[Interactions Data Load from ThirdPartySftp to SAP Marketing Cloud _HANA LOGS]

Date: 10/03/2020

Version: 1.0

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DOCUMENT CONTROL

Owner	Client contact	Status	Date issued
Oleg Veliks	N/A	N/A	N/A

Version history log

Version	Description of change	Date	Author
1.0	Initial version	10.03.2020	Oleg Veliks

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1 PURPOSE

The purpose of this document is to describe the general configuration steps required to set up the integration flow for migrating millions of Interactions from/to third Party systems to SAP C/4 Marketing Cloud Systems. The integration flow provides out of the box capability to consume millions of interactions in files of size 100k records from S3 buckets and splits them into smaller OData (5k) Packets and provides full traceability on whether each 1k or 5k packet is processed successfully or failed in SAP C/4 Marketing Cloud System.

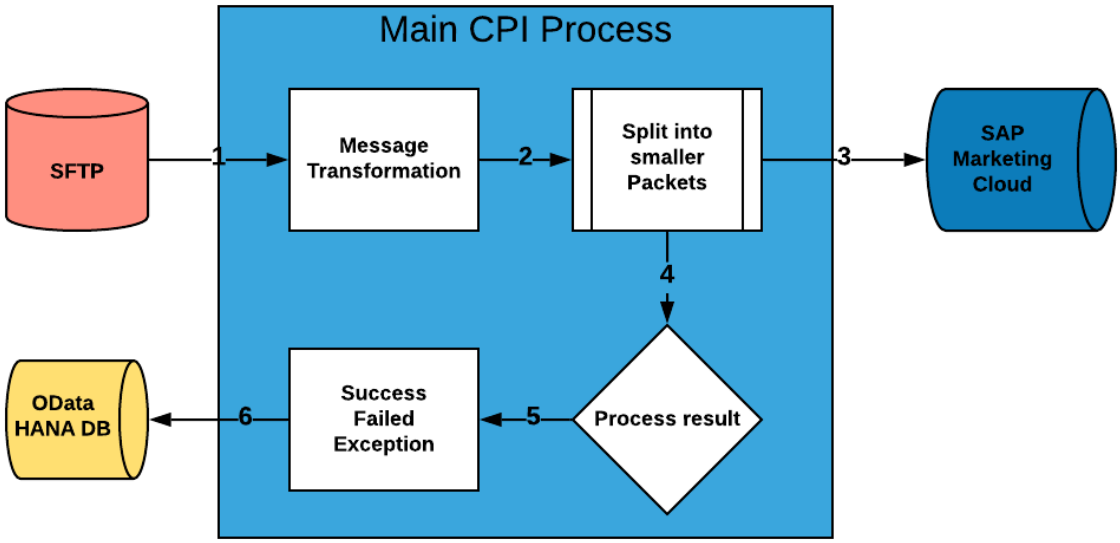
This IFLOW is an enhancement of SAP Standard Content https://api.sap.com/package/SAPHybrisMarketingCloudfilebaseddataload?section=Artifacts that will address the following limitations of the standard content:

- The error handling capability delivered in the standard integration triggers alerts via e-mail which is really not a good use case for complex large volume migration projects unless someone wants to jam their inbox with millions of error e-mail alerts.
- There is no mechanism for full audit logging of what packets failed and what packets are successfully sent to marketing cloud for each file. Imagine a scenario where we need to migrate 20 million interactions that are split into 200 files of 100k records and split into 1000k packet for each OData call to optimize performance and client want to have full traceability to extract files to understand what records failed and what records are processed successfully in SAP C/4 Marketing Cloud System for each file..
- There is no standard CPI mechanism to automatically move the error files to error folder. Due to that limitation, the files are reprocessed in the next run by the CPI IFLOW resulting in many message failures in CPI and also adversely effecting performance.

In this IFLOW, the error logs for each packet of source files are written in HANA Data base. It provides flexibility of customers to review the results of the file packets that failed in graphical HANA reports and helps them to resolve data issues quickly.

2 OVERVIEW

This IFLOW is used to read millions of interactions from AWS S3 Buckets (100k files) into SAP Marketing Cloud Systems (5k OData Packet).



Step 1. The file is uploaded on AWS S3 bucket and AWS SFTP service is set up to read and write files into S3 via SFTP.

Step 2. CPI Integration Flow splits 100k files into smaller OData API packets.

Step 3. CPI Integration Flow Sends OData packets one by one to SAP Marketing Cloud.

Step 4. CPI Integration Flow analyses the SAP Marketing Cloud response of each packet.

Step 5. CPI Generates the log for each packet of each file indicating which file is successful and which packet is failed. Logs sent to HANA DB Table which is exposed as OData service. Source filed is moved to Archive or Error folder based on results.

Step 6. The file is automatically moved into error folder if there is an error in processing the full file else it is moved into an archive folder.

3 PRE-REQUISITES

Before configuring Integration Flow, please make sure the following prerequisites have been met:

1. The SAP HANA Cloud Platform Integration has been delivered.
a. SAP HANA Cloud Platform Integration -
https://www.sap.com/products/hana-cloud-integration.html
https://cloudplatform.sap.com/index.html

2. Amazon Web Services account is enabled. S3 bucket is created and SFTP Transfer server is up and running. S3 bucket is a root directory of SFTP.

3. SFTP server is configured and connectivity between SAP CPI tenant and SFTP is established.

SFTP user having permissions to create and update folders and files.

4. HANA database is up and running. A table called logtable is exposed as OData service with CRUD operations.

Here is table definition:

	Name	SQL Data Type	Dim	Column Store D…	Key	Not Null	Default	Comment
1	Created	VARCHAR	50	STRING		X		
2	FileName	VARCHAR	255	STRING		X		
3	Packet	VARCHAR	50	STRING		X		
4	Status	VARCHAR	50	STRING		X		
5	Message	VARCHAR	5000	STRING		X		
6	Id	VARCHAR	100	STRING	(X1)	X		
7	Payload	NCLOB		LOB		X		

4 INTEGRATION FLOW CONFIGURATION

4.1 Configuration Parameters

Externalized Parameter Name	Description	Sample Value
Sender (Directory)	Root SFTP directory. A source directory of SFTP server.	DevelopmentLoads/LoadFiles/Interactions/Others/AfterSplit/Current
Sender (FileName)	Source File Name on SFTP server. A file from where to load data.	nofile.csv
Sender (Address)	SFTP server host name.	xxx.server.transfer.eu-west-2.amazonaws.com
Sender (User Name)	SFTP User Name. SFTP user which has access to SFTP directories.	CPI_USER_PROD
Sender (Timeout)	Maximum waiting time to contact the FTP server while establishing connection or performing a read operation.	10000
Sender (Lock Timeout)	How long to wait before trying to process the file again.	20
Sender (Change Directories Stepwise)	Changes directory levels one at a time	true
Sender (Post-Processing)	Controls which actions should be done after file processing.	Move File

Sender (Archive Directory)	Specifies the directory and the file name when moving the file after processing.	${property.archiveDirectory}/${property.origFileName}
Sender (Buffer size)	Write the file content using the mentioned buffer size.	128
Sender (Max. Messages per Poll)	Maximum number of messages to gather for each poll.	50
Receiver - SAPMkt (Address)	Service root URL of the OData service provider.	{{SAP_Mkt_Host}}/opu/odata/SAP/API_MKT_INTERACTION_SRV
Receiver - SAPMkt (SAP_Mkt_Host)	Host address of SAP Marketing Cloud	https://hostname.s4hana.ondemand.com/sap
Receiver - SAPMkt (Authentication)	Authentication type of OData service for SAP Marketing Cloud	Basic
Receiver - SAPMkt (Credential Name)	Credential name to connect to the system as deployed in the tenant.	KTAPIUSER
Receiver - SAPMkt (Timeout)	Maximum time system waits before termination.	5
Receiver - AWS_SFTP (Address)	Host name or IP address and port of the SFTP server.	xxx.server.transfer.eu-west-2.amazonaws.com
Receiver - AWS_SFTP (User Name)	ID of the user performing file transfer.	CPI_USER_PROD

Receiver - AWS_SFTP_LOG (Directory)	File path from where log files should be written.	DevelopmentLoads/LoadFiles/Interactions/Others/AfterSplit/Current/Error
Receiver - AWS_SFTP_LOG (File Name)	Name of the file name to be written.	error_log.csv
Receiver - AWS_SFTP_LOG (Address)	Host name or IP address and port of the SFTP server.	xxx.server.transfer.eu-west-2.amazonaws.com
Receiver - AWS_SFTP_LOG (User Name)	ID of the user performing file transfer.	CPI_USER_PROD
Receiver - HANA_DB (Address)	Emter service root URL of the OData endpoint to connect to HANA DB.	https://hostname.us3.hana.ondemand.com/custom_log/logservice.xsodata
Receiver - HANA_DB (Credential Name)	Enter credential name to connect to OData service for HANA DB logging.	KTAPIUSER
Receiver - HANA_DB (Timeout in min)	Maximum time system waits before operation is terminated.	1
More (Splitter Consurrent Process)	Number of processes running in parallel. Used for Splitter step.	5
More (Path to Exception Logs)	Path on FTP server where to write exception logs	DevelopmentLoads/LoadFiles/Interactions/Others/AfterSplit/Current/Logs/ ${property.origFileName}/${property.CamelSplitIndex}_Exception_${property.SAP_MessageProcessingLogID}.xml
More (Path to Failure Logs)	Path on FTP server where to write error logs	DevelopmentLoads/LoadFiles/Interactions/Others/AfterSplit/Current/Logs/ ${property.origFileName}/${property.CamelSplitIndex}_Failure_${property.SAP_MessageProcessingLogID}.xml

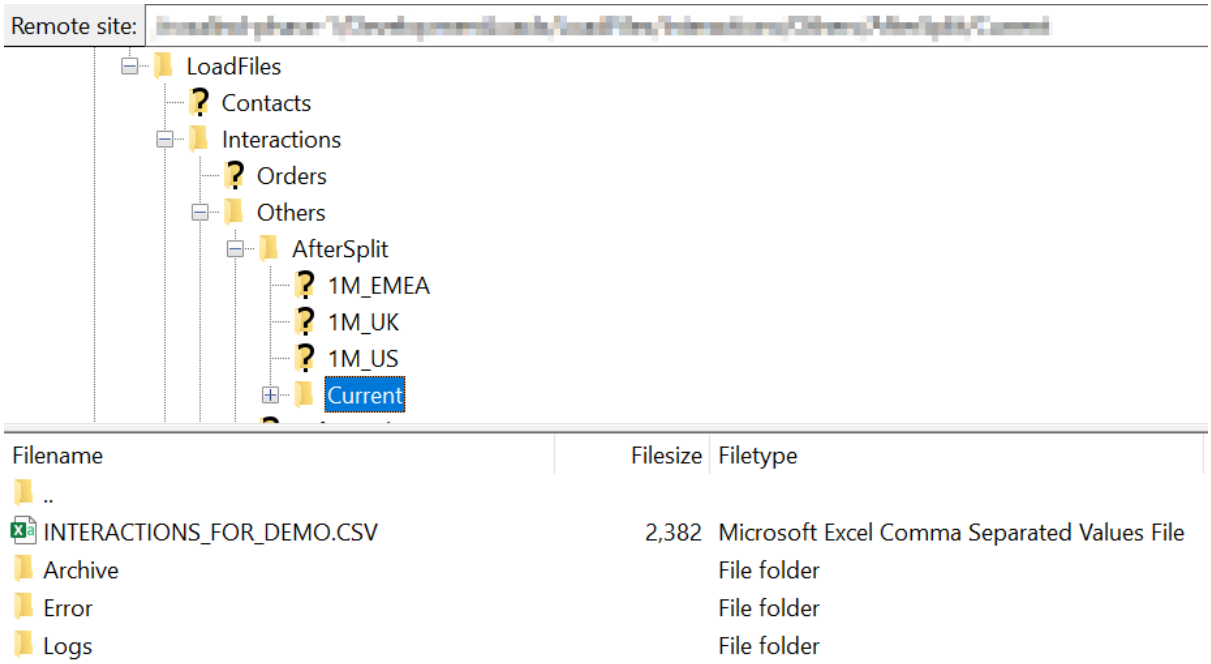
More (Splitter Grouping)	Specify the group size in which composite message should be split.	5
More (Path to Successful Logs)	Path on FTP server where to write logs of successfully processed records	DevelopmentLoads/LoadFiles/Contacts/C4M/AfterSplit/Current/Logs/${property.origFileName}/${property.CamelSplitIndex}_Success_${property.SAP_MessageProcessingLogID}.xml
More (Splitter Timeout)	Maximum waiting time to contact the FTP server while establishing connection or performing a write operation.	10800
More (Splitter Xpath Expression)	Xpath expression to navigate to the split item using absolute path.	/batchParts/batchChangeSet/batchChangeSetPart/InteractionsDeepInsert/InteractionDeepInsert/Interactions/Interaction

5 STEPS FOR TESTING THE IFLOW

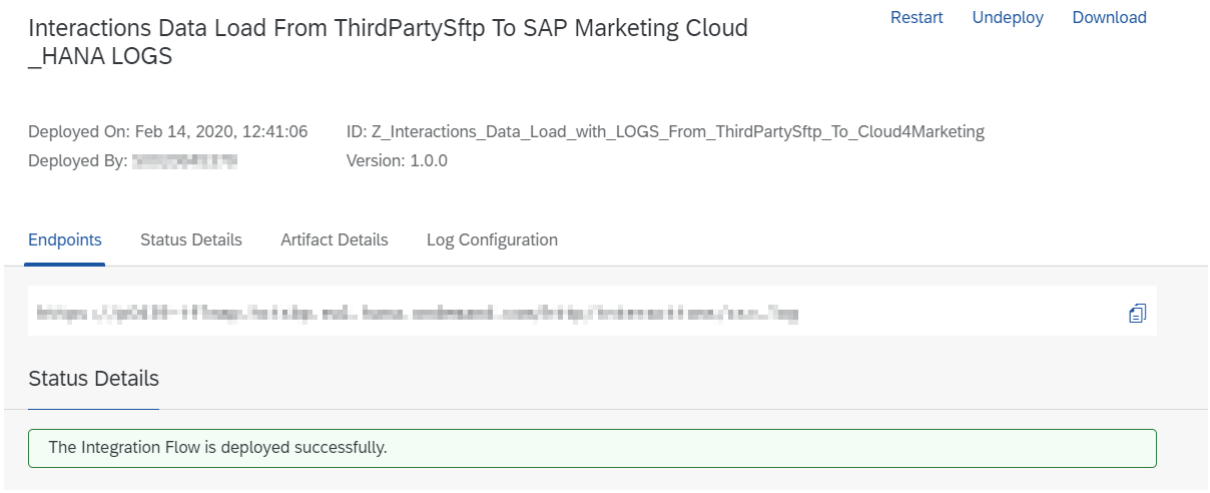
Step 1. Access the WEB UI URL on your SAP Cloud Platform Integration tenant.

It should be in the format https://.hci.us1.hana.ondemand.com/itspaces

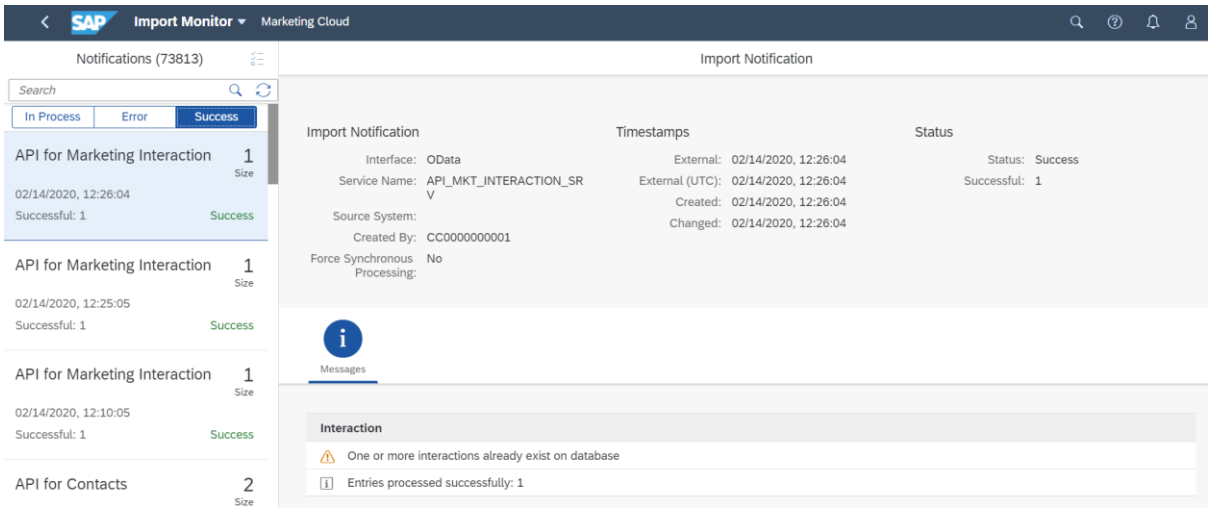
Step 2. Place the file in the SFTP server using Filezilla or other FTP client in the designed directory



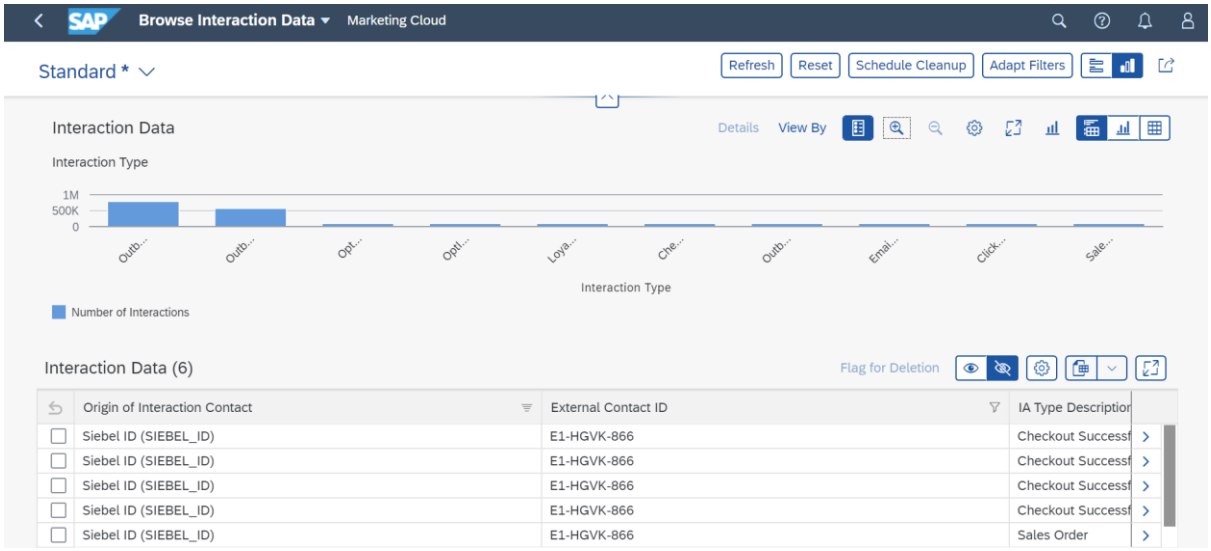
Step 3. Configure iflow and deploy. The iflow should be deployed.



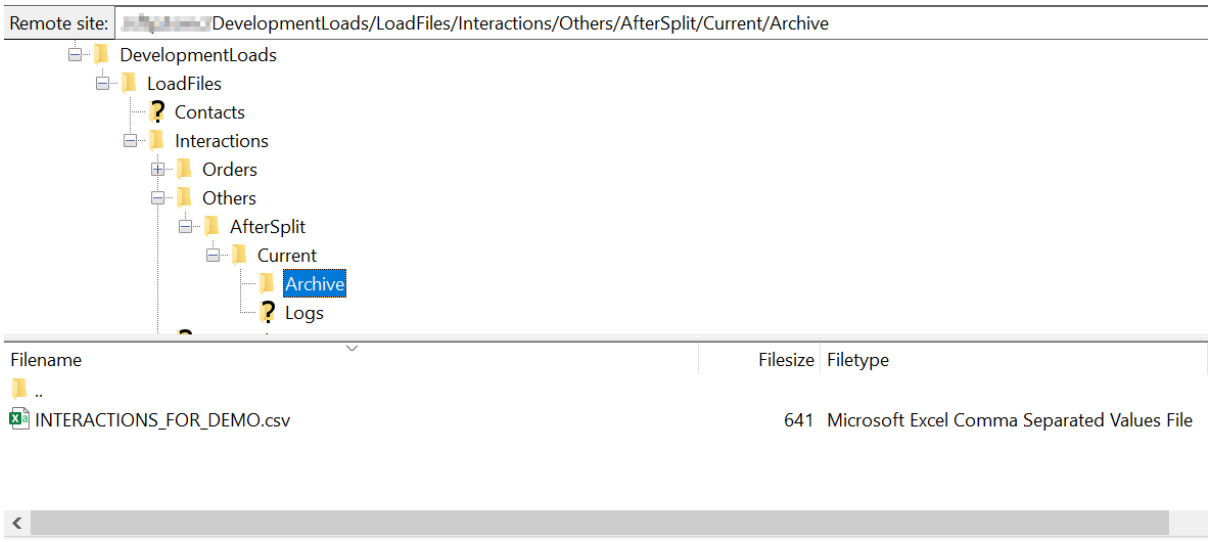
Step 4. Check the interaction is created in the SAP Marketing Cloud Using the Fiori App "Import Monitor"



and "Browse Interaction Data".



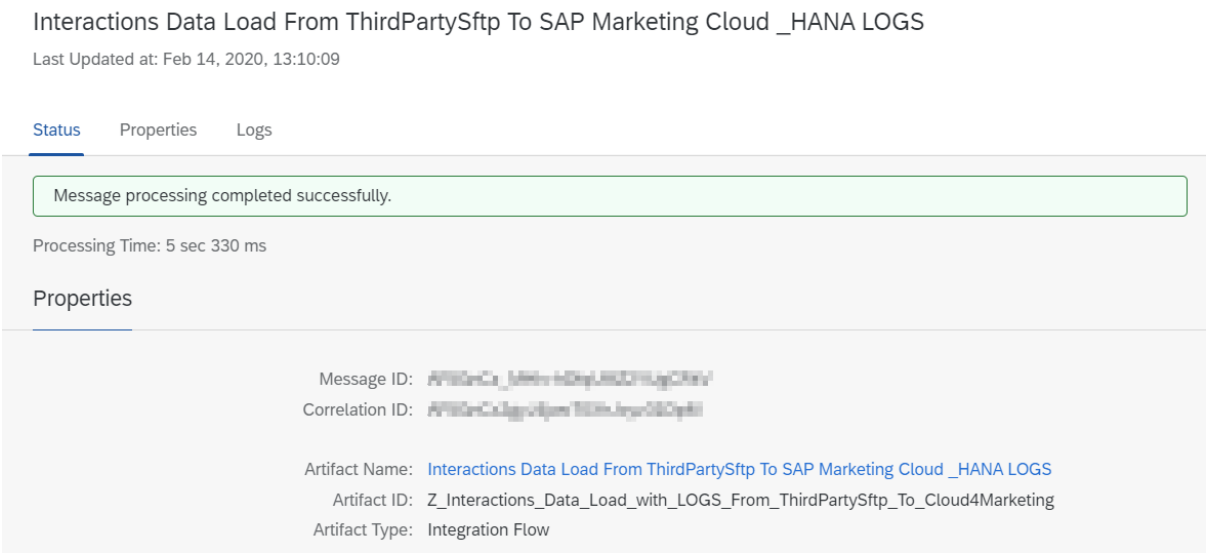
Step 6. Make sure source file has been moved to Archive folder after it has been processed.



Step 7. If hana_log parameter is "X" - check the HANA log table to see how many packets are successfully processed and how many packets failed.

	Created	FileName	Packet	Status	Message	Id	Payload
1	31.10.2019 16:00:04	INTERACTIONS_FOR_DEMO.CSV	4	Success		311020191600004-4	<notification xmlns:sap=
2	31.10.2019 16:00:05	INTERACTIONS_FOR_DEMO.CSV	8	Success		311020191600005-8	<notification xmlns:sap=
3	31.10.2019 16:00:05	INTERACTIONS_FOR_DEMO.CSV	5	Success		311020191600005-5	<notification xmlns:sap=
4	31.10.2019 16:00:05	INTERACTIONS_FOR_DEMO.CSV	1	Success		311020191600005-1	<notification xmlns:sap=
5	31.10.2019 16:00:06	INTERACTIONS_FOR_DEMO.CSV	0	Success		311020191600006-0	<notification xmlns:sap=
6	31.10.2019 16:00:24	INTERACTIONS_FOR_DEMO.CSV	3	Success		311020191600024-3	<notification xmlns:sap=

Step 8. Access the Monitor tab (Operations view) on the left side in the navigation for the "Integration Flow " to see the IFLOW processing status



Step 9. To make sure iflow has been processed in the right way - increase log to debug or trace and check detailed log.