

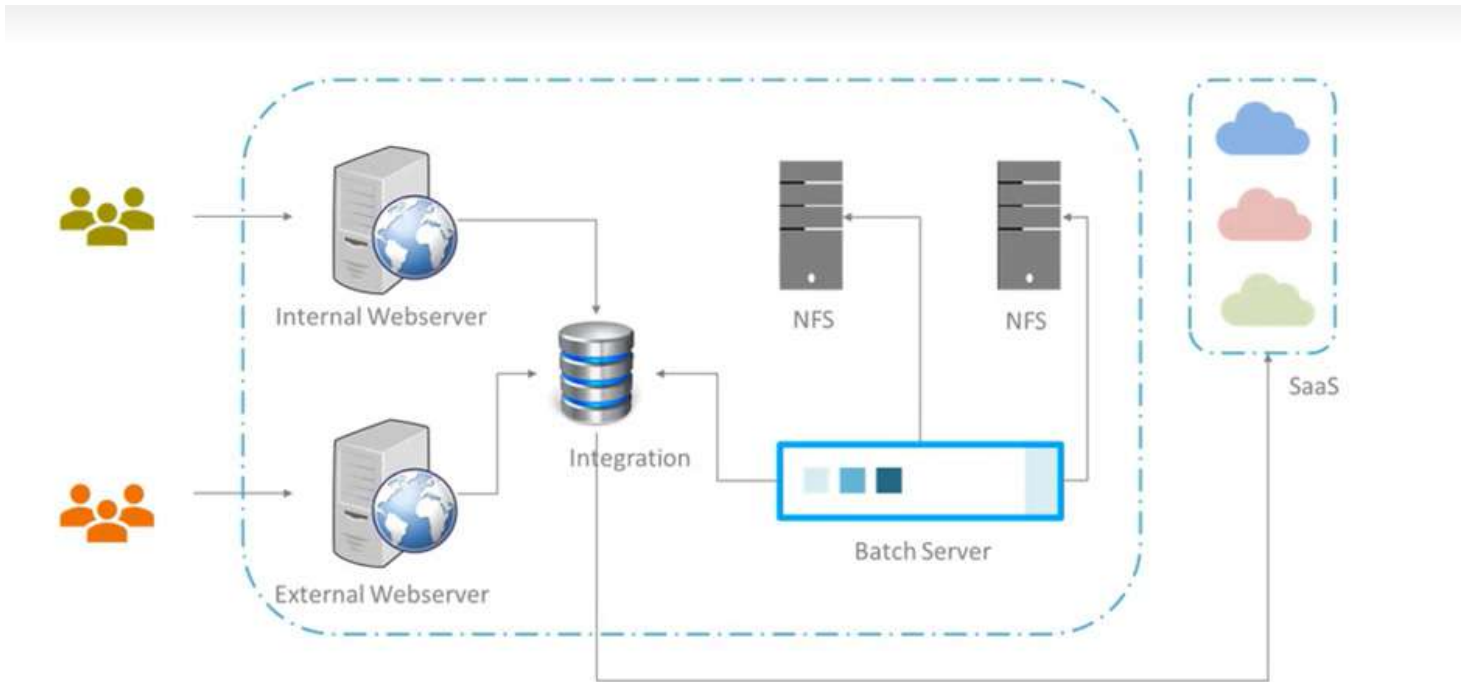
Automate your workflow with ADvantage Luminare Connect

New architecture platform that reduces processing time
and manages large volumes of data



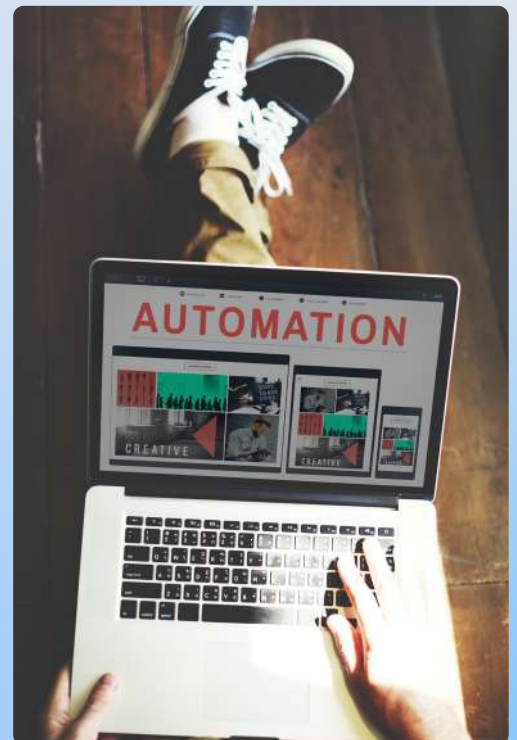
Introduction - Hybrid integration

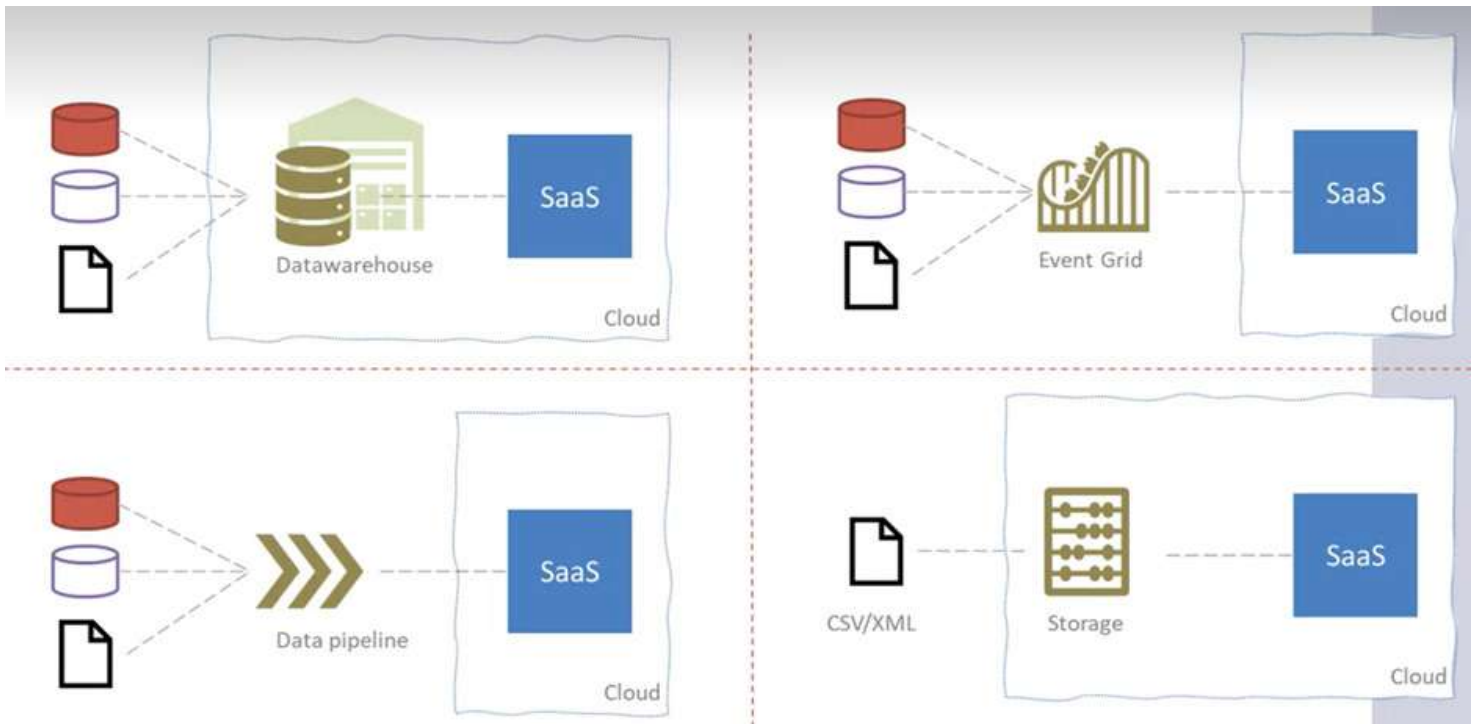
As more and more solutions are getting hosted on the Cloud and for most businesses, the journey is still in-transit from On Premise to Cloud hosted solutions, there is a constant requirement to share voluminous data between applications hosted On Premise to Cloud taking into consideration, the latency, infrastructure, performance, security, and cost which comes as a symbiosis between two different applications which are hosted on different infrastructure setups.



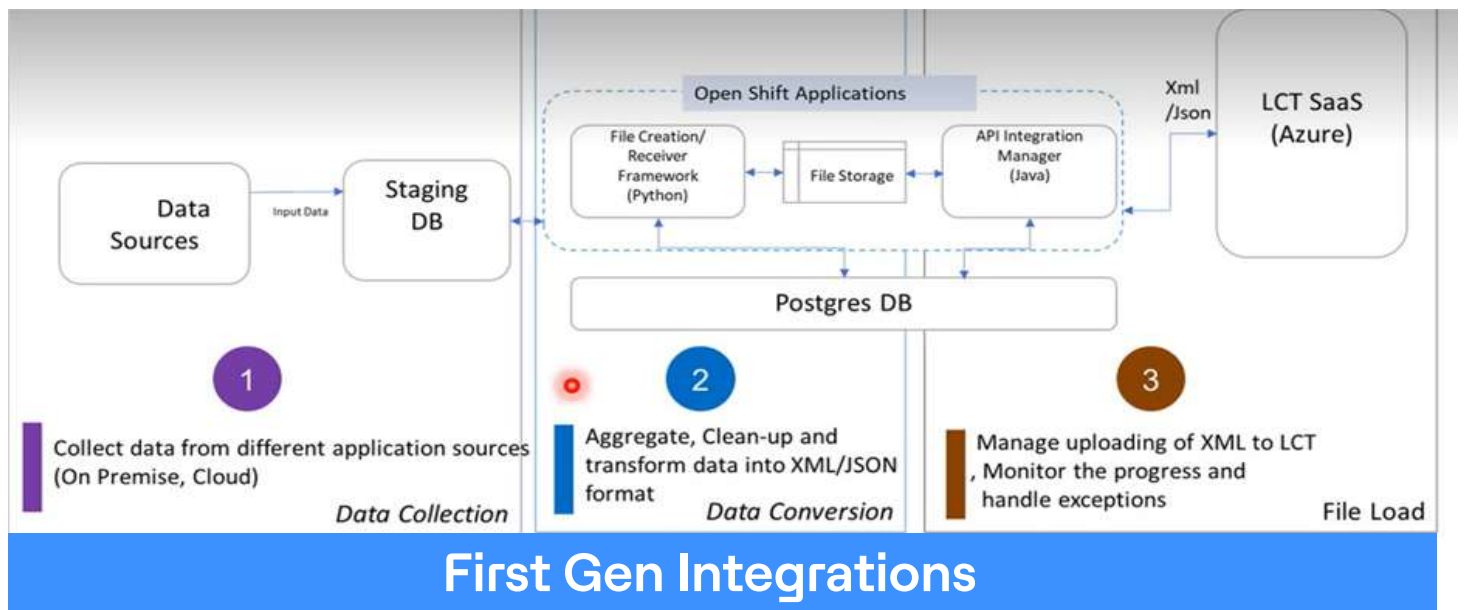
Existing conventional integration solutions:

- **Cloud Datawarehouse and Distribution** – Different sources of data are collected from On Premise solutions – and collated in Data Warehouse hosted in Cloud. From Data Warehouse, it is distributed to further SaaS solutions hosted by businesses
- **Data Pipeline and Streaming of Data** – Different sources of data are directly streamed to the Cloud based solutions without any application of business logics. As and when data is available in the data pipeline – real time or batch, it is directly integrated to the SaaS solutions
- **Event Grid** – Trigger based data events based on new inserts, updates on existing data sets which is sent as a message trigger to the Cloud applications based on a Request – Response Model
- **Storage** – Raw data is collected from On Premise Solution and converted into a file format csv/xml which is accepted by the SaaS solutions. This includes constraints with respect to file size; number of batches /per file which can be pushed





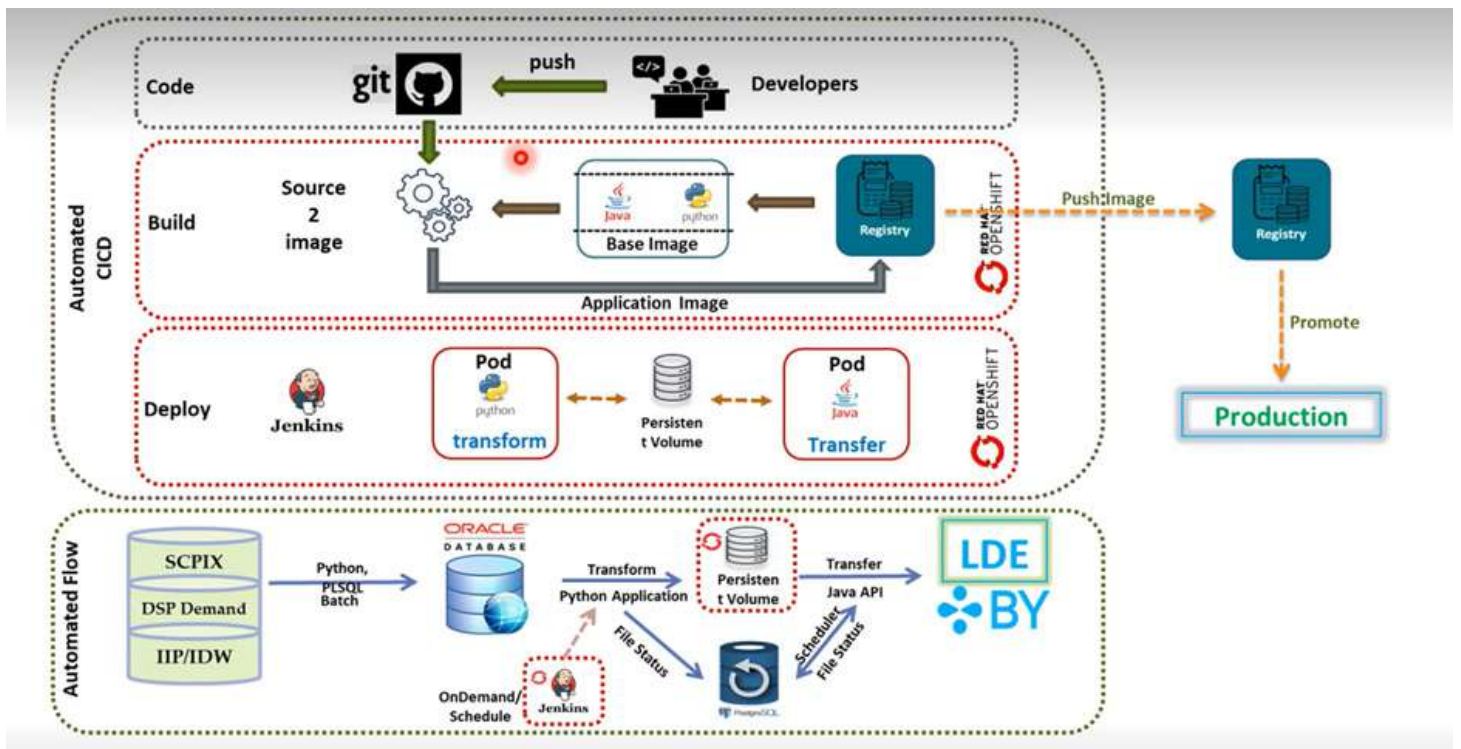
HCL Integration Journey – From First Generation to Advance Luminate Connect



An automated workflow

Right from the starting of the First Integration Adapter, HCLTech Solutions have been automation centric and focused throughout the lifecycle of Code
 ->Build->Deploy and integration lifecycle





Changing Landscape:

Drivers for Second Generation Luminate Connect focusing on applications like LCT which demand an exponentially high volume of data to be integrated in the shortest span of time. Develop a platform to be reused across SaaS solutions as a future NexGen transformation solution

High Data Growth Volume

More growth in business requires more accessibility to data across all integrated applications. This leads to potential growth in the data volume which is handled in the conventional data sets and integration becomes a challenge

File Security

As businesses are integrated and secure data needs to be channelized across business applications, there is a requirement for a secure file transfer process to ensure data encryption and security during the integration process

Reverse Integration

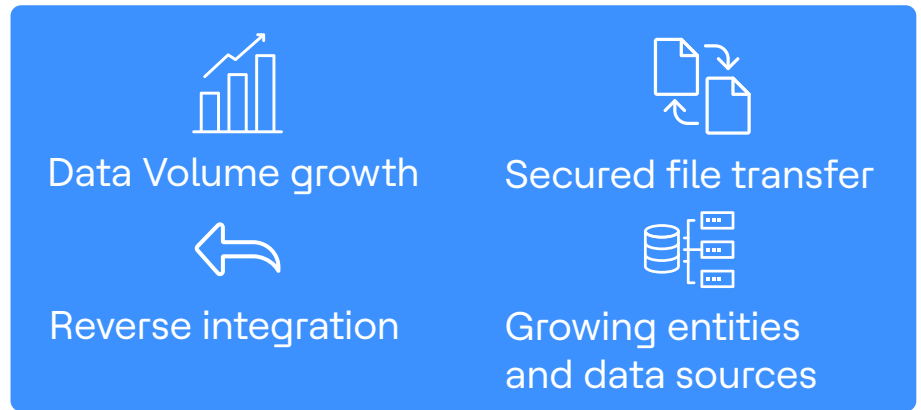
Data integration from Blue Yonder SaaS applications back to On Premise Applications demanded standardization

Growing Entities

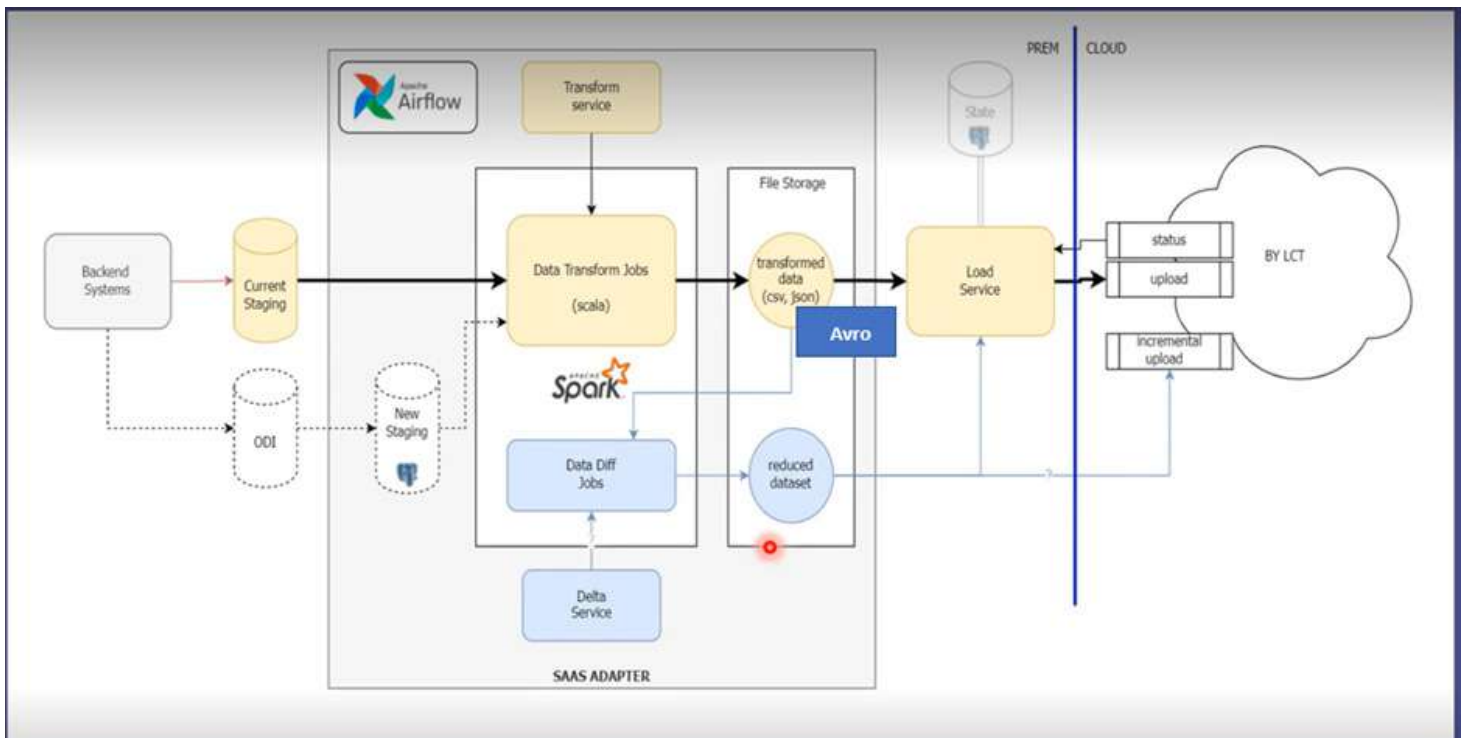
With growing entities and data models across applications, there was a need to expand the flexibility to build and deploy the new entities and transformation logics in the adapter in the least possible amount of time. Development lifecycle had to be shortened

Key solution enabler

Focus on Data Volume ->
Integration Performance Speed->
Data Validation at the source side
before pushing data to the target
systems. Implement a Schema
based file validation to avoid any
file syntax errors.



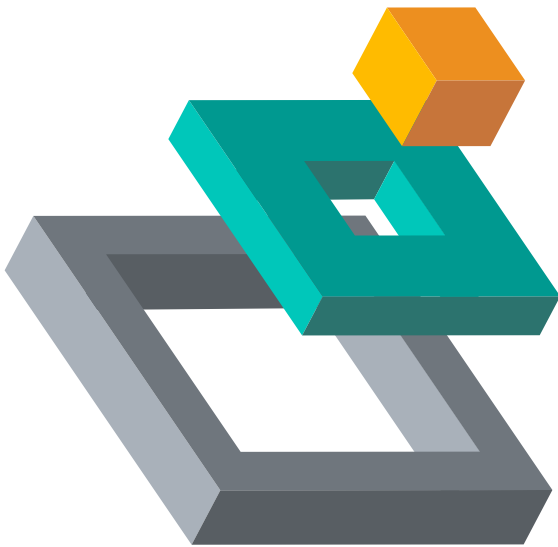
Second Generation solution



- **Shift to Open-Source Solutions** - Transitioned from Oracle Staging Tables to PostGres DB Open Source as the staging tables
- **Seamless File Syntax Validation at Source** - Avro Files have been used as the standard data format to transfer data from source to target
- **Delta Services** - Identify full load VS any delta changes on the existing data sets and only push the delta changes to the target systems - Significantly cutting down the data volume and integration latency
- **Microservices** - BY Validation, Token generation, Data Archival and others
- **Spark Jobs** for transformation and delta processes
- **Airflow** for overall orchestrating the workflow and checking the job status at each stage during trigger



Business benefits



Switching from licensed solutions to Open-Source solutions brings down the **overall cost of purchase and ownership**



Switching from CSV to Avro Files brings down significant and **drastic reduction in the #of files and file size**. More flexibility to handle a significantly large volume of data.



Introduction of new architecture platform shows a drastic reduction in the overall processing time of the files and integration from Source to Target Systems



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