Main Frame Batch Transformation

Background

- Enterprise decision to retire IBM mainframe COBOL/JCL/VSAM/DB2/CICS components
- legacy skills availability
- Quick Time to Market enhancements for business
- Applications are targeted for rewrite
- Applications are early stages of sunset



Objective

- Re-engineering applications to java
- Migrate Cobol Batch to Java Batch
 - ✓ Transaction management
 - ✓ Support Features Monitoring, Logging/Tracing
 - √ High Volume Support features (Partitioning, Clustering)
 - ✓ Batch Resource management
 - ✓ Batch restart, commit, rollback management
 - ✓ Batch processing statistics



Main Frame Apps by LOB

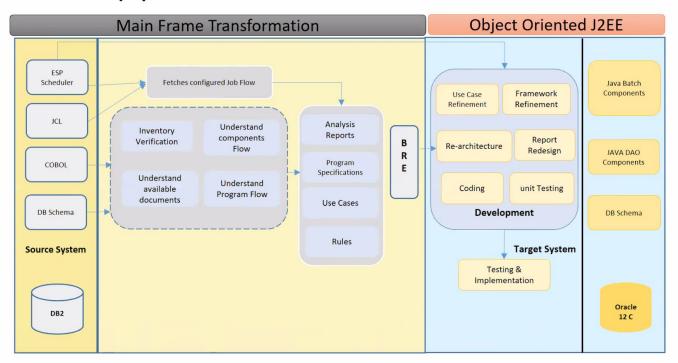
l No	Track in Road Map	Year	Quarter	LOB	Application	Jobs	Screens	Dependencies	Data in Oracle	Hard Dependency?
1	A4	2018	Q2		Vendor Reports	4		None		
2	A4	2018	Q2		Vendor Performance	3		None		
3	A4	2018	Q2		Order Catalogs	12		None		
4	A4	2018	Q2		ATM Recon	7.		None		
5	A4	2018	Q3		Store Decision Support	3		None		
6	A4	2018	Q3		eDC Alert Email	1		None		
7	A4	2018	Q3	Retail Pricing	Promo Planner	5		None	Yes	
8	A4	2018	Q3	Product	WIC	7		Event Manager	Yes	No
9	A4	2018	Q4	Product	Host scales system	26		None	Yes	
10	A6	2019	Q1	Store Systems	Signs and Tag	22		None	Yes	
11	A6	2019	Q1	Accounting	Damage Track	10		Invoice Data	Yes	Yes
12	A6	2019	Q3	Enterprise	Scan Maintenance	42		Event Manager	Yes	Yes
13	A5	2019	Q3	Enterprise	BI Feed	49		Event Manager	Yes	Yes
14	A5	2019	Q3	Enterprise	Manugistics Integration Feed	8		Event Manager	Yes	Yes
15	A5	2019	Q3	Enterprise	CMIS Feed	34		Event Manager	Yes	Yes
16	A5	2019	Q3	Enterprise	SRS Feed	3		Event Manager	Yes	Yes
17	A5	2019	Q3	Enterprise	DI Feed	4		Event Manager	Yes	Yes
18	A4	2019	Q4	Enterprise	WMS Inventory Management	28	6	ОМІ	No	Yes
19	A6	2019	Q4	Pharmacy	Pharmacy warehosue returns	3	12	FEOB, Bill Mast	No	Yes
20	A4	2019	Q4	Supply Chain	Bakery	12		FEOB, Bill Mast	No	Yes
21	A6	2020	Q1	Pharmacy	Third Party Pharmacy Receivables	45	5	Pharmarcy DB2	No	No
22	A6	2020	Q2	Accounting	SOAP	28		Accounting	No	Yes
23	A6	2019	Q2		POS Cashier History Processing	15		SOAP		Yes
24	A6	2020	Q2	Accounting	Daily Scan Movement	51		FEOB, Bill Mast		Yes

- √ Highlighted in Green are marked as Obsolete Retired
- ☐ Highlighted in Yellow Target to retire by Q1-2019

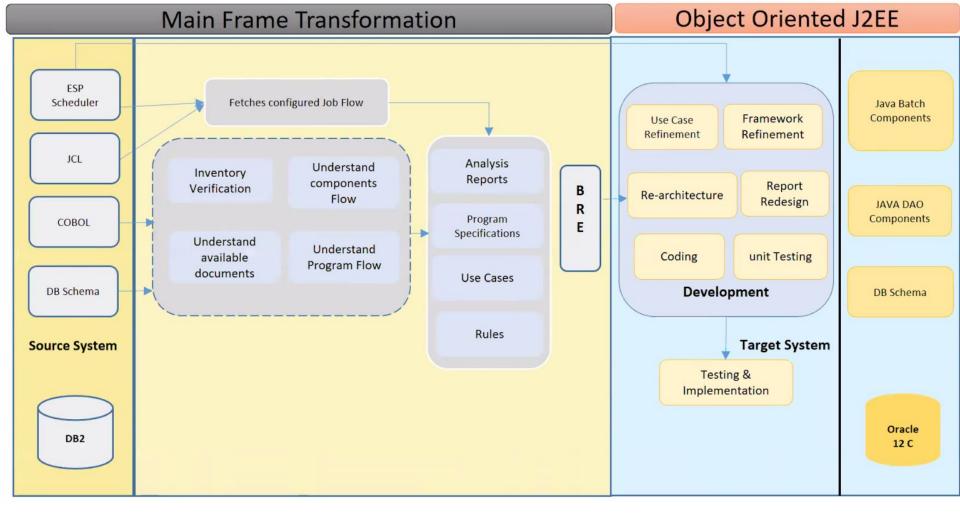


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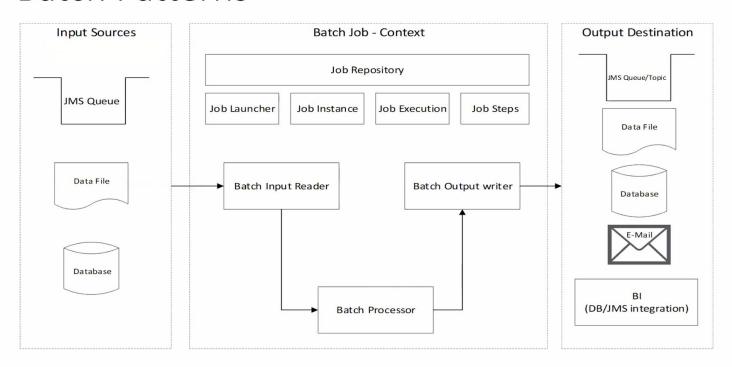
Solution Approach







Batch Patterns



Spring Batch Framework



Batch Rewrite - WIC

Scope:

There are 7 mainframe batch jobs that has been classified under WIC

- Accounting (5): These jobs have been found to be running with empty input and generating unused reports. These can be obsoleted
- Product Master (2): Accept file from Texas State and update Product Master, feed to POS.

High Level Functions

Receive daily file from Texas State and perform preliminary validations

 Compare WIC UPCs from Product Master and file from Texas State and update product master

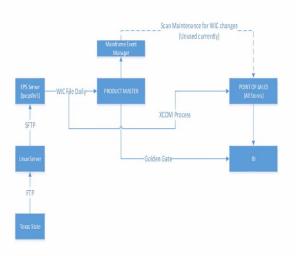
B

XCOM the file from Texas State to all Stores, POS gives a copy of the file to BI

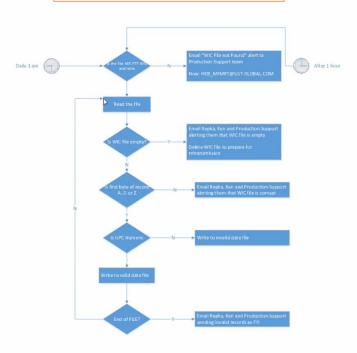


WIC – Job flow

High Level Job Flow

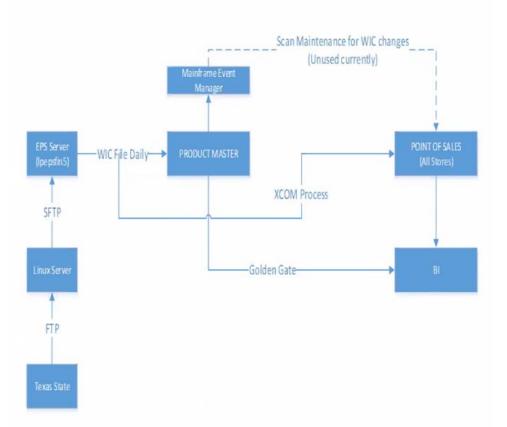


Detail Steps

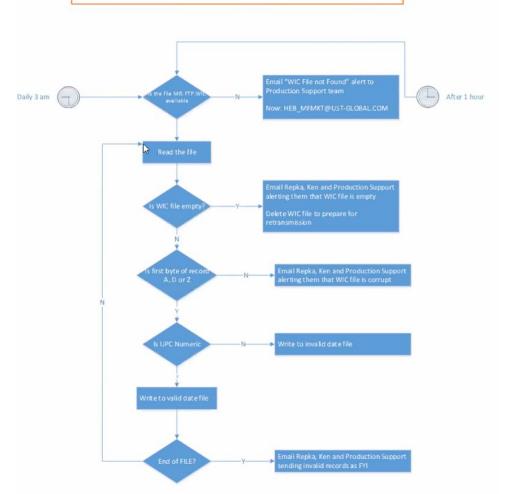




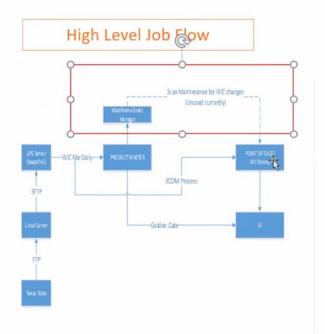
High Level Job Flow

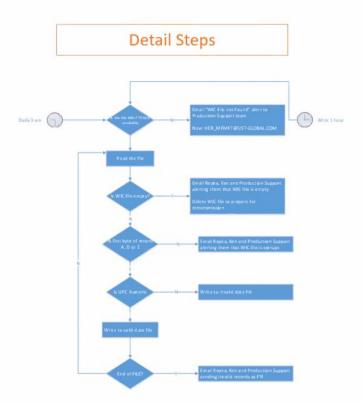


Detail Steps



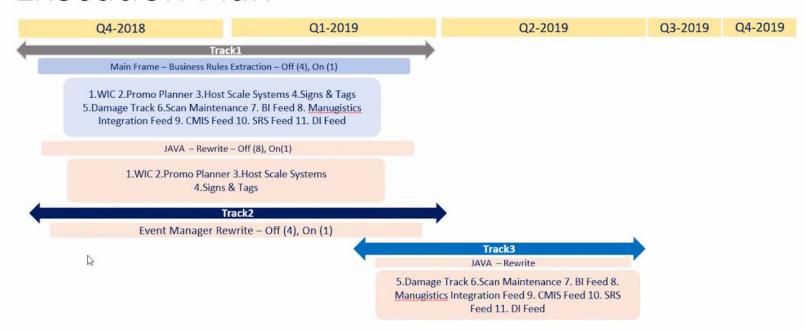
WIC – Job flow







Execution Plan





Detailed Steps – Function 2

- Create the below files:
 - File from Texas State after stripping Header, Trailer
 → File 1
 - Extract corresponding fields from PROD_SCN_CD_WIC
 Where CRE8_UID = 'TXSTATE'

 → File 2
- Compare File 1 and File to identify the records that needs to be
 - Inserted in WIC_CAT, WIC_SUB_CAT
 - Inserted in PROD_SCN_CD_WIC
 - Deleted from PROD_SCN_CD_WIC
 - Updated in PROD SCN CD WIC
- Perform those DB actions
- When inserting/updating PROD_SCN_CD_WIC, also update PROD_SCN_CODES with WIC_SW = Y and WIC_APL_ID

However, the data in the tables doesn't correspond to this logic

```
| SELECT PSC.WIC_SW, COUNT(*)
| PROM DBJPROD.PROD_SCN_CD_WIC PSW
| ELET CUTER JOIN DBJPROD.PROD_SCN_CODES PSC ON
| (PSC.SCN_CD_ID * PSW.SCN_CD_ID)
| WINCER
| PSW.CREG_UID * 'INSTATE'
| GROUP BY PSC.WIC_SW
| | MIC_SW
| M
```

Send an email to <u>Tablada Daniel</u>: <u>McCue_Tiffany</u>; <u>Abrego_Vanessa</u> C with a CSV report of the delta that was applied to Product Master

Texas State File	Definition	PROD_SCN_CD_WIC	Comments
ID-CODE	<u>X(</u> 02)		"DA"
SEQUENCE-NBR	9(06)		
MESSAGE-ID	9(04)		344
APL-PREFIX	9(01)	WIC-APL-ID	
UPC-KEY	9(15)	SCN CD ID	
CHECK-DIGIT	9(01)	SCN_CD_ID	
DESC	X(50)	WIC-PROD-DES	
CATEGORY-CD	9(02)	WIC-CAT-ID	
CATEGORY-DESC	<u>X(</u> 50)	Use to create entry in WIC_CAT if it doesn't exist	
SUBCATEGORY-CD	<u>X(</u> 03)	WIC-SUB-CAT-ID	
SUBCATEGORY- DESC	<u>X(</u> 50)	Use to create entry in WIC_SUB_CAT if it doesn't exist	
UNIT-OF-MEASURE	X(10)	WIC-UNT-TXT	
PACKAGE-SIZE	9(03)V9(02)	WIC-PKG-SZ-QTY	
BENEFIT-QTY	9(03)V9(02)	WIC-BNFT-QTY	
BENEFIT-UNIT	<u>X(</u> 50)	WIC-BNFT-UNT-TXT	
ITEM-PRICE	9(04)V9(02)	WIC-PRC-AMT	
PRICE-TYPE	<u>X(</u> 02)	WIC-PRC-CD	
CARD-ID-CD	X(15)	WIC-CRD-ACPT-ID	
EFF-DATE	9(08)	EFF_DT	
END-DATE	9(08)	END_DT	
		LEB_SW	"N"
		CRE8_TS	
		CRE8_UID	
		LST_UPDT_TS	
		LST_UPDT_UID	"TXSTATE"

Detailed Steps – Function 3

- The file from Texas State is XCOMed to every store As-Is, including UPCs that are not in HEB Catalog.
- When PROD_SCN_CD_WIC is updated WICE event from New Scan Maintenance is triggered.
 POS has not started consuming this event yet, once they do the XCOM process can be retired.

So, we would want to keep the XCOM process to every store. Also keep in mind that the corresponding process in distributed world, will need to ensure that when a new store opens it needs to be brought in to this process as well.

1.2. Ongoing/Planned Activities

Highlights

- 8/22 Rollout for Batch Jobs complete
- Redirection Development for next rollout on 9/22 and 10/6 In Progress
- SIT for 10/6 Go-live in Progress
- Received 7 Jira related tasks for DCM Enhancements, Utilizing the extra bandwidth available for this activity,
- 3 Batch Jobs for 10/6 Design/Development yet to be complete (Apex, Scan Merge, PAT report). Fall back plan will be executed from 8/30 for the 3 Jobs if design progress is not made

Track		Oracle Standup	
Go-Live Planned	9/8		
RAG	•		
Oracle Tables	95		
ETL	Complete (95)		
MF Data / DAO Fixes	Complete		

Track	Read Only Apps	DB2 to Oracle Redirection
Go-Live Planned	9/22	10/6
RAG		
	4/5 – Complete, ETA 8/31 PACE Recommendations 1/1 – In Progress	5/11 Application – Complete (CPS, PM, DSV,
Java Application	36/36 Scode DAO Complete. 20/36 Scode Screen Development Complete and UT in Progress.	DCM, PRM) E1A = 8:31
TIBCO Redirection	5 Services 6/6 Operation Complete	15 Service, 140/313 Operation Complete - ETA-
MF Batch Redirection	NA	OMI Online - Complete (22), Other Batch 50/57 - Complete. ETA 8/31
Scode Rewrite	37 Screens - ETA 9/6	
Test Case Prep	Complete	Complete
Test Execution	YTS	In Progress for OMI, DCM,CPS, MF and JAVA

1.3. Help needed from HEB Leadership

SI.No	Track	Description
1	Java Application Redirection	 We need to get shared environment for the below mentioned six jave application from the respective application owners by 8/31 COMS PAT SRS-Handheld EOM Vendor EOM STS-Web

1.4. Testing

Accomplishment

- Automation Scripting completed till Offer approval flow for Overlay, Flat Rate Deal and Cost Change scenarios (90
- Automation Scripting Completed for Location Group-Create and Maintain functionalities (40 TC's Automated).
- Automation Scripting Completed for BDC Screen (30 TC's Automated).
- DCM Perf tuning changes implemented on 8/22
- MF Skip 1156/48s components are implemented on 8/22

4 JAVA Batch jobs are implemented on 8/22

In Progress

- Java batch rewrite testing In-Progress for remaining 8/22 release jobs (J11W031D & J11W033D).
- Automation Scripting In-Progress for Deal Maintenance Screen (90% Completed).
- Redirection Testing for DCM, CPS has been started for 10/6 Go-live.
- MF and JAVA Batch redirect testing are In-Progress (30% Completed).
- OMI Online Testing is In-Progress (60% Completed).

Total# of Defects	Open	Re-open	Fixed	Testing/Certified	Rejected	Working	Deferred	Closed
398	6	1	0	4	5	0	25	357

1.5. Performance Analysis

Defect Summary

Accomplishment

- Code/Design recommendations provided for the following DAO services to address performance issues
- getEntireOffer getEntireDealHeader
- - getEntireSodIDeal getWorkSpaceByStatus
- General DB recommendations and also upgradation of DB connection pool jar provided
- Splunk dashboard for performance view of transaction created and updated with log details from application server · Submitted an interim report with the recommendations and response time behavior
- Code profiling of DCM UI
- Production health report from infrastructure & JVM stand point
- · Code profiling of Java batch jobs

2. Non Master Data Migration

2.1. Achievements

3. Remove Obsolete MF Components

3.1. Achievements

Sub Track	Status	ETA	Target for 8/31	Target for 9/7
Retire 8 DB2 tables	Completed	8/22	None	None
Retire Alert Cleanup application	In Progress	9/19	None	None
Retire Finished Goods	In Progress	9/19	None	None