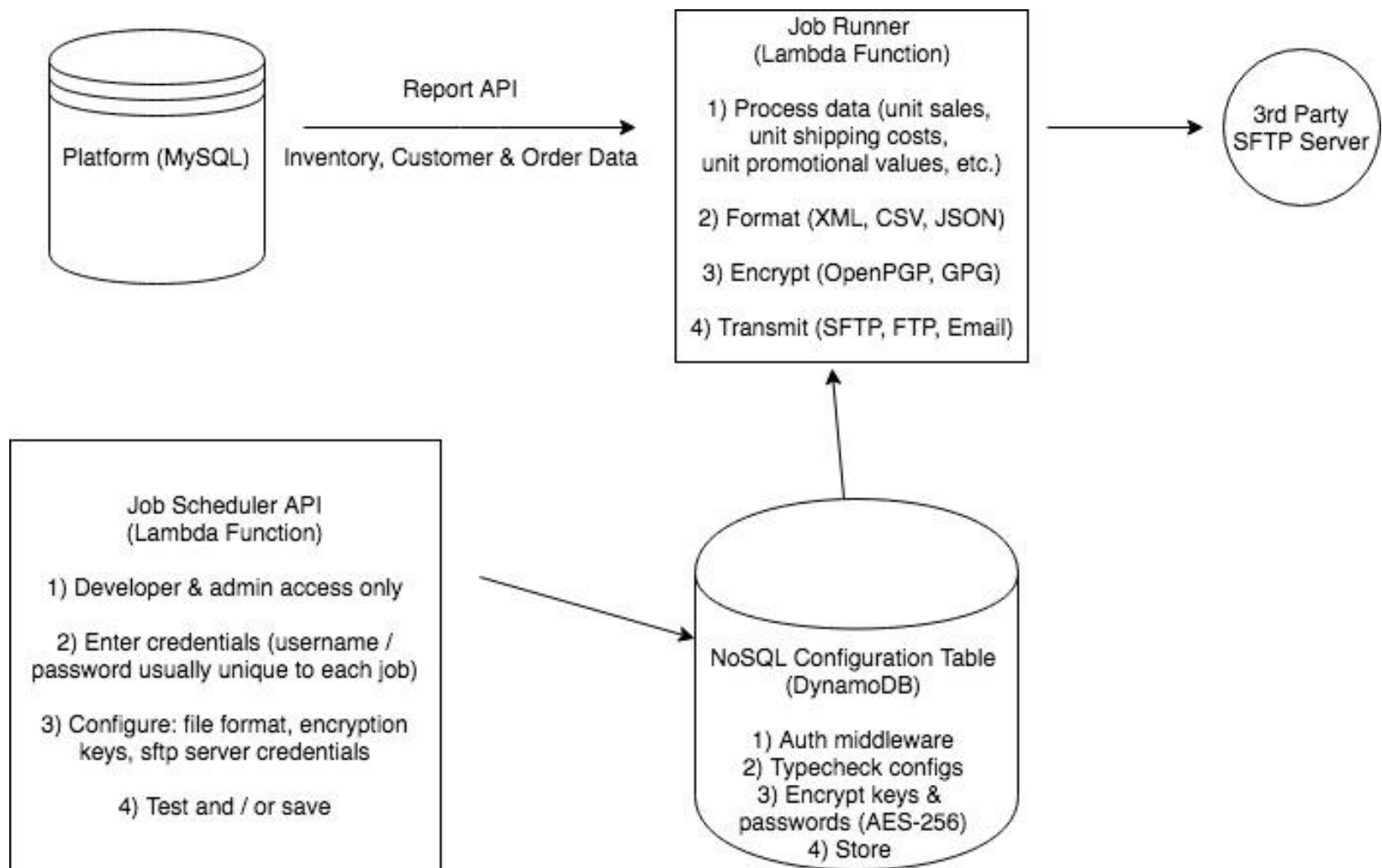# Scheduled Reports

Transmitting sensitive, encrypted data to 3rd parties

Client Requirements

1) Reports should capture all order, inventory, and/or customer information
2) Delivered to a secure SFTP server
3) Encrypted in either OpenPGP or GPG (keys typically maintained by client)
4) Specific file formats, column names, and file naming conventions (XML, JSON, CSV, TSV, XLSX)

Internal Requirements

1) Unit testing (at least 95% branch coverage)
2) Realtime monitoring (Slack, SignalFX, & Email)
3) Granular logging (Graylog, Cloudwatch)
4) Configuration via UI (available only to developers & project managers)
5) CI / CD pipeline (Jenkins & CircleCI)

Platform (MySQL)

Report API

Inventory, Customer & Order Data

Job Runner (Lambda Function)

1) Process data (unit sales, unit shipping costs, unit promotional values, etc.)

2) Format (XML, CSV, JSON)

3) Encrypt (OpenPGP, GPG)

4) Transmit (SFTP, FTP, Email)

3rd Party SFTP Server

Job Scheduler API (Lambda Function)

1) Developer & admin access only

2) Enter credentials (username / password usually unique to each job)

3) Configure: file format, encryption keys, sftp server credentials

4) Test and / or save

NoSQL Configuration Table (DynamoDB)

1) Auth middleware
2) Typecheck configs
3) Encrypt keys & passwords (AES-256)
4) Store

Tech Stack

Frontend:

1) Angular
2) Redux
3) CircleCI
4) Gulp

Backend:

1) AWS (Lambda, DynamoDB, API Gateway, IAM) and aws-sdk
2) Node.js
3) Crypto (Node library)
4) Jest (unit testing)
5) Jenkins
6) Internal libraries (sy-trance (Symphony Transfer) & sy-log, both developed by myself)

Profit