug-and-play modules, turnkey zero-maintenance HMI hardware, and 24/7 managed infrastructure.

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