

PlanNOW!

Batch Design Document

Enterprise Planning Batch Facility Release 2020.1

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# EP Batch Facility Design Document

### Document Purpose

The purpose of the EP Batch Facility Design Document is to define the blueprint for the implementation of the Enterprise Planning Batch Facility (EBF) which is comprised of a base installation, integration support, script configuration and global variable configuration. This document is also intended to serve as a batch operations guide.

Refer to the EP Functional Design Document for details about the functional requirements and refer to the EP Technical Design Document for specifics about configuration of the Enterprise Knowledge Base (EKB). To learn more about the architecture, features and components of the EBF, read the EP Batch Facility document.

### Audience

This document is directed at EP Technical personnel who have a working knowledge of the EP Batch Facility.

### Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description** |
| 1.0 | March 3, 2022 |  | Initial Draft |
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# Section 1: Script Configuration

Configuration covered in this section is accomplished by modifying the specified scripts using a text editor such as NotePad.

### Wrapper Scripts

The following scripts need to be manually modified to replace the default StartProcess command line with the implementation specific one identified in the table below.

|  |  |
| --- | --- |
| **SCRIPT NAME** | **START PROCESS COMMAND LINE** |
| **ActualsCubeSync.bat** | StartProcess ^  "CubeSync.bat plan\_actual PLAN\_ACTUAL" |
| **FoundationActualsDataUpdate.bat** | StartProcess 2 ^  "ActualsDataUpdate.bat ACTUAL\_INVBAL" ^  "ActualsDataUpdate.bat ACTUAL\_MKDNS" ^  "ActualsDataUpdate.bat ACTUAL\_RECEIPTS" ^  "ActualsDataUpdate.bat ACTUAL\_SALES" ^  "ActualsDataUpdate.bat ACTUAL\_ON\_ORDER" ^  "ActualsDataUpdate.bat ACTUAL\_OTHINV" |
| **FoundationPlanDataUpdate.bat** | StartProcess 4 ^  "PlanDataUpdate.bat PL\_BUL2" ^  "PlanDataUpdate.bat PL\_BULP" ^  "PlanDataUpdate.bat PL\_BUP1" ^  "PlanDataUpdate.bat PL\_BUP2" ^  "PlanDataUpdate.bat PL\_LL" ^  "PlanDataUpdate.bat PL\_LP" ^  "PlanDataUpdate.bat PL\_MOL2" ^  "PlanDataUpdate.bat PL\_MOLP" ^  "PlanDataUpdate.bat PL\_MOP2" ^  "PlanDataUpdate.bat PL\_MOPP" ^  "PlanDataUpdate.bat PL\_OL" ^  "PlanDataUpdate.bat PL\_OP1" ^  "PlanDataUpdate.bat PL\_RL" ^  "PlanDataUpdate.bat PL\_RP1" ^  "PlanDataUpdate.bat PL\_STP2" ^  "PlanDataUpdate.bat PL\_STPP" ^  "PlanDataUpdate.bat PL\_TDL2" ^  "PlanDataUpdate.bat PL\_TDLP" ^  "PlanDataUpdate.bat PL\_TDP1" ^  "PlanDataUpdate.bat PL\_TDP2" |
| **PlanCubeSync.bat** | StartProcess 4 ^  "CubeSync.bat plan\_bulp PLAN\_BULP" ^  "CubeSync.bat plan\_bupp PLAN\_BUPP" ^  "CubeSync.bat plan\_molp PLAN\_MOLP" ^  "CubeSync.bat plan\_mopp PLAN\_MOPP" ^  "CubeSync.bat plan\_stpp PLAN\_STPP" ^  "CubeSync.bat plan\_tdlp PLAN\_TDLP" ^  "CubeSync.bat plan\_tdpp PLAN\_TDPP" |
| **QuartzCubeSync.bat** | StartProcess 4 ^  "CubeSync.bat plan\_actual PLAN\_ACTUAL" ^  "CubeSync.bat plan\_bulp PLAN\_BULP" ^  "CubeSync.bat plan\_bupp PLAN\_BUPP" ^  "CubeSync.bat plan\_molp PLAN\_MOLP" ^  "CubeSync.bat plan\_mopp PLAN\_MOPP" ^  "CubeSync.bat plan\_stpp PLAN\_STPP" ^  "CubeSync.bat plan\_tdlp PLAN\_TDLP" ^  "CubeSync.bat plan\_tdpp PLAN\_TDPP" |
| **QuartzPurgeAgedData.bat** | StartProcess 4 ^  "CubePurgeAgedData.bat plan\_actual PLAN\_ACTUAL" ^  "CubePurgeAgedData.bat plan\_bulp PLAN\_BULP" ^  "CubePurgeAgedData.bat plan\_bupp PLAN\_BUPP" ^  "CubePurgeAgedData.bat plan\_molp PLAN\_MOLP" ^  "CubePurgeAgedData.bat plan\_mopp PLAN\_MOPP" ^  "CubePurgeAgedData.bat plan\_stpp PLAN\_STPP" ^  "CubePurgeAgedData.bat plan\_tdlp PLAN\_TDLP" ^  "CubePurgeAgedData.bat plan\_tdpp PLAN\_TDPP" |

### EP Batch Facility Environment Variables

The following environment variables allow for implementation specific configuration of the EP Batch Facility. These variables and their values are defined in the GlobalVariables.bat file.

|  |  |  |
| --- | --- | --- |
| **VARIABLE** | **VALUE** | **DATASTAGE ONLY** |
| **DATASOURCE** | [database SID] |  |
| **FOUNDATIONUSER** | ekb |  |
| **MULE** | Y |  |
| **MULEENV** | dev |  |
| **MULELABEL** | defaultLabel |  |
| **CLEARIMPORTTABLESURL** | http://localhost:9091/clear/ekbsimporttables |  |
| **CREATEAGTABLESURL** | http://localhost:9091/init/agtables |  |
| **GETBATCHRESULTURL** | http://localhost:9091/result/ |  |
| **GETEKBSCHEMACONFIGURL** | http://localhost:9091/config/ep |  |
| **GETEXTSCHEMACONFIGURL** | http://localhost:9091/config/ji |  |
| **INITEXTSCHEMAURL** | http://localhost:9091/init/extschema |  |
| **PENDINGBATCHPROCESSESURL** | http://localhost:9091/import/pendingbatches |  |
| **PROCESSBERELDATAURL** | http://localhost:9091/import/crossdimrel |  |
| **PROCESSMEMBERDATAURL** | http://localhost:9091/import/memberdata |  |
| **PROCESSMETADATAURL** | http://localhost:9091/import/metadata |  |
| **SETJIPROPERTIESURL** | http://localhost:9811/cps/api/v1/application/ji/properties |  |
| **EKBSCHEMAPROPS** | "?categories=%FOUNDATIONUSER%&environment=%MULEENV%&label=%MULELABEL%" |  |
| **EMAILPROPS** | "?categories=email&environment=%MULEENV%&label=%MULELABEL%" |  |
| **EXTSCHEMAPROPS** | "?categories=%JIUSER%&environment=%MULEENV%&label=%MULELABEL%" |  |
| **FRAMEWORKPROPS** | "?categories=eFramework&environment=%MULEENV%&label=%MULELABEL%" |  |
| **HTTPPROPS** | "?categories=http&environment=%MULEENV%&label=%MULELABEL%" |  |
| **JIPROPS** | "?environment=%MULEENV%&label=%MULELABEL%" |  |
| **JIUSER** | ext |  |
| **DSDIR** | D:\IBM\InformationServer\Clients\Classic\ | X |
| **DSPASSWORD** | isadmin | X |
| **DSPROJECT** | SPEXTEPSD | X |
| **DSSERVER** | [primary mid-tier server] | X |
| **DSUSER** | isadmin | X |
| **PRISEC** | primary |  |
| **SERVERCLONES** |  |  |
| **CONTEXTNAMES** | EPPlan |  |
| **DEFAULTINCREMENT** | +WEEK |  |
| **DEFAULTFTFTABLE** | PF\_FT\_ACTUAL\_RECEIPTS\_000 |  |
| **DEFAULTFTFTIMECOLUMN** | CALENDAR\_KEY |  |
| **ALLOWED\_ERROR\_CODES** |  |  |
| **FORCEEMPTY** | ACTUAL\_ON\_ORDER |  |
| **FULLSTATEMENT** | ACTUAL\_ON\_ORDER |  |
| **TRIGGERPATH** | \\[admin sever]\Toolkit\Corporate\Plan\trigger.ini |  |
| **ARCHIVEFILEEXTENSIONS** | log,trc,errlist,errors,infolist,bin,shape,facttables,sr,tmp,merged,sts |  |
| **EXPIREDAYS** | 28 |  |
| **QUARTZHOMEPATHS** | C:\ProgramData\JDA\EKB |  |
| **CLOUD** | Y |  |
| **SFTPPATH** | D:\SFTP |  |
| **FACTHISTORYPATH** | %SFTPPATH%\Fact\_History |  |
| **INBOXPATH** | %SFTPPATH%\Inbox |  |
| **INBOXARCHIVEPATH** | %INBOXPATH%\Archive |  |
| **OUTBOXPATH** | %SFTPPATH%\Outbox |  |
| **SFTPSUPPORTPATH** | D:\EP\_Batch\SFTP\_Support |  |
| **SQLLDRCONTROLPATH** | %SFTPSUPPORTPATH%\Ctl\_Files |  |
| **SQLLDRERRORSPATH** | %SFTPPATH%\SQLLDR\_Errors |  |
| **SQLLDRLOGSPATH** | %SFTPPATH%\SQLLDR\_Logs |  |
| **STRUCTURELOADERRORSPATH** | %SFTPPATH%\Structure\_Load\_Errors |  |
| **TYLOADERRORSPATH** | %SFTPPATH%\TY\_Load\_Errors |  |

### SFTP Support Environment Variables

The following environment variables allow for implementation specific configuration of the SFTP Support Additions. These variables and their values are defined in the sftp\_support\_global\_variables.vbs file.

|  |  |
| --- | --- |
| **VARIABLE** | **KEY and VALUE** |
| **goStrucThresholds** | goStrucThresholds.Add"AG\_1\_P1",0 |
| goStrucThresholds.Add"AG\_1\_P2",0 |
| goStrucThresholds.Add"AG\_1\_TOTPROD",0 |
| goStrucThresholds.Add"AG\_1\_DIV",0 |
| goStrucThresholds.Add"AG\_1\_DPT",0 |
| goStrucThresholds.Add"AG\_1\_SUBDPT",0 |
| goStrucThresholds.Add"AG\_1\_CLASS",0 |
| goStrucThresholds.Add"AG\_1\_SUBCLASS",0 |
| goStrucThresholds.Add"AG\_1\_STYLE",0 |
| goStrucThresholds.Add"AG\_1\_STYLECOLOR",0 |
| goStrucThresholds.Add"AG\_2\_P1",0 |
| goStrucThresholds.Add"AG\_2\_TOTORG",0 |
| goStrucThresholds.Add"AG\_2\_BU",0 |
| goStrucThresholds.Add"AG\_2\_CHANNEL",0 |
| goStrucThresholds.Add"AG\_2\_REGION",0 |
| goStrucThresholds.Add"AG\_2\_DISTRICT",0 |
| goStrucThresholds.Add"AG\_2\_TOUCHPOINT",0 |
| goStrucThresholds.Add"AG\_4\_TOTYEAR",0 |
| goStrucThresholds.Add"AG\_4\_YEAR",0 |
| goStrucThresholds.Add"AG\_4\_SEASON",0 |
| goStrucThresholds.Add"AG\_4\_QUARTER",0 |
| goStrucThresholds.Add"AG\_4\_PERIOD",0 |
| goStrucThresholds.Add"AG\_4\_WEEK",0 |
| goStrucThresholds.Add"AG\_4\_DAY",0 |
| goStrucThresholds.Add"EXT\_EPSD\_IMPORT\_MEMBER\_REL",0 |
| goStrucThresholds.Add"EXT\_EPSD\_IMPORT\_ATTR\_DEF\_POT",0 |
| **DATABASE** | "[database SID]" |
| **FILE\_SERVER** | "[primary mid-tier server]" |
| **ADMIN\_SERVER** | "[primary mid-tier server]" |
| **EP\_SERVER** | "[primary mid-tier server]" |
| **EP\_PRIMARY\_MID\_TIER** | "EP\_SERVER" |
| **INTERFACE\_SLEEP\_INTERVAL** | 60000 |
| **INTERFACE\_MAX\_LOOPS** | 120 |
| **INBOX\_DIRECTORY** | "D:\SFTP\Inbox\" |
| **INBOX\_ARCHIVE** | INBOX\_DIRECTORY & "Archive\" |
| **BATCH\_SCRIPTS\_DIRECTORY** | "\\" & EP\_SERVER & "\EP\_BATCH\SFTP\_Support" |
| **REMOTE\_SCRIPTS\_DIRECTORY** | "\\" & ADMIN\_SERVER & "\EP\_BATCH\Scripts\" |
| **EXPORT\_DIRECTORY** | "D:\SFTP\Outbox\" |
| **EXPORT\_XML\_DIRECTORY** | "D:\SFTP\Export\_Xml\_Files\" |
| **SLY\_INBOX** | INBOX\_DIRECTORY |
| **LOG\_DIRECTORY** | "D:\SFTP\SQLLDR\_Logs\" |
| **ERRORFILE\_DIRECTORY** | "D:\SFTP\SQLLDR\_Errors\" |
| **CTLFILE\_DIRECTORY** | "D:\EP\_Batch\SFTP\_Support\Ctl\_Files\" |
| **LOG\_RETENTION** | 28 |
| **ARCHIVE\_RETENTION** | 28 |
| **EXPORT\_RETENTION** | 28 |

# Section 2: EP Batch Facility Return Codes

Four types of errors can be returned by executing an EP Batch Facility command. These types are EP Batch Facility, EP Product, Oracle and Microsoft Windows errors. This document focuses on only those errors defined by the EP Batch Facility.

Wrapper scripts are intended to be called from scheduler batch flows whereas EP Batch Facility commands are run from within the wrapper scripts. Wrapper scripts return 0 for success and non-zero for failure. In failure scenarios, interrogation of the wrapper scripts output will indicate which command failed and the error it returned whether EP Batch Facility, EP Product, Oracle or Microsoft Windows generated.

Note that many of the EP Batch Facility error codes are handled within the logic of the wrapper scripts.

|  |  |  |  |
| --- | --- | --- | --- |
| **COMMAND** | **CODE** | **DESCRIPTION** | **COMMENTS** |
| **ActualsDataUpdate.bat** | 9999 | Errors in staged data | Code translated to 4 when Cloud enabled |
| **DumpErrors.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Dump failed |  |
| 9000 | No records found in any {0} tables. |  |
| 9001 | Number of {0} table dump files written: {1} |  |
| **FoundationRestartStatus.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine if restart is pending |  |
| 9000 | Restart not pending for command |  |
| 9001 | Restart pending for command |  |
| 9002 | Command is currently running |  |
| 9003 | Restart pending for different type |  |
| 9004 | Restart pending for blocking command |  |
| 9005 | Restart pending for different fact table |  |
| 9006 | Blocking command is currently running |  |
| **GetInputSourceName.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine input source name |  |
| **JIMemberDataLoad.bat** | 9999 | Errors in staged data |  |
| **JIMetaDataLoad.bat** | 9999 | Errors in staged data |  |
| **LatestFactDataTime.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine latest fact data time for table:column [*ftf table name:time column*] |  |
| **PlanDataUpdate.bat** | 9999 | Errors in staged data |  |
| **QuartzRestartStatus.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine if restart is pending |  |
| 9000 | Restart not pending for command |  |
| 9001 | Restart pending for command |  |
| 9002 | Command is currently running |  |
| 9003 | Restart pending for different type |  |
| 9004 | Restart pending for blocking command |  |
| 9006 | Blocking command is currently running |  |
| **QuartSyncStatus.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine if a sync is pending |  |
| 9000 | Quartz Cube structure and data is in sync |  |
| 9001 | Both structure and data syncs are pending |  |
| 9002 | Structure sync is pending |  |
| 9003 | Data sync is pending |  |
| **RowCount.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot determine row count |  |
| **SendRESTRequest.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Command failed for url {0} |  |
| 9000 | Command succeeded for url {0} |  |
| **StartProcess.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | A command failed to start |  |
| 9000 | All commands completed successfully |  |
| 9001 | All commands failed |  |
| 9002 | All commands partially succeeded |  |
| 9003 | Some commands failed |  |
| 9004 | Some commands partially succeeded |  |
| **TruncateJIErrors.exe** | -9002 | ARGUMENT\_MISSING |  |
| -9001 | Cannot truncate JI error table |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WRAPPER SCRIPT** | **ActualsDataUpdate.bat** | **DumpErrors.exe** | **FoundationRestartStatus.exe** | **GetInputSourceName.exe** | **LatestFactDataTime.exe** | **PlanDataUpdate.bat** | **QuartzRestartStatus.exe** | **QuartSyncStatus.exe** | **RowCount.exe** | **StartProcess.exe** | **TruncateJIErrors.exe** | **SendRESTRequest.exe** |
| **ActualsCubeSync.bat** |  |  |  |  |  |  | X | X |  | X |  |  |
| **ClearImportTables.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **CreateAGTables.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **FoundationActualsDataUpdate.bat** | X | X | X | X |  |  |  |  | X | X |  |  |
| **FoundationPlanDataUpdate.bat** |  |  | X | X |  | X |  |  | X | X |  |  |
| **FoundationPurgeAgedData.bat** |  |  | X |  |  |  |  |  |  |  |  |  |
| **FoundationSetTime.bat** |  |  | X |  | X |  |  |  |  |  |  |  |
| **FoundationStructureUpdate.bat** |  |  | X |  |  |  |  |  |  |  |  |  |
| **GetBatchResult.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **GetEKBSchemaConfig.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **GetEXTSchemaConfig.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **InitEXTSchema.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **JIMemberDataLoad.bat** |  | X |  |  |  |  |  |  | X |  | X | X |
| **JIMetaDataLoad.bat** |  | X |  |  |  |  |  |  | X |  | X | X |
| **PendingBatchProcesses.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **PlanCubeSync.bat** |  |  |  |  |  |  | X | X |  | X |  |  |
| **ProcessMemberData.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **ProcessMetadata.bat** |  |  |  |  |  |  |  |  |  |  |  | X |
| **QuartzCubeSync.bat** |  |  |  |  |  |  | X | X |  | X |  |  |
| **QuartzPurgeAgedData.bat** |  |  |  |  |  |  | X |  |  | X |  |  |
| **SetJIMuleProperties.bat** |  |  |  |  |  |  |  |  |  |  |  | X |

# Section 3: EP Batch Flow

There are 4 batch flows: daily, Saturday, Sunday and year end. The following table illustrates what jobs comprise each batch flow with a run order of top down. Jobs that are in grey are not part of the EP Batch Facility but need to be provided by the host administrator.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **JOB** | **DAILY** | **SATURDAY** | **SUNDAY** | **YEAR END** |
| **Lock out EP Client Users** | X | X | X | X |
| **Logout Citrix Users** | X | X | X | X |
| **DB Backup** | X | X | X | X |
| **Gather Schema Stats** | X | X | X | X |
| **Post User Plan Data** | X | X |  |  |
| **Synchronize User Plan Quartz Cubes** | X | X |  |  |
| **Stage Structure** |  | X |  |  |
| **Run JI Meta Data Job** |  | X |  |  |
| **Run JI Server Data Job** |  | X |  |  |
| **Rebuild Contexts** |  | X |  |  |
| **Foundation Structure Update** |  | X |  |  |
| **Synchronize All Quartz Cubes** |  | X |  |  |
| **Stop Primary Mid Tier** |  | X |  |  |
| **Restart Primary Mid Tier** |  | X |  |  |
| **EP front end structure update job** |  | X |  |  |
| **Stage Actuals** |  |  | X |  |
| **Post Actuals data** |  |  | X |  |
| **Set the Foundation Current Time** |  |  | X |  |
| **Synchronize Actuals Quartz Cubes** |  |  | X |  |
| **EP front end Week job** |  |  | X |  |
| **Post User Plan Data** |  |  | X |  |
| **Synchronize User Plan Quartz Cubes** |  |  | X |  |
| **Purge Aged Foundation Data** |  |  |  | X |
| **Purge Aged Quartz Data** |  |  |  | X |
| **Synchronize All Quartz Cubes** |  |  |  | X |
| **Allow EP Client Users** | X | X | X | X |
| **EKB Cleanup** |  |  | X |  |
| **Archive log and purge aged archives** |  |  | X |  |

### Scheduler Configuration

See the Control-M configuration file for specific details pertaining to the scheduler configuration of all batch flows.

### Service Level Agreement

The Service Level Agreement (SLA) defines the time frames, day by day, that users plan on using the system. Time frames outside of this scope is available for the batch scheduler to run jobs.

When the scheduler starts the batch, users are prompted to save their changes and logout of EP Client. After a 15-minute timer expires, all users still logged in will be automatically logged out. Once the batch completes, users will be allowed to reconnect and resume their work.

The following table identifies the SLA for this implementation…

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sunday** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** |
| **Minimum Available for Users** | 12pm – 12am | 7am – 10pm | 7am – 10pm | 7am – 10pm | 7am – 10pm | 7am – 10pm | 7am – 3 pm |
| **Available for Scheduler** | 12am – 12pm | 10pm – 7am next day | 10pm – 7am next day | 10pm – 7am next day | 10pm – 7am next day | 10pm – 7am next day | 3pm – 7am next day |

# Appendix A

### Supporting Documents

|  |  |  |
| --- | --- | --- |
| **Document Name** | **Version** | **Date** |
| EP Batch Facility v2020.1.0.0.docx | 2020.1.0.0 | 05-04-2020 |
| EP PlanNOW! Functional Design Document 1.0.pdf | 1.0 | xx-xx-xxxx |
| EP PlanNOW! Technical Design Document 1.0.pdf | 1.0 | 03-23-2022 |
| Control-M configuration v2020.1.0.0.xlsx | 2020.1.0.0 | 03-03-2022 |
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