[Contacts Data Load From ThirdPartySftp To SAP Marketing Cloud]

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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 Customers 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 customers 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:

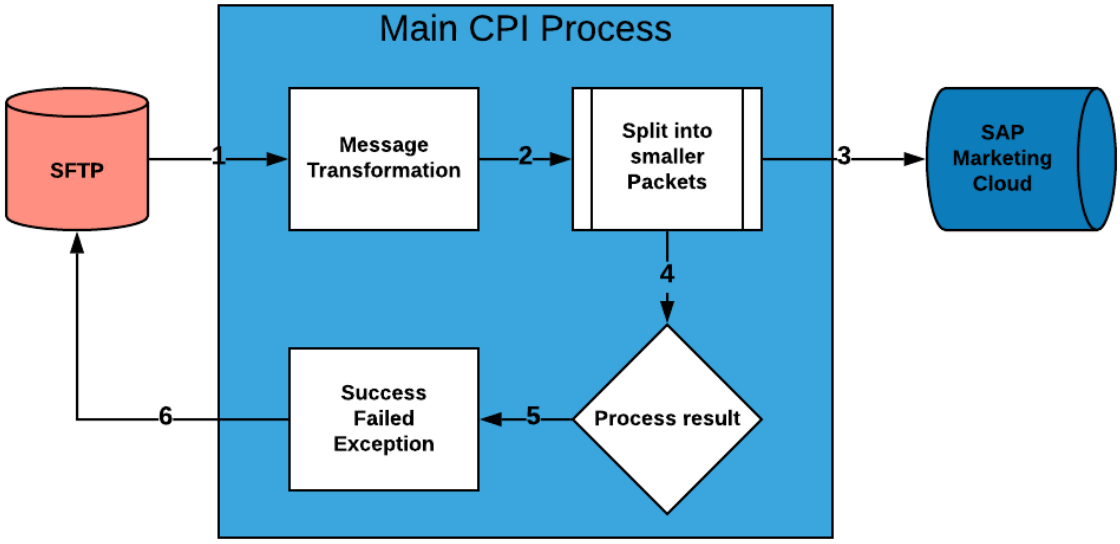
1. The error handling capability delivered in the standard integration triggers alerts via e-mail which is really not a good use case for complex large volume migration projects unless someone wants to jam their inbox with millions of error e-mail alerts.
2. There is no mechanism for full audit logging 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 customers that are split into 200 files of 100k records and split into 2000k 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.
3. 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 AWS S3 buckets.

2 OVERVIEW

This Integration Flow reads millions of customers from AWS S3 Buckets (100k records for each file) and splits them into 5K or 1k OData API packets before sending data to the SAP Marketing Cloud Systems (5k OData Packet).

Please check the below diagram to understand the end-to-end process.



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 packet of the file is successful and which packet is failed. A log folder is created with same name as "source file name" for each file and response of each packet of the file is stored in the AWS S3 with a prefix <PacketNumber_Success/Failure> to easily find out whether a packet is failed or successful for every file that is loaded.

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 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/Contacts/C4M/AfterSplit/Current
Sender (FileName)	Source File Name on SFTP server. A file from where to load data.	test_contacts.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 Processing (Lock Timeout)	How long to wait before trying to process the file again.	20
Sender (Change Directories Stepwise)	Changes directory	true

	levels one at a time	
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}}/sap/opu/odata/SAP/API_MKT_CONTACT_SRV;v=0002
Receiver - SAPMkt (SAP_Mkt_Host)	Host address of SAP Marketing Cloud	https://myxxx.s4hana.ondemand.com
Receiver - SAPMkt (Authentication)	Authentication type of OData service for SAP Marketing Cloud	Basic
Receiver - SAPMkt (Credential Name)	Credential name to connect to	KTAPIUSER

	the system as deployed in the tenant.	
Receiver - SAPMkt (Timeout)	Maximum time system waits before termination.	10
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/Contacts/C4M/ 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
More (Splitter Concurrent Processes)	This configuration parameter is used to split the file into multiple OData packets . If the packet size is 5000 then 5000 interactions	5

	will be sent to marketing system in one API Call	
More (Path to Exception Log)	Path on FTP server where to write exception logs	DevelopmentLoads/LoadFiles/Contacts/C4M/AfterSplit/Current/Logs/ ${property.origFileName}/${property.CamelSplitIndex}_Exception_${property.SAP_MessageProcessingLogID}.xml
More (Path to Failure Log)	Path on FTP server where to write error logs	DevelopmentLoads/LoadFiles/Contacts/C4M/AfterSplit/Current/Logs/ ${property.origFileName}/${property.CamelSplitIndex}_Failure_${property.SAP_MessageProcessingLogID}.xml
More (XML Converter - XSD Path)	Path to Target Element in XSD	CSV_Contacts/Contact
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 Packet Size)	This configuration parameter is used to split the file into multiple OData packets . If the packet size is 5000 then 5000	5000

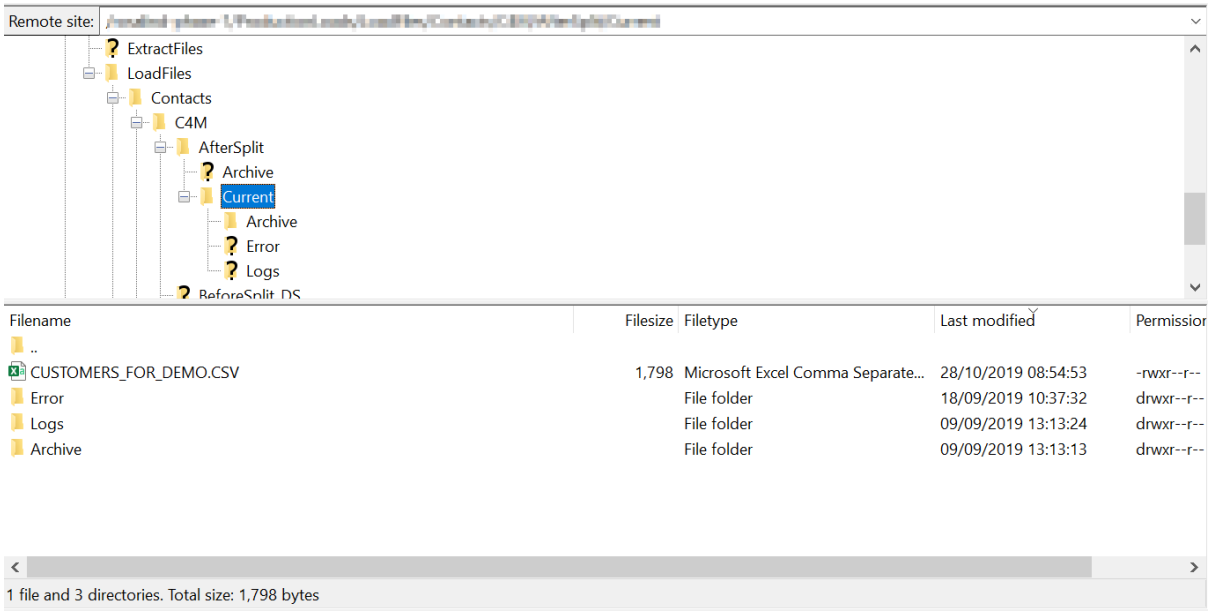
	interactions will be sent to marketing system in one API Call	
More (XPath Expression)	Xpath expression to navigate to the split item using absolute path.	/CSV_Contacts/Contact

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

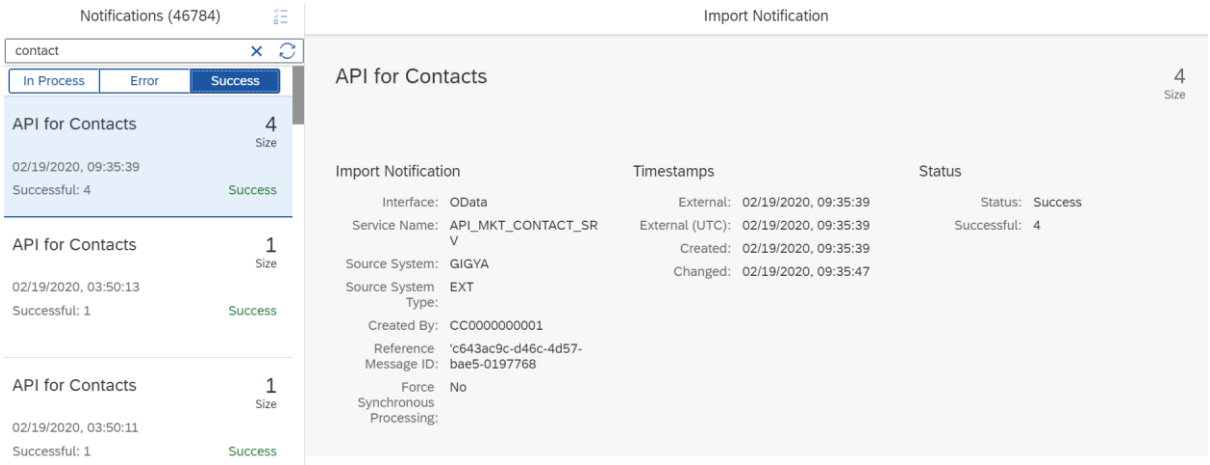
Step 2. Place the file in the SFTP server using Filezilla or other FTP client in the designed directory



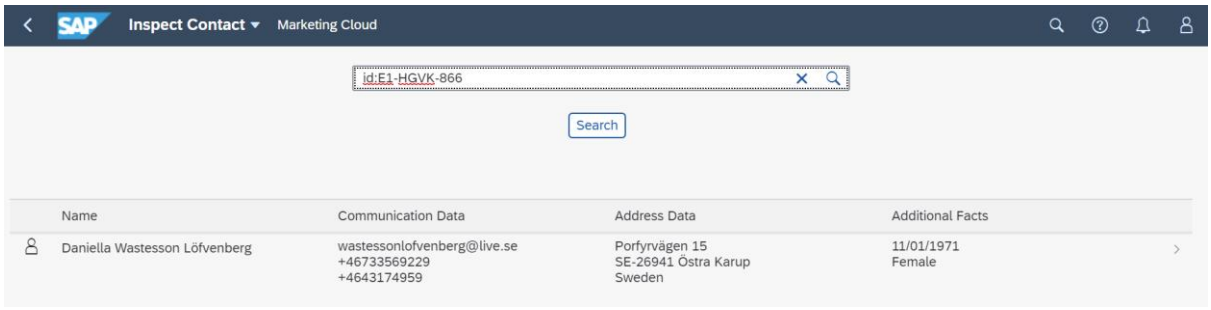
Step 3. Configure iflow with above parameters in step 4 and deploy. The iflow should be deployed.

Step 4. Login to SAP Marketing Cloud and go to Import Monitor app. You should be able to see status of processed message.

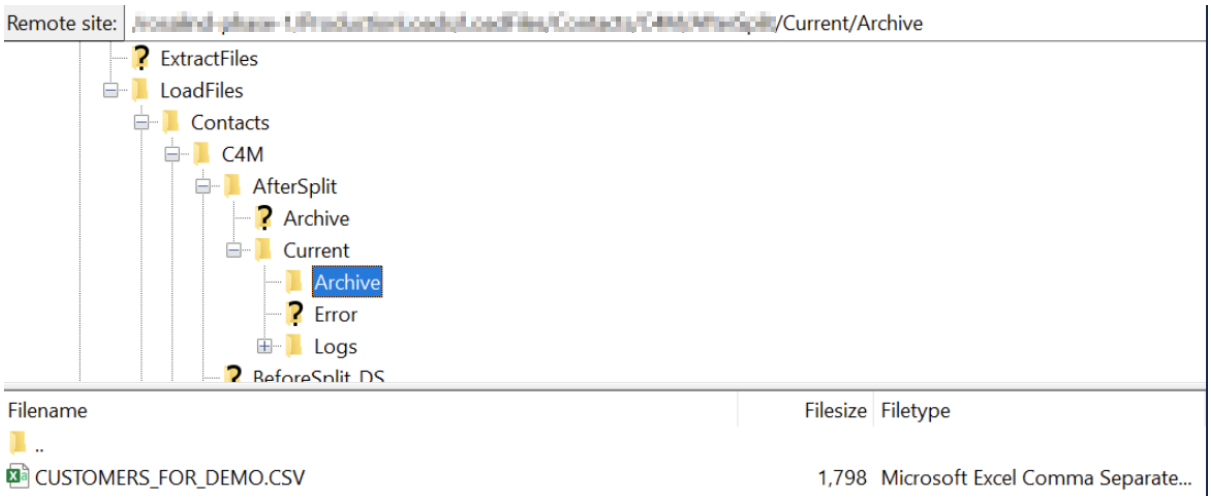
If there is a message - fix an error and start process from the beginning.



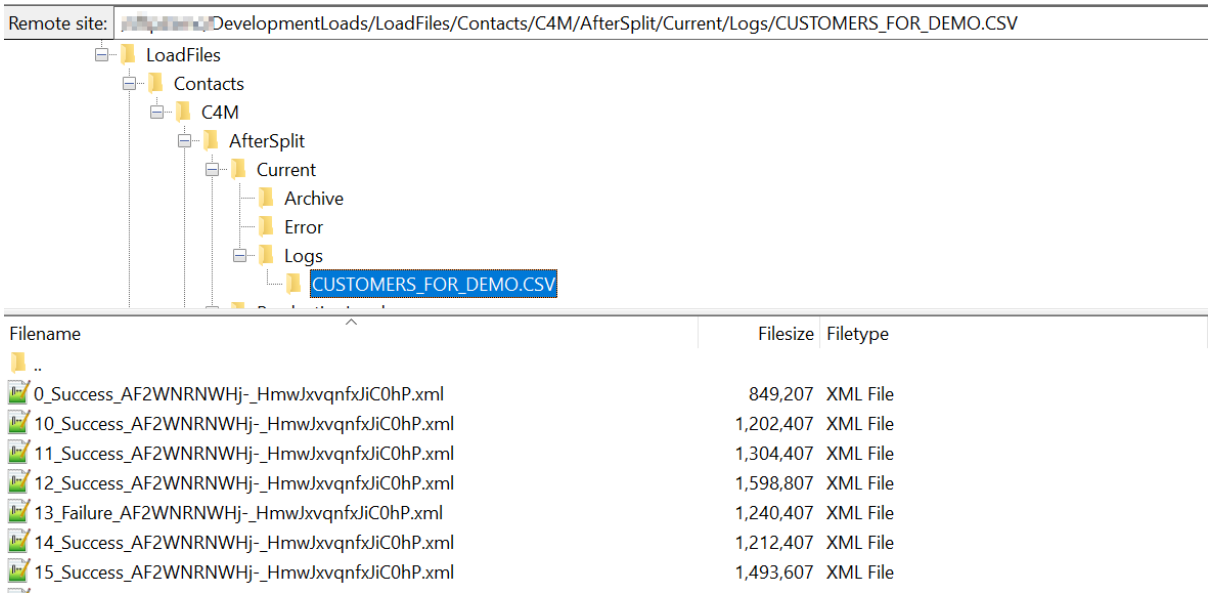
Step 5. Check the customer is created in the SAP Marketing Cloud Using the Fiori App "Inspect Contact"



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



Step 7. Check the AWS SFTP log to see how many packets are successfully processed and how many packets failed.



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

Contacts Data Load From ThirdPartySftp To SAP Marketing Cloud Last Updated at: Jan 10, 2020, 10:05:08

Status Properties Logs

Message processing completed successfully.

Processing Time: 3 sec 833 ms

Properties

Message ID: AF4YTFFT7suzuW_ByCVBJuix3c_S
Correlation ID: AF4YTFEmBg31c_Beedt6nRdVuVov

Artifact Name: Contacts Data Load From ThirdPartySftp To SAP Marketing Cloud
Artifact ID: Z_Contacts_Data_Load_From_ThirdPartySftp_To_Cloud4Marketing
Artifact Type: Integration Flow

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