

A&R

(Job Scheduler (Batch) System)

APPLICATION SPECS

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1. BUSINESS DESIGN

1.1 SCOPE STATEMENT

Develop a strategic framework to perform batch processing to ETL (Extraction, Transform and Load) to house data in Relational Database within A&R environment and Delivering data to Analytic (Essbase Cubes) environment. This includes the complete framework to Extract data from any disparate system, Transform data using either OLTP functions or Report/Essabse specific transforms, loading data in to the Reporting Environment, preparing the data to deliver it to Essbase.

The system should be able to:

- Schedule, Monitor, Maintain, Kick-off (Process), Analyze and help tune ETL batch jobs.
- Use parameters for the commonly used values. (Define once and use many places in the system).
- Extract data from any disparate system, including the data from flat files.
- Transform data using Business rules defined in OLTP.
- Run jobs concurrently and sequentially.
- Run any host commands.
- Certify (balance) data.
- STOP the batch process flow, when data does not balance.
- Capture and Notify batch statuses/failures.

1.2 OBJECTIVES

1. To establish standards for the capture & transformation of data for reporting.
2. Allow MBIA to respond quickly to new business reporting requirements by making new data available within the Analysis and Reporting environment with minimal IT involvement.
3. Be able to capture data from new, disparate data sources as required.
4. Ensure the integrity of data.
5. Record data definitions including business rules (transformations) applied during ETL within the MBIA Data Directory.
6. No disruption to operational systems.

1.3 DESIGN PRINCIPLES

1. Leverage vendor supplied architectures / components whenever possible.
2. Object oriented plug and play architecture to eliminate redundant code and allow for development of new components.
3. Avoid single purpose custom ETL for transforming & loading data
4. Transformations are performed on data, not on record sets.
5. Integrate data certification during ETL.
6. Table driven framework to facilitate easy access, maintenance & analysis of ETL details, metrics, statuses, etc.
7. Compact architecture consisting of centralized, database resident code

1.4 TERMINOLOGY / DEFINITIONS

ETL	Extract, Transform and Load
A&R	Analytic and Reporting

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RPT	Reporting
MDS	MIDAS OLTP System
ROMD	Object Prefix for Report Stage-Out in MIDAS objects.
RIMD	Object Prefix for Report Stage-In for MIDAS objects.
RIDT	Object Prefix for Report Stage-In for DART objects.
RITK	Object Prefix for Report Stage-In for TRACKER objects.
RIXP	Object Prefix for Report Stage-In for Expenses External Table.
ESS	Object Prefix for Essbase Stage-Out objects.
RPU	Object Prefix for Report Utility objects.
RPTOUT_MDS	Schema name for Report Stage-Out in MIDAS.
RPTIN_MDS	Schema name for Report Stage-In for MIDAS, within Reporting environment.
ESSOUT_RPT	Schema name for Essbase Stage-Out, within Reporting environment.
RPT_UTIL	Schema name for Report Utilities, within Reporting environment.
RPT_BAL	Schema name for Report Balancing (Data Certification) System, within Reporting environment.
ROBL	Object Prefix for Report Balancing Objects outside of RPT_BAL schema..
RPTOUT_ASM	Schema name for Report Stage-Out for Asset Management Data.
RPTIN_ASM	Schema name for Report Stage-In for Asset Management Data.
RPTOUT_FIN	Schema name for Report Stage-Out for Financial Data.
RPTIN_FIN	Schema name for Report Stage-In for Financial Data.
RPT_FIN	Reporting Schema for Financial Data
HAL	Schema Name for Hyperion Application Link, also object prefix for HAL and HALOUT_FIN objects.
HFM	Hyperion Financial Management
HALOUT_FIN	Schema name for HAL Stage-out for Financial
FINOUT_FIN	Schema name for Financial Stage-out for Financial

1.5 BUSINESS / APPLICATION RULES

1. Accounting Period for MIDAS is not based on regular calendar. i.e. It does not close at the end of month or last Friday of the month. It varies month by month. We run monthly cycle through this batch system, to take snapshot of data on Sunday, after the Accounting period is closed and Exposure processes are completed and balanced.
2. While populating Calendar data for the year, by default we set Frequency to Daily for all the rows, except Sundays. Sundays are set as Weekly. We have to manually change the frequency to the Monthly for the date that we are going to process the monthly cycle.
3. Currently there is a DBMS_JOB which kicks-off the batch system at 8PM on Daily basis, and processes the jobs based on the frequency set for the processing date.

This job executes rpu_pr_kickoff_batch_cycle procedure, which does the followings:

- Checks that the current cycle has completed successfully.
- Checks the status for Next Cycle (next_rpt_job_status column in rpu_job_current_process_dates table) is set to 'N'.
- Checks that the next processing date is equal to Current Process Date + 1.
- Checks that the Next Process Date is between (Sysdate – 1) and Sysdate.
- Checks that the Next Rpt As Of Date is the Last date of the Month.
- Checks that the Next Rpt As Of Date is the Last date of the Current or Previous Month.
- Validates DB Connections to make sure that all the connections in prod are pointing to other prod databases only.

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- After all above checks are successful then it sets next_rpt_job_status column = 'Y' in rpu_job_current_process_dates table, other wise it sends an email with proper error message.
 - There is another DBMS_JOB setup to run RPU_PR_MAIN_JOB procedure every second, which starts the batch as soon as it finds that the next_rpt_job_status column is set to 'Y' (ready to start).
4. "###" is used as a prefix to an Application Parameter in this system. Commonly used values such as schema names, tablespace names, etc., including some derived values based on current dates are defined as application parameters, and used at Job Step level. These application parameters are replaced with its current value before executing it.
 5. Program Types: There are five pre-defined program types and are used to prepare executable code based on program type id. If you modify or add another program id, you have to modify other PL/SQL code, which is used to generate executable code and execute it.
 6. Programs: Each job step is executing a program, which has to be registered in this system, with its required parameter information.
 7. Criteria Processing Dates: Allows administrator to define different processing date for each criteria, mainly used for ad-hoc processing, such as to populate history data, using the same views which are used in the batch system. These dates for all criteria are synchronized at the beginning of the batch cycle, to use the same dates during the batch process.
 - Criteria Processing Dates are stored in RPU_JOB_CRITERIA_PROCESS_DATES table.
 - This table is replicated in RPTOUT_MDS schema in MDS_PROD, and synchronized through a trigger on the table in RPT_UTIL schema in the reporting instance.
 - This table is replicated to improve performance and can be replicated to other OLTP environments, if required.
 8. Job Setup: This screen allows administrator to maintain all the jobs that needs to be processed.
 - Frequencies are process in the order of Daily, Weekly, Monthly, Quarterly and then Yearly, based on the Frequency set for the current processing date. i.e. If the frequency is set as Monthly for current processing date, then it will run Daily jobs, then Weekly Jobs and Then Monthly Jobs, sequentially.
 - By default Jobs within a Class runs concurrently. Class can be processed concurrently or sequentially based on the dependency setup for that class.
 - Subject area and jobs allows sub-grouping of Jobs.
 - Subject area, jobs and job steps are processed sequentially based on the defined processing sequence.
 - Job Step has the information about the program to execute, DB Connection information, and required parameter values.
 9. Job Monitor: This screen allows administrator to monitor the progress of batch cycle, see the details for the job failures, restart/skip/ignore the failed job step.

2. SYSTEM DESIGN

2.1 COMPONENT LAYOUT (PER COMPONENT DISCUSSED)

2.1.1 DB CONNECTION INFO (SCREEN)

2.1.1.1 General

This screen allows administrator to define Database connection information, which is required by this system at the time of executing a job step, using JDBC connection.

Database Connection Info	Short Desc	Active?
Data_Certification		<input checked="" type="checkbox"/>
Essbase_Stageout		<input checked="" type="checkbox"/>
MIDAS_Stagein		<input checked="" type="checkbox"/>
MIDAS_Stageout		<input checked="" type="checkbox"/>
RPT_STGIN		<input checked="" type="checkbox"/>
Report_Utility		<input checked="" type="checkbox"/>
Reporting		<input checked="" type="checkbox"/>

Connection Description

Connect to Oracle Instance rpt_prod as rptin_mds (old user rpt_stgin) user.

Host Name or IP: PHOENIX Port Number: 1521 Database Instance Name: rpt_prod User ID: rptin_mds Password: XXXXXXXX

Created Date: 06/18/2002 Created By: shuklk Updated Date: 11/14/2002 Updated By: SHUKLK

Record: 3/7 <OSC> <DBG>

2.1.1.2 Field Level Information

Please refer to RPU_JOB_DB_CONNECTIONS Table.

Data Item Name	Default Value	Updateable	Description
Short Desc	NA	Y	Connection Name
Active Indicator	I	Y	Active? (A/I)
Connection Description	NA	Y	Connection Description
Host Name OR IP	NA	Y	Host Name or IP Address
Port Number	NA	Y	Port Number for TCP/IP listener.
Database Instance Name	NA	Y	Database Instance Name without domain name.
User ID	NA	Y	User ID to connect to the Database
Password	NA	Y	Password to connect to the Database

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2.1.1.3 Notes:

- This is the only screen in the system, allows administrator to enter database connection information.
- Connection Name (Short Desc) must be unique name.
- These connections are used in the Job Setup Screen to select the connection to execute a Job Step.
- If Active Indicator is set to 'I' (Inactive) then it will not be available on the list item on the Job Setup Screen.
- Inactivating DB Connection Information does not inactivate the Job Step which are using this connection. Need to make sure that none of the steps are using this connection, before inactivating or deleting it.
- Database Instance Name must be defined as only the SID name (i.e. without the domain name). e.g. rpt_prod instead of rpt_prod.mbia.com.
- Connections defined here are only Oracle specific. We might have to modify this screen, if in future there is a need to use any other JDBC driver, which has different requirements.

2.1.2 APPLICATION PARAMETERS (SCREEN)

2.1.2.1 General

This screen allows administrator to define commonly used value as a parameter and refer it within the Job Step. This allows us to specify value once as a parameter and use it as many times as required throughout the system. There are some derived values based on dates in the rpu_job_current_process_dates table, and derived using rpu_fn_replace_app_param_val function.

2.1.2.2 Field Level Information

Please refer to RPU_JOB_APP_PARAMS Table.

Name	Value	Short Desc	Active?	Derived?
##PREV_MONTH_RPT_AS_OF_DATE	31-DEC-2002	Previous Month Value of Report As of Date	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_MONTH_RPT_AS_OF_DATE_YYYYMM	20021231	Previous Month Value of Report As of Date (YYY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_MONTH_RPT_AS_OF_YEAR	2002	Previous Month Value of Report As of Year (YYY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_MONTH_RPT_AS_OF_YEAR_MONTH	200212	Previous Month Value of Report As of Year Mont	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_RPT_AS_OF_DATE	31-JAN-2003	Previous Value of Report As of Date	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_RPT_AS_OF_YEAR	2003	Previous Value of Report As of Year (YYYY)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_RPT_AS_OF_YEAR_MONTH	200301	Previous Value of Report As of Year Month (YYY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_RPT_PROCESS_DATE	10-FEB-2003	Previous Value of Report Process Date	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##PREV_RPT_PROCESS_DATE_YYYYMMDD	20030210	Previous Value of Report Process Date (YYYYMM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
##BATCH_FAILURE_EMAIL_ADDRESSES	rptbatchfailurenotification@mbia.	Batch Failure Notifications Email Addresses	<input checked="" type="checkbox"/>	<input type="checkbox"/>
##BATCH_STATUS_EMAIL_ADDRESSES	rptbatchstatusnotification@mbia.	Batch Status Notifications Email Addresses	<input checked="" type="checkbox"/>	<input type="checkbox"/>
##DB_LINK_MDS_PROD_RPTOUT_MDS	MDS_PROD_RPTOUT_MDS	DB LINK to RPTOUT_MDS Schema in MDS_PROD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
##DB_LINK_MDS_TEST_RPT_STGOUT	MDS_TEST_RPT_STGOUT	DB LINK to RPT_STGOUT Schema in MDS_TEST	<input type="checkbox"/>	<input type="checkbox"/>
##ESSBASE_STAGEOUT_SCHEMA_NAME	ESSOUT_RPT	Essbase Stageout Schema Name in Reporting	<input checked="" type="checkbox"/>	<input type="checkbox"/>
##ESSBASE_TEAM_EMAIL_ADDRESSES	rptessbaseteam@mbia.com	Essbase Team Notifications Email Addresses	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Desc

Previous Month Value of Report As of Year (YYYY), derived from rpu_job_current_process_date table.
Last_Day(Add_Months(Curr_Rpt_As_Of_Date, - 1)).

Created Date: 10/17/2002 Created By: SHUKLK Updated Date: 07/25/2002 Updated By: RPT_UTIL

Note: Derived columns are based on current processing dates.

Record: 12/? <DSC> <DBG>

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Data Item Name	Default Value	Updateable	Description
Name	NA	Y*	Parameter Name. Must be prefixed with two pound signs '##', and are defined in upper case.
Value	NA	Y*	Parameter Value.
Short Desc	NA	Y	Short Description for the Parameter.
Active?	I	Y	Active Indicator? (A/I)
Derived?	N	Y	Derived Indicator? (Y/N)
Description	NA	Y	Description for the Parameter.

Y* : Updateable only when Derived Indicator is set to N.

2.1.2.3 Notes:

- Values for the derived parameters are derived using rpu_fn_replace_app_param_val function, based on the parameter name (hard-coded in this function). That is why Name and Value columns are non-updateable for Derived parameters.
- If you need to add another derived parameter, you need to also modify the rpu_fn_replace_app_param_val function
- There is no restriction of case defining any of these parameters at the Job Step level on Job Setup Screen. Since it can be defined in mixed-case, the rpu_fn_replace_app_param_val function converts it to upper case to replace parameters with its values. Only Host commands are converted to lower cases, after replacing parameters with its values within rpu_fn_build_executable_code function.

2.1.3 PROGRAM TYPES (SCREEN)

2.1.3.1 General

This screen allows administrator to define the types of program that can be executed through this system.

ID	Name	Short Description	Active ?
1	Build DDL and Execute	Build DDL and Execute	<input checked="" type="checkbox"/>
2	Build DML and Execute	Build DML and Execute	<input checked="" type="checkbox"/>
3	Execute a Procedure	Execute a Procedure	<input checked="" type="checkbox"/>
4	Execute a Procedure Locally	Execute a Procedure Locally (without connecting to target DBMS.	<input checked="" type="checkbox"/>
5	Build Host Command and Execute	Build Host Command and Execute on the Database Server	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Description

Build Host Command and Execute on the Database Server.
Used to create export directories for next month, within monthly cycle.

Created Date: 01/23/2003 Created By: SHUKLK Updated Date: Updated By:

Save (F10) Record: 5/5 <QSC> <DBG>

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2.1.3.2 Field Level Information

Please refer to RPU_JOB_PGM_TYPES Table.

Data Item Name	Default Value	Updateable	Description
Id	NA	Y	User defined ID for a Program Type.
Name	NA	Y	Name of the Program Type.
Short Desc	NA	Y	Short Description for the Program Type.
Active?	I	Y	Active Indicator? (A/I)
Description	NA	Y	Description for the Program Type.

2.1.3.3 Notes:

- Based on the Program Type ID, rpu_fn_build_executable_code and rpu_pr_exec_a_job_class generates code for a specific program type unit.
- You need to make appropriate modifications to rpu_fn_build_executable_code and rpu_pr_exec_a_job_class, when you have to change the Program Type ID.
- You also need to make appropriate modifications to rpu_fn_build_executable_code and rpu_pr_exec_a_job_class, when you introduce new program type.
- Currently the following types are defined.
 1. Build DDL and Execute – Program unit of this type must be a function and must be generating and returning a DDL command.
 2. Build DML and Execute – Currently this type is the same as above, and generates DML code. This can be further enhanced to capture and log the number of rows inserted/updated or deleted.
 3. Execute a Procedure - Program unit of this type must be a procedure call either standalone procedure or it is defined within a package.
 4. Execute a Procedure Locally – Same as above except it executes locally. e.g. To build Indexes on a Table, procedure needs to be executed locally, since the procedure makes the connection internally(based on step_id) to the database where it has to create the indexes, using the definitions(ddls) stored locally in the rpu_index_ddl table.
 5. Build Host Command and Execute - Program unit of this type must be a function and must be generating and returning a HOST command. Used for exports and creating folders within Monthly cycle.

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2.1.4 PROGRAMS - PL/SQL CODE (SCREEN)

2.1.4.1 General

This screen allows administrator to register PL/SQL program units and required parameters for each program unit, which can be executed through this system, defining it on a Job Step level.

PL/SQL Program Units

Program Short Desc	Job Pgm Type	PL/SQL Program Name	Active?
Save Local 9i Indexes	Execute a Procedure	RPT_Util.RPU_Pr_Save_Local9i_Indexes	<input checked="" type="checkbox"/>
Build Indexes on a Table	Execute a Procedure Locally	RPT_Util.RPU_Pr_Build_Indexes	<input checked="" type="checkbox"/>
Save MIDAS OLTP Objects	Execute a Procedure	rpu_pr_save_mds_oltp_objects	<input checked="" type="checkbox"/>

Program Desc

Build Indexes on a Table. This procedure need to be executed locally, since this procedure makes the connection internally(based on step_id) to the database where it has to create the indexes, using the definitions(ddls) stored locally in the rpu_index_ddl table.

Created Date: 07/18/2002 Created By: RPT_UTIL Updated Date: 09/11/2002 Updated By: RPT_UTIL

Parameter Values

Param Seq	Parameter Name	Parameter Short Desc	Default Value for the Parameter	Active?
1	In_Table_Owner	Table Owner	##MIDAS_STAGEIN_SCHEMA_NAME	<input checked="" type="checkbox"/>
2	In_Table_Name	Table Name		<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Parameter Desc

Table Schema Name, if you leave blank it will build indexes for all the users except sys and system.

Created Date: 07/18/2002 Created By: RPT_UTIL Updated Date: 09/09/2002 Updated By: RPT_UTIL

Record: 10/21 <OSC> <DBG>

2.1.4.2 Field Level Information for Program Unit

Please refer to RPU_JOB_PGMS Table.

Data Item Name	Default Value	Updateable	Description
Program Short Desc	NA	Y	Program Short Description.
Program Type	NA	Y	Name of the Program Type. List Item.
PL/SQL Program Name	NA	Y	PL/SQL Program Unit Name, which is compiled in an Oracle Instance. Can be either in local or remote instance.
Active?	I	Y	Active Indicator? (A/I)
Description	NA	Y	Description for the Program Unit.

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2.1.4.3 Field Level Information for Parameters Required to Execute a Program Unit

Please refer to RPU_JOB_PGM_PARAMS Table.

Parameter Values	Parameter Name	Parameter Short Desc	Default Value for the Parameter	Active?
1	In_Table_Owner	Table Owner	##MIDAS_STAGEIN_SCHEMA_NAME	<input checked="" type="checkbox"/>
2	In_Table_Name	Table Name		<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Parameter Desc

Table Schema Name, if you leave blank it will build indexes for all the users except sys and system.

Created Date: 07/18/2002 Created By: RPT_UTIL Updated Date: 09/09/2002 Updated By: RPT_UTIL

Data Item Name	Default Value	Updateable	Description
Parameter Sequence	NA	Y	User defined sequence. Once defined it should not be changed, since the program is using the sequence number to build executable code.
Parameter Name	NA	Y	Name of the Parameter.
Parameter Short Desc	NA	Y	Short Description for the Parameter.
Default Value for the Parameter	NA	Y	Default value for the Parameter.
Active?	I	Y	Active Indicator? (A/I)
Parameter Description	NA	Y	Description for the Parameter.

2.1.4.4 Notes:

- List Item in this form is refreshed only at the form startup, so if you add another program type and you need to select new program type on this screen, you have to exit the form and launch it again.
- PL/SQL Program Name entered on this screen is not validated. If the name is incorrect or the Program Unit in the database is invalid, then the process referring it fails at the run-time.
- Default Value defined at the parameter level is copied to the Job Step level parameter as a default value, while adding a Job Step.

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2.1.5 INDEX DDLs (SCREEN)

2.1.5.1 General

This screen allows administrator to view and maintain Index DDLs, which are stored in the beginning of batch cycle within Daily Jobs.

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File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Index DDLs

Table Information

Owner	Name
RPT	CB_CONCURRENCY
RPT	CB_VERSION
RPT	DTR_ATTRIBUTES
RPT	DTR_INFO

Index details

Owner	Name	Active ?
RPT	PK_CB_CONCURRENCY	<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

DDL:

```
CREATE UNIQUE INDEX "RPT"."PK_CB_CONCURRENCY" ON "RPT"."CB_CONCURRENCY"
("CB_USER_NAME", "CB_USER_SESSION_ID", "CB_OBJECT_ID", "CB_OBJECT_TYPE")
PCTFREE 10 INITRANS 2 MAXTRANS 255
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT)
TABLESPACE "RPT_DATA"
```

Note:

Created Date: 09/12/2002 Created By: RPT Updated Date: 09/15/2002 Updated By: RPT

Record: 1/? <OSC> <DBG>

2.1.5.2 Field Level Information

Please refer to RPU_JOB_INDEX_DDLS Table.

Data Item Name	Default Value	Updateable	Description
Table Owner	NA	Y	Table Owner
Table Name	NA	Y	Table Name
Index Owner	NA	Y	Index Owner
Index Name	NA	Y	Index Name
Active?	A	Y	Active Indicator? (A/I)
DDL	NA	Y	Index DDL
Note	NA	Y	User defined comments for this index

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2.1.5.3 Notes:

- Latest Index definitions for all the tables within a schema, are retrieved from Oracle dictionary and stored in RPU_JOB_INDEX_DDLS table, at the beginning of a batch cycle.
- There are some processes in the batch, which drops a table and re-builds the same table using latest source data, and then re-builds indexes based on these stored DDLs. When the table is dropped, indexes and grants are also dropped for that table, and the definitions are not available in Oracle dictionary.
- RPU_PR_SAVE_RPTOUT_MDS_INDEXES procedure, stores the indexes for tables in rptout_mds schema in MIDAS.
- RPU_PR_SAVE_LOCAL9I_INDEXES procedure, can store index DDLs for the tables, in any schema other than sys and system, within local Oracle 9i instance. This procedure uses new Oracle 9i package DBMS_METADATA.GET_DDL, which is not available in MIDAS Oracle 8.0.6 instance.
- You can use note column to document the need for a special index. e.g. if an index is required to improve performance of a specific process, you should document here, so that it can be referred to make better decision, before modifying it or dropping it.

2.1.6 OPERATIONAL OBJECTS – OLTP OBJECT DDLs (SCREEN)

2.1.6.1 General

This screen allows administrator to view Operational Object DDLs, which are stored in the beginning of Monthly batch cycle, for MIDAS PL/SQL objects.

As Of Date	Process Date	Owner	Type
08/31/2002	09/15/2002	MIDAS	FUNCTION
08/31/2002	09/15/2002	MIDAS	PACKAGE
08/31/2002	09/15/2002	MIDAS	PACKAGE BODY
08/31/2002	09/15/2002	MIDAS	PROCEDURE

Name
MDS_ORG_ID
MDS_FN_VOTE_CODES
MDS_FN_VOTE_CONDITIONS
MDS_FN_VOTING_ENTITY_CODES

DDL:

```
CREATE OR REPLACE FUNCTION MDS_ORG_ID (  
  pvAbbrevName IN VARCHAR2  
) RETURN NUMBER AS  
/*****  
Filename:      fnorgid.pls  
Created By:    Mike Marra, ORACLE  
Created On:    5/3/1996  
Description:    Returns org_id for given abbrev_name  
Known Bugs:  
Modification history:  
Modified By    On          Change description  
*****
```

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2.1.6.2 Field Level Information

Please refer to RPU_JOB_OLTP_OBJECTS Table.

Data Item Name	Default Value	Updateable	Description
As Of Date	NA	N	Rpt As Of Date – Last date of the month.
Process Date	NA	N	Process Date – Date of cycle processing.
Owner	NA	N	Object Owner
Type	NA	N	Object Type, such as function, procedure, package, etc.
Name	NA	N	Object name.
DDL	NA	N	Object DDL

2.1.6.3 Notes:

- Latest MIDAS PL/SQL objects such as functions, procedures, packages, are retrieved from Oracle dictionary and stored in RPU_JOB_OLTP_OBJECTS table, at the beginning of monthly batch cycle. Currently we are just capturing the DDLs, and not using anywhere in the system.

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2.1.7 EXPORT JOBS & TABLES (SCREEN)

2.1.7.1 General

This screen allows administrator to monitor the progress of export jobs, view/maintain export logs, add special notes within description columns at Job as well as Table level, and re-import all or some of the tables (only the tables which were exported as table-by-table) within an Export Job.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Export Jobs & Tables

Export Jobs

Rpt As Of Date	Rpt Process Date	Schema Name	Tbl By Tbl?	Rows?	Active?
01/31/2003	02/17/2003	RPTIN_MDS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
01/31/2003	02/17/2003	RPTIN_MDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
01/31/2003	02/17/2003	RPTOUT_MDS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Short Desc: Export of MIDAS StageOut Objects - Table by Table

Desc: Export of MIDAS StageOut Objects - Table by Table

Program Name: /ora/app/oracle/product/8.0.6.2/bin/exp

Base Dir: /ora/export2/staging

Created Date: 02/18/2003 Created By: RPT_UTIL Updated Date: Updated By:

Prepare an Import Job and Execute

Export Tables

Select Criteria: ☒ All ☐ Failed ☐ Being Processed ☐ Completed ☐ Failed & Warning ☐ Failed & Skipped

Table Name	Active?	Con. On Failure?	Start Date Time	End Date Time	Status
RPU_JOB_CRITERIA_PROCESS_DATES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:47 AM	02/18/2003 11:38:49 AM	Completed
ROMD_WRITING_SUMMARIES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:44 AM	02/18/2003 11:38:47 AM	Completed
ROMD_TWRK_POLAPP_WRITINGS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:41 AM	02/18/2003 11:38:44 AM	Completed
ROMD_TWRK_POLAPP_SUMMARIES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:39 AM	02/18/2003 11:38:41 AM	Completed

Short Desc: Export Table: RPU_JOB_CRITERIA_PROCESS_DATES

Desc: Export Table: RPU_JOB_CRITERIA_PROCESS_DATES

Message Txt: Export of RPU_JOB_CRITERIA_PROCESS_DATES Table completed, please check the log.

Directory: /ora/export2/staging/200301/rptout_mds

Filename: rpu_job_criteria_process_dates_20030217.dmp

Log Filename: rpu_job_criteria_process_dates_20030217_exp.log

Record: 5/? <OSC> <DBG>

2.1.7.2 Field Level Information for an Export Job

Please refer to RPU_EXP_JOBS Table.

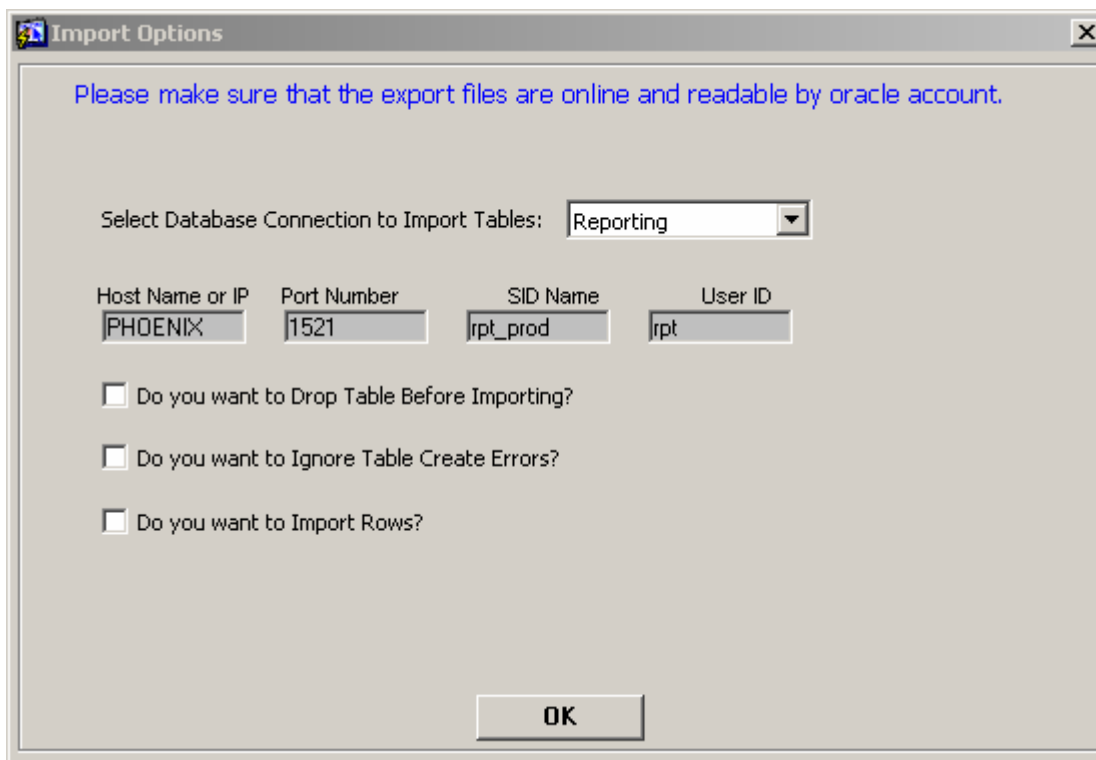
Data Item Name	Default Value	Updateable	Description
Rpt As Of Date	NA	N	Rpt As Of Date – Last date of the month.
Process Date	NA	N	Process Date – Date of cycle processing.
Schema Name	NA	N	Object Owner
Table By Table?	NA	N	Table by Table Indicator? (Y/N), if 'Y' then the export is done table by table, creating a separate export file per table.
Rows?	NA	N	Rows Indicator? (Y/N), if 'Y' then it exports the

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			data.
Active?	NA	N	Active Indicator? (A/I)
Short Desc	NA	Y	Short Description for the Export Job.
Desc	NA	Y	Description for the Export Job.
Program Name	NA	Y	Program used for the export.
Base Dir	NA	Y	Base Directory Name on Host for storing export files.

2.1.7.3 Notes:

- There are two procedures RPU_PR_EXP_SCHEMA_TBL_BY_TBL and RPU_PR_EXP_SCHEMA, which loads the data into the RPU_EXP_JOBS and RPU_EXP_TABLES tables at the startup of an export job, and updates the status during the execution.
- You can add special comments in Description columns, for a specific export job.
- Export Program Name can be different to exporting from different versions of Oracle databases.
- You can use "Prepare an Import Job and Execute" button to re-import all or some of the tables. **Note: This feature is allowed only, if connected as RPT_UTIL user, since RPT_UTIL user has some special permission that this process requires.**
- Clicking on "Prepare an Import Job and Execute" button, displays an alert to make sure you want to proceed and then displays the following screen, where you can select
 - database connection to use for Import
 - Drop the Table before Import?
 - Ignore Create Table Errors?
 - Import Rows?



The image shows a Windows-style dialog box titled "Import Options". At the top, there is a blue instruction text: "Please make sure that the export files are online and readable by oracle account." Below this, there is a section for "Select Database Connection to Import Tables:" with a dropdown menu currently showing "Reporting". Underneath, there are four input fields: "Host Name or IP" with the value "PHOENIX", "Port Number" with "1521", "SID Name" with "rpt_prod", and "User ID" with "rpt". Below these fields are three checkboxes, all of which are currently unchecked: "Do you want to Drop Table Before Importing?", "Do you want to Ignore Table Create Errors?", and "Do you want to Import Rows?". At the bottom center of the dialog is an "OK" button.

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- Clicking on OK, builds Import Job data in RPU_IMP_JOBS and RPU_IMP_TABLES tables based on the export job information in RPU_EXP_JOBS and RPU_EXP_TABLES tables, and launches "Import Jobs & Tables" screen where you can select/de-select the tables and submit an Import Job.

2.1.7.4 Field Level Information for Tables within an Export Job

Please refer to RPU_EXP_TABLES Table.

Export Tables

Select Criteria: ☒ All ☐ Failed ☐ Being Processed ☐ Completed ☐ Failed & Warning ☐ Failed & Skipped

Table Name	Active?	Con. On Failure?	Start Date Time	End Date Time	Status
RPU_JOB_CRITERIA_PROCESS_DATES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:47 AM	02/18/2003 11:38:49 AM	Completed
ROMD_WRITING_SUMMARIES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:44 AM	02/18/2003 11:38:47 AM	Completed
ROMD_TWRK_POLAPP_WRITINGS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:41 AM	02/18/2003 11:38:44 AM	Completed
ROMD_TWRK_POLAPP_SUMMARIES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/18/2003 11:38:39 AM	02/18/2003 11:38:41 AM	Completed

Short Desc: Export Table: RPU_JOB_CRITERIA_PROCESS_DATES

Desc: Export Table: RPU_JOB_CRITERIA_PROCESS_DATES

Message Txt: Export of RPU_JOB_CRITERIA_PROCESS_DATES Table completed, please check the log.

Directory: /ora/export2/staging/200301/rptout_mds

Filename: rpu_job_criteria_process_dates_20030217.dmp

Log Filename: rpu_job_criteria_process_dates_20030217_exp.log

Data Item Name	Default Value	Updateable	Description
Select Criteria	NA	Y	Selecting specific radio button allows you to monitor the progress of selected export job, if it is currently running.
Table Name	NA	N	Table Name. Displays "ALL-OBJECTS", if the export job is for all the objects (not a table-by-table export).
Active?	NA	Y	Active Indicator? (A/I)
Continue On Failure?	NA	Y	Continue On Failure Indicator? (Y/N)
Start Date Time	NA	N	Date and Time the export started for the object.
End Date Time	NA	N	Date and Time the export completed for the object.
Short Desc	NA	Y	Short Description for the Export Object.
Desc	NA	Y	Description for the Export Object.
Message text	NA	N	Export Completion or Failure Information
Directory	NA	Y	Directory where the export file is stored on the host machine.
Filename	NA	Y	Export Filename.
Log Filename	NA	Y	Export Log Filename.

2.1.7.5 Notes:

- Rpt As Of Date is used to decide the directory for the current month under the base directory. e.g. /ora/export2/staging/200301 is the directory for January 2003 exports, where /ora/export2/staging is base directory defined in the system as application parameter.

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- There is a folder for each schema, within the folder for the current year & month. e.g. /ora/export2/staging/200301/essout_rpt is the directory for all archives for January 2003 essout_rpt objects.
- Process Date is used to name the export file names:
 - e.g. essout_rpt_20030217_norows.dmp file is for the export of essout_rpt schema, processed on 20030217 date and it was exported with rows=n parameter.
 - e.g. rpt_reinsurance_20030217.dmp file is for the export of rpt_reinsurance table, processed on 20030217 date and it contains data.

2.1.8 IMPORT JOBS & TABLES (SCREEN)

2.1.8.1 General

This screen allows administrator to monitor the progress of import jobs, view/maintain import log, add special notes within description columns at Job as well as Table level.

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File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Import Jobs & Tables

Import Jobs

Imp Process Date	Rpt As Of Date	Rpt Process Date	Exp Schema Name	Imp Schema Name	Drop Tbl?	Ignore Create Err?	Imp Rows?	Active?
					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Short Desc: Desc:

Program Name: Base Dir:

Created Date: Created By: Updated Date: Updated By:

Submit an Import Job

Import Tables

Select Criteria: ☒ All ☐ Failed ☐ Being Processed ☐ Completed ☐ Failed & Warning ☐ Failed & Skipped

Select All Tables **De-Select All Tables**

Table Name	Active?	Con. On Failure?	Start Date Time	End Date Time	Status
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			

Short Desc: Desc:

Message Txt: Directory:

Filename: Log Filename:

Record: 1/1

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2.1.9 JOB ANALYSIS (SCREEN)

2.1.9.1 General

This screen allows administrator to compare job step execution time with it's history execution times for a given process date and a selected frequency, to help analyse and tune long running processes.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Analysis

Search Criteria

Process Date: 02/23/2003 ☒ Daily ☐ Weekly ☐ Monthly ☐ Quarterly ☐ Yearly **Search**

Job Class	Start Date Time	End Date Time	Elapsed Time
Daily Job Start Email Notification	02/23/2003 08:00:28 PM	02/23/2003 08:01:21 PM	0000h 00m 53s
Save Index Definitions	02/23/2003 08:00:29 PM	02/23/2003 08:02:22 PM	0000h 01m 53s
Tracker SCR Datapull	02/23/2003 08:02:26 PM	02/23/2003 08:03:02 PM	0000h 00m 36s
Post Daily Jobs	02/23/2003 08:03:07 PM	02/23/2003 08:08:28 PM	0000h 05m 21s

Job Step	Start Date Time	End Date Time	Elapsed Time
Drop RITK_TRKSCRST Table	02/23/2003 08:02:31 PM	02/23/2003 08:02:34 PM	0000h 00m 03s
Build RITK_TRKSCRST Table	02/23/2003 08:02:34 PM	02/23/2003 08:02:35 PM	0000h 00m 01s
Build indexes on RITK_TRKSCRST Table	02/23/2003 08:02:35 PM	02/23/2003 08:02:36 PM	0000h 00m 01s
Build Public Synonym for RITK_TRKSCRST	02/23/2003 08:02:36 PM	02/23/2003 08:02:37 PM	0000h 00m 01s

History

Job Process Date	Start Date Time	End Date Time	Elapsed Time
22-FEB-2003	02/22/2003 08:01:44 PM	02/22/2003 08:01:45 PM	0000h 00m 01s
21-FEB-2003	02/21/2003 08:01:45 PM	02/21/2003 08:01:46 PM	0000h 00m 01s
20-FEB-2003	02/20/2003 08:01:44 PM	02/20/2003 08:01:46 PM	0000h 00m 02s
19-FEB-2003	02/19/2003 08:01:47 PM	02/19/2003 08:01:48 PM	0000h 00m 01s
18-FEB-2003	02/18/2003 09:17:43 PM	02/18/2003 09:17:44 PM	0000h 00m 01s
17-FEB-2003	02/17/2003 07:08:09 PM	02/17/2003 07:08:10 PM	0000h 00m 01s
16-FEB-2003	02/16/2003 08:04:00 PM	02/16/2003 08:04:01 PM	0000h 00m 01s

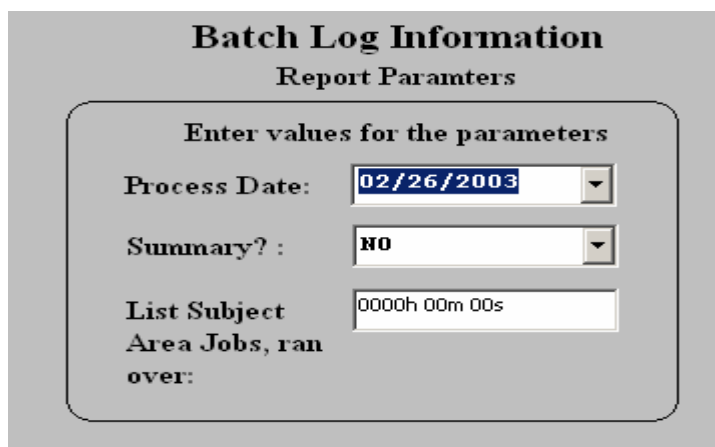
Record: 3/? <OSC> <DBG>

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2.1.10 LOG REPORT (PARAMETER SCREEN AND REPORT)

2.1.10.1 General

This screen allows administrator to enter report parameter values to execute, view / print report for a specific batch processing date. Also, allows to create summary only report, as well as the option of listing the Subject Areas that took more time to process than the entered value.



Generates the report in the following format.

JobLog.rep
02/27/2003 04:01 pm

MBIA MBIA Insurance Corporation
A&R Batch Log Information

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Process Date: 02/26/2003

Frequency/Class/Subject Area/Job/Job Step	Start Date-Time	End Date-Time	Elapsed Time	Status
Freq: Daily	26-FEB-2003 20:00:33	26-FEB-2003 20:07:34	0000h 07m 01s	Completed
Class: Daily Job Start Email Notification	26-FEB-2003 20:00:33	26-FEB-2003 20:00:48	0000h 00m 15s	Completed
Subject: Daily Job Start Email Notification	26-FEB-2003 20:00:39	26-FEB-2003 20:00:48	0000h 00m 09s	Completed
Job: Daily Job Start Email Notification	26-FEB-2003 20:00:39	26-FEB-2003 20:00:48	0000h 00m 09s	Completed
Step: Daily Job Start Email Notification	26-FEB-2003 20:00:39	26-FEB-2003 20:00:48	0000h 00m 09s	Completed
Class: Save Index Definitions	26-FEB-2003 20:00:34	26-FEB-2003 20:01:43	0000h 01m 09s	Completed
Subject: Save Index Definitions for RPTOUT_MDS schema	26-FEB-2003 20:00:39	26-FEB-2003 20:00:50	0000h 00m 11s	Completed
Job: Save Index Definitions for RPTOUT_MDS schema	26-FEB-2003 20:00:39	26-FEB-2003 20:00:50	0000h 00m 11s	Completed
Step: Save Index Definitions for RPTOUT_MDS schema	26-FEB-2003 20:00:39	26-FEB-2003 20:00:50	0000h 00m 11s	Completed
Subject: Save Index Definitions for RPTIN_MDS schema	26-FEB-2003 20:00:50	26-FEB-2003 20:01:27	0000h 00m 37s	Completed
Job: Save Index Definitions for RPTIN_MDS schema	26-FEB-2003 20:00:50	26-FEB-2003 20:01:27	0000h 00m 37s	Completed
Step: Save Index Definitions for RPTIN_MDS schema	26-FEB-2003 20:00:50	26-FEB-2003 20:01:27	0000h 00m 37s	Completed
Subject: Save Index Definitions for RPT schema	26-FEB-2003 20:01:27	26-FEB-2003 20:01:40	0000h 00m 13s	Completed
Job: Save Index Definitions for RPT schema.	26-FEB-2003 20:01:27	26-FEB-2003 20:01:40	0000h 00m 13s	Completed
Step: Save Index Definitions for RPT schema	26-FEB-2003 20:01:27	26-FEB-2003 20:01:40	0000h 00m 13s	Completed

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2.1.11 CALENDAR (SCREEN)

2.1.11.1 *General*

This screen displays the frequency, dates, and status for the Current, Previous and Next Processing Cycles. Allows administrator to change the frequency for today's Date or any other selected date, start the batch cycle manually, and launch monitor to see the progress of current batch cycle.

The screenshot shows the 'A&R Job Scheduler' application window. The 'Calendar' tab is active, displaying a calendar for February 2003. The calendar grid shows dates from 1 to 28, with the 13th highlighted. To the left of the calendar, there are three sections for process information: 'Current Process Information', 'Previous Process Information', and 'Next Process Information'. Each section includes fields for 'Process Date', 'As Of Date', 'Job Freq.', and 'Job Status'. The 'Next Process Information' section has a 'Start the Next Cycle?' button. Below these sections is a 'Launch Monitor' button. To the right of the calendar, there are fields for 'Today's Date', 'Today's Job Frequency', 'Selected Date', and 'Selected Date Job Frequency'. The 'Today's Date' and 'Selected Date' fields are both set to 'February 13, 2003'. The 'Today's Job Frequency' and 'Selected Date Job Frequency' fields are both set to 'Daily'. At the bottom right of the calendar area are 'OK' and 'Cancel' buttons. The status bar at the bottom of the window shows 'Record: 1/1' and '<OSC> <DBG>'.

2.1.11.2 *Field Level Information for Calendar (to setup frequency for a date)*

Please refer to RPU_JOB_CALENDAR Table.

Data Item Name	Default Value	Updateable	Description
Today's Job Frequency	Sysdate	Y	Today's Job Frequency.
Selected Date Job Frequency	Sysdate	Y	Job Frequency, for the date selected in the calendar.

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2.1.11.3 Field Level Information for Processing Dates

The screenshot shows a 'Process Dates' dialog box with three main sections:

- Current Process Information:**
 - Process Date: 02/12/2003
 - As Of Date: 01/31/2003
 - Job Freq.: Daily
 - Job Status: Completed
- Previous Process Information:**
 - Process Date: 02/11/2003
 - As Of Date: 01/31/2003
 - Job Freq.: Daily
 - Job Status: Completed
- Next Process Information:**
 - Process Date: 02/13/2003
 - As Of Date: 01/31/2003
 - Job Freq.: Daily (dropdown menu)
 - Start the Next Cycle? (button)

At the bottom of the dialog is a 'Launch Monitor' button.

Please refer to RPU_JOB_CURRENT_PROCESS_DATES Table.

Data Item Name	Default Value	Updateable	Description
Current Process Information			
Process Date	NA	N	Current Process Date for the batch cycle, either being processed or completed.
As Of Date	NA	N	Last Date of the Month, for the Open Account Period.
Job Frequency	NA	N	Frequency for the Process Date.
Job Status	NA	N	Being Processed / Completed.
Previous Process Information			
Process Date	NA	N	Previous Process Date for the batch cycle that was completed before starting the current cycle.
As Of Date	NA	N	Last Date of the Month, for the Open Account Period for that Process Date.
Job Frequency	NA	N	Frequency for the Process Date.
Job Status	NA	N	Completed.
Next Process Information			
Process Date	NA	Y*	Process Date to use for the next batch cycle.
As Of Date	NA	Y*	Last Date of the Month, for the Open Account Period to use for the next batch cycle.
Job Frequency	NA	Y	Frequency for the Next Process Date.

Y* : There are some validation on these values, performed at the startup of the next batch.

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2.1.11.4 Notes:

- You must populate rows in the `rpu_job_calendar` table, and must have at-least few rows for the next processing cycles, since it assigned frequency to the Next Cycle automatically using the data in this table.
- To populate this table, you could run `RpU_Pr_Populate_JobCalendar` procedure supplying any date as a parameter for the year, you want to populate this table. This procedure loads data from January 1st to December 31st, in this table. While populating Calendar data for the year, by default we set Frequency to Daily for all the rows, except Sundays. Sundays are set as Weekly. We have to manually change the frequency to the Monthly for the date that we are going to process the monthly cycle.
- Currently there is a `DBMS_JOB` which kicks-off the batch cycle at 8PM on Daily basis, and processes jobs based on the frequency set for the processing date.

This job executes `rpu_pr_kickoff_batch_cycle` procedure, which does the followings:

- Checks that the current cycle has completed successfully.
- Checks the status for Next Cycle (`next_rpt_job_status` column in `rpu_job_current_process_dates` table) is set to 'N'.
- Checks that the next processing date is equal to Current Process Date + 1.
- Checks that the Next Process Date is between (Sysdate – 1) and Sysdate.
- Checks that the Next Rpt As Of Date is the Last date of the Month.
- Checks that the Next Rpt As Of Date is the Last date of the Current or Previous Month.
- Validates DB Connections to make sure that all the connections in prod are pointing to other prod databases only.
- After all above checks are successful then it sets `next_rpt_job_status` column = 'Y' in `rpu_job_current_process_dates` table, otherwise it sends an email with proper error message.
- There is another `DBMS_JOB` setup to run `RPV_PR_MAIN_JOB` procedure every second, which starts the batch as soon as it finds that the `next_rpt_job_status` column is set to 'Y' (ready to start).
- Currently `DBMS_JOB` kicks-off the batch cycle at 8PM on Daily basis, however you could kick-off the cycle manually, clicking on "Start the Next Cycle?" button and then clicking on "YES" button when it prompts you "Are you sure you want to start next batch process?".
- You can then immediately launch monitor screen by clicking on "Launch Monitor" button.

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2.1.12.3 Notes:

- These dates for all criterias are synchronized at the beginning of the batch cycle, to use the same processing dates during the entire batch process.
 - Criteria Processing Dates are stored in RPU_JOB_CRITERIA_PROCESS_DATES table.
 - This table is replicated in RPTOUT_MDS schema in MDS_PROD, and synchronized through a trigger on the table in RPT_UTIL schema in the reporting instance.
 - This table is replicated to improve performance and can be replicated to other OLTP environments, if required.

2.1.13 JOB SETUP (SCREEN)

2.1.13.1 General

This screen allows administrator to maintain Frequencies, Classifications, Subject Areas, Jobs, and Job Steps information.

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File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency

Frequency	Frequency Short Desc	Active?
Daily		<input checked="" type="checkbox"/>
Weekly		<input checked="" type="checkbox"/>
Monthly		<input checked="" type="checkbox"/>

Classification

Classification	Classification Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
Save Index Definitions		<input checked="" type="checkbox"/>
Load Scorecard Expenses Data into RPT Tabl		<input type="checkbox"/>

Subject Area

Subject Area	Subject Area Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

Job

Job	Job Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

Job Step

Job Step	Job Step Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

Frequency | Classification | Subject | Job | Step

Freq. Id	Frequency Short Desc	Active
100	Daily	<input checked="" type="checkbox"/>

Frequency Desc

Daily Jobs.

Created Date: 06/03/2002 Created By: shukll Updated Date: 10/02/2002 Updated By: RPT_UTIL

Record: 1/5 <OSC> <DBG>

A&R Batch System Specifications

2.1.13.2 Field Level Information for Frequencies

Please refer to RPU_JOB_FREQS Table.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency

Frequency	Frequency Short Desc	Active?
Daily		<input checked="" type="checkbox"/>
Weekly		<input checked="" type="checkbox"/>
Monthly		<input checked="" type="checkbox"/>

Classification

Classification	Classification Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
Save Index Definitions		<input checked="" type="checkbox"/>
Load Scorecard Expenses Data into RPT Tabl		<input type="checkbox"/>

Subject Area

Subject Area	Subject Area Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>

Job

Job	Job Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>

Job Step

Job Step	Job Step Short Desc	Active?
Daily Job Start Email Notification		<input checked="" type="checkbox"/>
		<input type="checkbox"/>

Frequency

Frequency	Classification	Subject	Job	Step
100	Daily			

Frequency Short Desc: Daily

Frequency Desc: Daily Jobs.

Created Date: 06/03/2002 Created By: shuklk Updated Date: 10/02/2002 Updated By: RPT_UTIL

Record: 1/5 <OSC> <DBG>

Data Item Name	Default Value	Updateable	Description
Frequency ID	NA	Y	User defined ID, to process frequencies in that order.
Frequency Short Desc	NA	Y	Short Description for the Frequency.
Active?	I	Y	Active Indicator? (A/I)
Frequency Description	NA	Y	Description for the Frequency.

2.1.13.3 Notes:

- List of Frequencies on the left-side is non-updateable list, clicking on a frequency in that list, displays information on right-side.
- ID numbers are assigned with some gap, intentionally, so that we can add other frequencies in between. e.g. if we need to add a Frequency called Bi-Weekly, we can assign it with the ID of 250, to process Bi-Weekly after the Weekly jobs are processed.

A&R Batch System Specifications

- Frequency is skipped during the processing of a batch cycle, when the Active Indicator is set to 'I' (un-checked).

2.1.13.4 Field Level Information for Classifications

Please refer to RPU_JOB_CLASSIFICATIONS Table.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency: Daily [Active?] Weekly [Active?] Monthly [Active?]

Classification

Classification Short Desc: Save Index Definitions [Active?] Load Scorecard Expenses Data into RPT Tabl [Active?] **Tracker SCR Datapull [Active?]**

Tracker SCR Datapull Details:

Processing Seq.: 400 Classification Short Desc: Tracker SCR Datapull [Active?]

Classification Desc: Tracker SCR Datapull. This datapull is based on regular calendar, and not based on Accounting Period Calendar. i.e. RPT_AS_OF_DATE is the last_day(sysdate).

Created Date: 01/27/2003 Created By: SHUKLK Updated Date: Updated By:

Subject Area

Subject Area Short Desc: Re-build Tracker SCR Stage-In Tables [Active?] Load Data into RPT_TRACKER_SCR [Active?]

Job

Job Short Desc: Pull TRKSCRST table [Active?] Pull TRKSCRSL table [Active?] Pull TRKCH table [Active?]

Job Step

Job Step Short Desc: Drop RITK_TRKSCRST Table [Active?] Build RITK_TRKSCRST Table [Active?] Build indexes on RITK_TRKSCRST Table [Active?]

Class Dependence:

This Class is Dependent On the Following Classes:

Dependent on Class	Class Depend Short Desc	Active Ind
Save Index Definitions	Wait for Save Indexes	[Active]

Class Depend Desc: Wait for Save Indexes.

Created Date: 01/27/2003 Created By: SHUKLK Updated Date: Updated By:

Record: 4/5 <QSC> <DBG>

Data Item Name	Default Value	Updateable	Description
Processing Seq.	NA	Y	User defined sequence, to process classifications in that order.
Classification Short Desc	NA	Y	Short Description for the Classification.
Active?	I	Y	Active Indicator? (A/I)
Classification Desc	NA	Y	Description for the Classification.

A&R Batch System Specifications

2.1.13.5 Notes:

- List of Classifications on the left-side is non-updateable list, clicking on a Classification in that list, displays information on right-side.
- Processing sequence numbers are assigned with some gap, intentionally, so that we can add other Classifications in-between.
- Classification is skipped during the processing of a batch cycle, when the Active Indicator is set to 'I' (un-checked).

2.1.13.6 Field Level Information for Classification Dependencies

Please refer to RPU_JOB_CLASS_DEPENDENCIES Table.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency: Daily [Active? ☒

Classification: Tracker SCR Datapull [Active? ☒

Subject Area: Re-build Tracker SCR Stage-In Tables [Active? ☒

Job: Pull TRKSCRST table [Active? ☒

Job Step: Drop RITK_TRKSCRST Table [Active? ☒

Classifications:

Classification Short Desc	Active?
Save Index Definitions	<input checked="" type="checkbox"/>
Load Scorecard Expenses Data into RPT Tabl	<input type="checkbox"/>
Tracker SCR Datapull	<input checked="" type="checkbox"/>

Tracker SCR Datapull Details:

Processing Seq: 400

Classification Short Desc: Tracker SCR Datapull

Classification Desc: Tracker SCR Datapull. This datapull is based on regular calendar, and not based on Accounting Period Calendar. i.e. RPT_AS_OF_DATE is the last_day(sysdate).

Created Date: 01/27/2003 Created By: SHUKLK Updated Date: Updated By:

Class Dependencies:

This Class is Dependent On the Following Classes:

Dependent on Class	Class Depend Short Desc	Active Ind
Save Index Definitions	Wait for Save Indexes	<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

Class Depend Desc: Wait for Save Indexes.

Created Date: 01/27/2003 Created By: SHUKLK Updated Date: Updated By:

Record: 4/5 <OSC> <DBG>

Data Item Name	Default Value	Updateable	Description
Dependent on Class	NA	Y	Master Classification is dependent on the completion of this class. List of Values are

A&R Batch System Specifications

			available to select a class.
Class Dependent Short Desc	NA	Y	Short Description for the Classification dependency.
Active?	I	Y	Active Indicator? (A/I)
Class Dependent Description	NA	Y	Description for the Classification dependency.

2.1.13.7 Notes:

- By Default classes are submitted to run jobs concurrently. Note: Frequencies, Subject Areas, Jobs, and Job Steps are processed sequentially based on the Processing Sequence.
- Classifications selected in this block are the classes that the master class is dependent on. i.e. Master Class Jobs has to wait for the successful completion of all these "Dependent on Class(s)" Jobs.
- Classification dependency is ignored during, when the Active Indicator is set to 'I' (unchecked).

2.1.13.8 Field Level Information for Subject Areas

Please refer to RPU_JOB_SUBJECT_AREAS Table.

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Data Item Name	Default Value	Updateable	Description
Processing Seq.	NA	Y	User defined sequence, to process subject area in that order.
Subject Area Short Desc	NA	Y	Short Description for the Subject Area.
Active?	I	Y	Active Indicator? (A/I)
Subject Area Desc	NA	Y	Description for the Subject Area.

2.1.13.9 Notes:

- List of Subject Areas on the left-side is non-updateable list, clicking on a Subject Area in that list, displays information on right-side.
- Processing sequence numbers are assigned with some gap, intentionally, so that we can add other Subject Areas in-between.
- Subject Area is skipped during the processing of a batch cycle, when the Active Indicator is set to 'I' (un-checked).

2.1.13.10 Field Level Information for Jobs

Please refer to RPU_JOBS Table.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency: Frequency Short Desc Active?

Daily ☒ Weekly ☒ Monthly ☒

Classification: Classification Short Desc Active?

Save Index Definitions ☒ Load Scorecard Expenses Data into RPT Tabl ☐ Tracker SCR Datapull ☒

Subject Area: Subject Area Short Desc Active?

Re-build Tracker SCR Stage-In Tables ☒ Load Data into RPT_TRACKER_SCR ☒

Job: Job Short Desc Active?

Pull TRKSCRST table ☒ Pull TRKSCRSL table ☒ Pull TRKCH table ☒

Job Step: Job Step Short Desc Active?

Drop RITK_TRKSCRST Table ☒ Build RITK_TRKSCRST Table ☒ Build indexes on RITK_TRKSCRST Table ☒

Job Proc Seq: 100 Job Short Desc: Pull TRKSCRST table Active? ☒

Job Desc: Copy TRK_MBIA.TRKSCRST table to RITK_TRKSCRST.

Copy this Job to a New Job New Job Proc Seq:

Created Date: 01/27/2003 Created By: SHUKLK Updated Date: 01/27/2003 Updated By: SHUKLK

Record: 1/2 <OSC> <DBG>

A&R Batch System Specifications

Data Item Name	Default Value	Updateable	Description
Job Proc Seq.	NA	Y	User defined sequence, to process Job in that order.
Job Short Desc	NA	Y	Short Description for the Job.
Active?	I	Y	Active Indicator? (A/I)
Job Desc	NA	Y	Description for the Job.

2.1.13.11 Notes:

- List of Jobs on the left-side is non-updateable list, clicking on a Job in that list, displays information on right-side.
- Processing sequence numbers are assigned with some gap, intentionally, so that we can add other Jobs in-between.
- Job is skipped during the processing of a batch cycle, when the Active Indicator is set to 'I' (un-checked).
- The button "Copy this Job to a New Job" on this screen, allows you to replicate selected job and it's steps to a New Job with a New Processing Sequence that you enter into the "New Job Proc Seq" field, before clicking on the button. New Job and it's step names are prefixed with "*" and Job is marked as Inactive. You need to make necessary modifications and activate the new job.

2.1.13.12 Field Level Information for Job Steps

Please refer to RPU_JOB_STEPS Table.

A&R Job Scheduler

File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Job Setup

Frequency: Daily, Weekly, Monthly (selected)

Classification: Build RIMD_EARNING_SUMMARY Table, Build RIMD_REINSURANCE_SUMMARY Table, Build RIMD_POLAPP_EARNINGS Table (selected)

Subject Area: Build RIMD_POLAPP_EARNINGS Table (selected)

Job: Pull MDS_POLAPP_EARNINGS table

Job Step

Job Step	Job Step Short Desc	Active?
Drop RIMD_POLAPP_EARNINGS Table	Drop RIMD_POLAPP_EARNINGS Table	<input checked="" type="checkbox"/>
Build RIMD_POLAPP_EARNINGS Table	Build RIMD_POLAPP_EARNINGS Table	<input checked="" type="checkbox"/>
Build indexes on RIMD_POLAPP_EARNINGS T	Build indexes on RIMD_POLAPP_EARNINGS T	<input checked="" type="checkbox"/>

Job Step Details

Step Proc Seq	Job Step Short Desc	Active?	Continue On Failure
100	Drop RIMD_POLAPP_EARNINGS Table	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

PL/SQL Program to Execute: Drop A Table

Job Step Long Desc: Drop RIMD_POLAPP_EARNINGS table, before re-creating it.

Database Connection: MIDAS_Stagein, Host Name or IP: PHOENIX, Port Number: 1521, SID Name: lrpt_prod, User ID: lrptin_mds

Created Date: 08/12/2002, Created By: RPT_UTIL, Updated Date: , Updated By:

Parameter Values

Seq	Parameter Name	Parameter Value	Active?
1	Table_Owner	##MIDAS_STAGEIN_SCHEMA_NAME	<input checked="" type="checkbox"/>
2	Table_Name	RIMD_POLAPP_EARNINGS	<input checked="" type="checkbox"/>

Parameter Short Desc: Schema Name for Table

Created Date: 08/12/2002, Created By: RPT_UTIL, Updated Date: , Updated By:

Generate/Show Executable Code **Execute Selected Job-Step (on-line)**

Record: 1/6 <OSC> <DBG>

A&R Batch System Specifications

Data Item Name	Default Value	Updateable	Description
Step Proc Seq.	NA	Y	User defined sequence, to process Job Step in that order.
Job Step Short Desc	NA	Y	Short Description for the Job Step.
Active?	I	Y	Active Indicator? (A/I)
Continue On Failure?	N	Y	Continue On Failure Indicator? (Y/N)
PL/SQL program to Execute	NA	N	Program Name to execute. Select from the list of pre-defined programs.
Job Step Long Desc	NA	Y	Long Description for the Job Step.
Database Connection	NA	Y	Database connection to execute selected program.

2.1.13.13 Notes:

- List of Job Steps on the left-side is non-updateable list, clicking on a Job Step in that list, displays information on right-side.
- Processing sequence numbers are assigned with some gap, intentionally, so that we can add other Jobs in-between.
- Job Step is skipped during the processing of a batch cycle, when the Active Indicator is set to 'I' (un-checked).
- When "Continue On Failure Indicator" is set to 'Y', and the current job step fails during the batch cycle, batch marks the status for the current job step to "Failed & Ignored", and continues to process the next step. **Note: If you click on Ignore button on the monitor screen for a failed job step, batch sets this Indicator to 'Y', and batch will continue to ignore the failure of this job step.**
- You can not change the "PL/SQL Program to Execute", once you have selected a PL/SQL Program to Execute and committed the record, since the list of parameters are specific to the program, automatically generated and displayed.
- Currently we do not allow delete of a Job Step, however you can inactivate it.
- Batch makes database connection for execution of each job step, to the selected database/user.

2.1.13.14 Field Level Information for Job Step Parameter Values

Please refer to RPU_JOB_STEP_PGM_PARAM_VALUES Table.

Seq	Parameter Name	Parameter Value	Active?
1	Table_Owner	###MIDAS_STAGEIN_SCHEMA_NAME	<input checked="" type="checkbox"/>
2	Table_Name	RIMD_POLAPP_EARNINGS	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Parameter Short Desc

Schema Name for Table

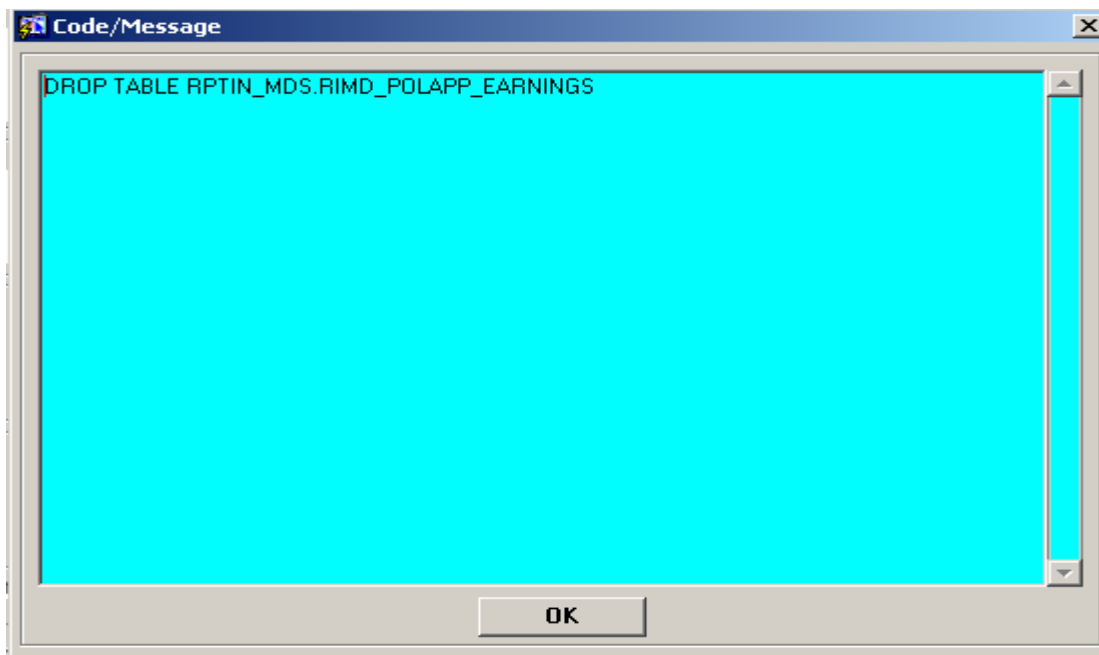
Created Date	Created By	Updated Date	Updated By
08/12/2002	RPT_UTIL		

A&R Batch System Specifications

Data Item Name	Default Value	Updateable	Description
Seq.	NA	N	User defined sequence, at the time of adding a Program module.
Parameter Name	NA	N	Name of the Parameter.
Parameter Value	As defined in the Program Setup	Y	Value of the Parameter.
Active?	I	Y	Active Indicator? (A/I)
Parameter Short Desc	NA	N	Short Description for the Parameter.

2.1.13.15 Notes:

- These parameter values are supplied to the PL/SQL Program as in Parameters. **Note: Each PL/SQL Program must have two parameters defined, to be able to execute it through batch.**
 - First parameter must be an in-parameter for job_step_id.
 - Last parameter must be as an out-parameter for return_info. Program returns error code and proper error message, in the case of failure.
 - These two parameters are implicit parameters. i.e. Batch process adds these at the time of executing the program, and are not defined as parameters, while setting up a Program in the system.
- These parameters are not the same as Application parameters. Application Parameters can be used as a Parameter Value here.
- Clicking on "Generate/Show Executable Code" button on this screen, executes rpu_fn_build_executable_code function for the current job step, which builds the executable code, replaces the application parameters with it's values, and displays code as shown below.



- You can copy and paste this code in SQL*Plus session and execute it OR If you have Special1 Access granted on rpu_job_setup screen, then you can execute a Job Step On-Line, by Clicking on "Execute Selected Job_Step (On-Line)" button.

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- If a Job Step is defined to execute a package or a procedure then it generates the code, as shown below. E.g. execute PR_EARNINGS procedure within ROMD_PK_EARNSUMM package, where first parameter is job_step_id, second parameter is current RPT_AS_OF_DATE value, and the last parameter is out retutn_info variable:

```
BEGIN
  ROMD_PK_EARNSUMM.PR_EARNINGS
  (
    '2497' ,
    '28-FEB-2003' ,
    ?
  );
END;
```

To Execute above procedure manually within SQL*Plus session, you need to modify as shown below in RED:

```
set pages 9999
set long 50000
set serveroutput on;
var lv_ret varchar2(200);
exec dbms_java.set_output(5000);
BEGIN
  ROMD_PK_EARNSUMM.PR_EARNINGS
  (
    '2497' ,
    '28-FEB-2003' ,
    :lv_ret
  );
END;
/
--To display the return code, execute the following.
exec dbms_output.put_line(:lv_Ret);
```

- **To execute remote shell (i.e. to execute a batch/program on remote machine):**

You can run batch/program on any remote machine, even cross platform. i.e. execute Essbase Cube load on NT server from Unix server, using rsh utility.

Note:

1. You need "Windows Services for UNIX" software installed on Windows NT/2000 server.
2. Create a local "oracle" userid, with Read, Execute permissions on the program/folder. Rsh command requires this userid, since we run processes from unix oracle user.
3. You need to run /sfu/common/rshpswd.exe, and enter password for local oracle userid. Rerun this utility, every time when you change local oracle user's password on this server.
4. To fix timeout issue, modify registry value for DefaultTimeout, within HKEY_LOCAL_MACHINE, SYSTEM, CurrentControlSet, Services, RshSvc to decimal value of 36000 (10 hours).
5. Oracle userid should have Read, Write, Delete permissions on c:\inetpub\ftproot folder, if you use the same userid to perform ftp to/from this server.
6. RSH does not return an error code on failures. For that reason we must, create a file on remote server through the process that we run with RSH, and then try to ftp that file as a next step. If the file does not exist, ftp will fail, if the RSH process was not successful. For loading Essbase cubes, we can create balancing datafile within the same RSH process and ftp the same file as a next step.

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7. Also, we must delete the balancing file from remote server, as soon as the datafile is ftp'd and the subject area(s) balanced, to avoid ftp of older file, if the RSH process fails.

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2.1.14 MONITOR (SCREEN)

2.1.14.1 General

This screen allows administrator to monitor the progress of batch cycle, see the details for a job step using "Show Details" button, restart/skip/ignore a failed job step.

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File Jobs Admin Reports Security Action Edit Query Block Record Field Window Help

Monitor

Current Process Date: 20030212 Current As Of Date: 31-JAN-2003 Current Job: Daily Current Job Status: Completed ☒ Auto Refresh? Every 2 Seconds **Refresh**

Failed

Frequency	Classification	Step

Start Date Time: End Date Time: Elapsed Time: **Show Details** **Restart** **Skip** **Ignore**

Being Processed/Restarted

Frequency	Classification	Step

Start Date Time: Current Date Time: Elapsed Time: **Show Details** **Kill**

Completed/Warning/Skipped

Frequency	Classification	Step	Status
Daily	Post Daily Jobs	Daily Job Completion Email Notification	Completed
Daily	Post Daily Jobs	Refresh Object Process Dates Table for ESSOUT_RP	Completed
Daily	Post Daily Jobs	Refresh Object Process Dates Table for RPT	Completed

Start Date Time: 12-FEB-2003 08:39:08 End Date Time: 12-FEB-2003 08:39:10 Elapsed Time: 0000h 00m 02s **Show Details**

Record: 1/? <OSC> <DBG>

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Details

Details

Frequency:

Classification:

Subject:

Job:

Step:

Database Instance Name:

User:

Info:

Command:

OK

2.1.14.2 Notes:

- By Default this screen is refreshed every 2 seconds. To change the screen refresh rate, you can change it up to 60 seconds, and then check the "Auto Refresh" check box.
- To turn off "Auto Refresh", uncheck the check-box.
- To manually refresh this screen, click on the "Refresh" button.
- Top Block on the main screen displays Failed Job Steps, if any.
- Middle Block on the main screen displays Being Processed/ Restarted Job Steps, if any.
- Bottom Block on the main screen displays Completed, Failed & Ignored, Failed & Skipped Job Steps, if any.
- "Show Details" button on each of these blocks, displays frequency, classification name, subject area name, job name, job step name, database instance name (connection), database user, status/error info and the actual command for a selected job step.
- Once the problem for the failed job step is fixed, job step can be restarted clicking on "Restart" button.
- If you decide that the failed job step can be skipped, you can skip that step using "Skip" button.
- If you decide to execute the failed job one more time and continue if it fails again, then you can do so by clicking on "Ignore" button. Using this functionality, it updates the "Continue on Failure" indicator for that job step, and then onward batch will not stop, if that job step fails. If you need to stop the job flow on the failure of this job step, you must update "Continue on Failure" indicator for that job step, and you can do so through Job Setup screen.
- "Kill" button is to kill a currently running Job Step. This functionality has not been implemented yet.

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2.1.15 HAL APPLICATIONS (SCREEN)

2.1.15.1 General

This screen allows administrator to maintain HAL (Hyperion Application Link) source applications, where administrator can define Source Data information for financial data, to process and load into A&R, HFM, and AXS1.

Id	Name	Short Name	Seq Order	Active?	GL Suppl Ind	Source Field Parsing?	Ignore Translation Errors?	Processing Type
1	MARS	MARS		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	RH
2	MIDAS	MIDAS		<input checked="" type="checkbox"/>	Both	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RH
3	PAM	PAM		<input checked="" type="checkbox"/>	Both	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RH
4	OUTLOOKSOFT	OUTLOOKSOFT		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	RH
5	SUMMIT	SUMMIT		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	RH
7	HFM2AX5	HFM2AX5		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	HR
9	HFM2HFM	HFM2HFM		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	HH
8	AXS2HFM	AXS2HFM		<input checked="" type="checkbox"/>	GL	<input type="checkbox"/>	<input type="checkbox"/>	RH
6	POLICYAPP	POLICYAPP		<input checked="" type="checkbox"/>	Supplemental	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PA

HFM View: GL, SUPPL
 Server 1: mbia-amk-hfm02, Domain 1: MBIA, Name: PARALLEL, Application1 UserId: sys_hfmloader, Password:
 Email Group Name: HFM2HFMNotification@mbia.com, Data Archive Path: c:\mbia_hal\archive
 Hfm2hfm Custom Filename: , Mapping Application: MIDAS
 Description: Load MIDAS GL & Supplemental Data in to HFM Application. -USER MUST SELECT BOTH (GL & Suppl) Data Load.
 Created Date: 07/11/2003 11:47:08 AM, Created By: , Updated Date: 11/24/2003 02:06:07 PM, Updated By: carupu

2.1.15.2 Field Level Information for Frequencies

Please refer to HAL_APPLICATIONS Table.

Data Item Name	Default Value	Updateable	Description
Application ID	NA	Y	User defined ID, to process Financial Source Data.
Application Name	NA	Y	Name of the Source Data Application.
Short Name	NA	Y	Short Name for Application. Used in deriving application parameters dynamically. Remote site short name is prefixed with 'R'.
Seq/order	NA	Y	Sequence can be defined to display rows, and can be used to define application processing sequence.

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Active?	N	Y	Active (Y/N) Indicator.
GL Supplemental Ind	GL	Y	Available data for this Application. GL / Supplemental or Both data.
Source Field Parsing	N	Y	Source field parsing is applied for only Supplemental data processing. i.e. this indicator has to be checked for Supplemental and both options.
Ignore Translation errors?	N	Y	'Y' – HAL code will ignore translation errors and load translated data into HFM. 'N' – HAL code will not load data into HFM, if there is any translation errors.
Processing Type	RH	Y	RH – Relational to HFM HH – HFM to HFM HR – HFM to Relational PA – PolicyApp data
HFM View For GL Data	YTD	Y	YTD – Year to Date MTD – Month to Date PERIODIC – Periodic
HFM View For Supplemental Data	YTD	Y	YTD – Year to Date MTD – Month to Date PERIODIC – Periodic
Server Name	NA	Y	Machine name where HFM is configured
Domain Name	NA	Y	Domain Name for the Server.
HFM Application Name	NA	Y	HFM Application Name to load the data into for the current application
User ID	NA	Y	User ID - HAL will use this userid to load data into HFM application.
Password	NA	Y	Password for the above HFM user ID.
Email Group Name	NA	Y	MS Outlook Email group to send email to.
Data Archive Path	NA	Y	Directory on the server where HAL will create temporary work files and the logs.
HFM2HFM custom filename	NA	Y	Applies only for HFM2HFM application.
Mapping Application	NA	Y	Corresponding Mapping App.
Description	NA	Y	Description and notes.

2.1.15.3 Notes:

- There is relationship between A&R Job Frequency ID and HAL Application ID. A&R Job Frequency ID for the HAL application must be defined as 900 + HAL app id. E.g. HAL App ID = 1 and A&R Freq ID = 901, so when user request processing for app id = 1, A&R batch will process jobs defined in frequency 901.
- Application parameters are derived dynamically for each HAL application based on the application short name. e.g. for MARS it will derive values dynamically the following parameters.

```

##HAL_MARS_AS_OF_DATE
##HAL_MARS_AS_OF_DATE_YYYYMMDD
##HAL_MARS_AS_OF_MONTH
##HAL_MARS_AS_OF_YEAR
##HAL_MARS_AS_OF_YEAR_MONTH
##HAL_MARS_PROCESS_DATE
##HAL_MARS_PROCESS_DATE_YYYYMMDD
##HAL_MARS_USER_REQUEST_ID

```

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- There are some applications which shares common entity and account mappings. e.g. AXS2HFM mapping is used for all the remote site data. This is defined using Mapping Application ID.

2.1.16 HAL APPLICATION PROCESSING DATES (SCREEN)

2.1.16.1 General

This screen allows administrator to maintain processing dates for HAL (Hyperion Application Link) source applications, where administrator can define As of Date, Period Start and End Date and Process Date. These dates are used for processing and preparing data in RPT instance, and not used for loading data into HFM using HAL code. These dates and request id are updated when user inserts a new user request record with the status "New Request".

Id	Application Name	As Of Date	Start Date	End Date	Process Date	Request ID	Status
1	MARS	09/30/2003	09/01/2003	09/30/2003	11/21/2003	212	Completed
2	MIDAS	09/30/2003	09/01/2003	09/30/2003	11/24/2003	205	Completed
3	PAM	09/30/2003	09/01/2003	09/30/2003	11/17/2003	161	Completed
4	OUTLOOKSOFT	03/31/2003	03/01/2003	03/31/2003	09/02/2003	4	Completed
5	SUMMIT	09/30/2003	09/01/2003	09/30/2003	11/18/2003	214	Completed
6	POLICYAPP	03/31/2003	03/01/2003	03/31/2003	10/20/2003	653	Completed
7	HFM2AXS	09/30/2003	09/01/2003	09/30/2003	10/23/2003	5	Completed
8	AXS2HFM	12/31/2000	12/01/2000	12/31/2000	11/19/2003	223	Completed
9	HFM2HFM	07/31/2003	07/01/2003	07/31/2003	10/08/2003	9	Completed
10	REMOTE_1838	09/30/2003	09/01/2003	09/30/2003	11/20/2003	244	Completed
11	REMOTE_MRC	09/30/2003	09/01/2003	09/30/2003	11/20/2003	245	Completed
12	CURRENCYRATES	09/30/2003	09/01/2003	09/30/2003	11/20/2003	243	Completed
13	REMOTE_MTB	09/30/2003	09/01/2003	09/30/2003	11/20/2003	246	Completed
14	REMOTE_CAH	09/30/2003	09/01/2003	09/30/2003	11/20/2003	247	Completed
15	REMOTE_CISC	09/30/2003	09/01/2003	09/30/2003	11/20/2003	248	Completed
16	REMOTE_FRANCEB	09/30/2003	09/01/2003	09/30/2003	11/20/2003	249	Completed
17	REMOTE_SPAINB	09/30/2003	09/01/2003	09/30/2003	11/20/2003	250	Completed

Created Date: 11/20/2003 06:19:37 PM Created By: Updated Date: Updated By:

Record: 17/28 <OSC> <DBG>

2.1.16.2 Field Level Information for Frequencies

Please refer to HAL_APP_CURRENT_PROCESS_DATES Table.

Data Item Name	Default Value	Updateable	Description
Application ID	NA	N	User defined ID, through HAL Applications screen.

A&R Batch System Specifications

Application Name	NA	N	Name of the Source Data Application.
As of Date	NA	Y	Last date of the month, for the processing period.
Start Date	NA	Y	Start date for the processing period. Usually first date of the month.
End Date	NA	Y	End date for the processing period. Usually first date of the month.
Process Date	NA	Y	Process date. Updated with SYSDATE when new request is entered.
Request ID	NA	N	Updated when new request is created with status "New Request".
Status	NA	N	Processing Status for the current request.

2.1.16.3 Notes:

- Usually there is no need to update dates through this screen, since these dates are synchronized when there is new request created. This screen allows us to change the dates, if we need to manually process some history data in RPT environment, without creating new user request.

2.1.17 HAL USER REQUESTS (SCREEN)

2.1.17.1 General

This screen allows administrator to maintain user requests for processing data. A&R batch kicks-off the jobs for an application, when there is new entry in this screen with status "New Request". There is logic in the trigger, which returns an error, if the jobs are already running and user tries to enter new request. The information entered on this screen is used by HAL code to process the data. HAL code only processes the data if the status is "Pending" for the request, at the startup. When user enters new request with status "New Request", it updates the dates and status in HAL_APP_CURRENT_PROCESS_DATES table and A&R jobs are kicked-off. When A&R batch executes PL/SQL code to execute HAL Program, it updates the status to "Pending", before calling HAL executable. HAL code updates the appropriate status at the end of the program execution. Then the PL/SQL code raises an error, if the HAL execution was not completed successfully.

A&R Batch System Specifications

User Requests

Id	Application	Hal As Of Date	Status	Start Date	End Date	Scenario	View	Year
1	MARS	03/31/2003	Successful Completion	03/01/2003	03/31/2003			
2	MIDAS	06/30/2003	Successful Completion	06/01/2003	06/30/2003			
3	PAM	07/31/2003	Soft Error	07/01/2003	07/31/2003			
4	OUTLOOKSOFT	07/31/2003	Successful Completion	07/01/2003	07/31/2003			
5	SUMMIT	07/31/2003	Successful Completion	07/01/2003	07/31/2003	ActualGAAP	YTD	2003
6	POLICYAPP	07/31/2003	Successful Completion	07/01/2003	07/31/2003			
7	HFM2AXS	01/31/2003	Successful Completion	01/01/2003	01/31/2003			
8	AXS2HFM	03/31/2003	Successful Completion	03/01/2003	03/31/2003			
9	HFM2HFM	07/31/2003	Successful Completion	07/01/2003	07/31/2003			

Refresh Entity Metadata ☐ Refresh Account Metadata ☐ Refresh Custom1 Metadata ☐ Refresh Custom2 Metadata ☐ Refresh Custom3 Metadata ☐ Refresh Custom4 Metadata ☐ GI Supplemental ☐ GI Account ☒ Email Confirmation ☒

App. Description: To Load MARS GL Data.

Date Started: 11/06/2003 03:31:18 PM Date Completed: 11/06/2003 03:31:22 PM Created Date: 08/06/2003 09:48:25 AM Created By: Updated Date: 11/11/2003 12:00:00 AM Updated By:

Record: 1/? <OSC> <DBG>

2.1.17.2 Field Level Information for Frequencies

Please refer to HAL_USER_REQUESTS Table.

Data Item Name	Default Value	Updateable	Description
Application ID	NA	N	User request ID, generated using oracle sequence.
Application Name	NA	N	Name of the Source Data Application.
HAL As of Date	NA	Y	Last date of the month, for the processing period.
Status	New Request	Y	Inserting new record with status = 'New Request', triggers the A&R batch job executions for the selected application. If you do not want to automatically trigger the execution of batch jobs then select 'Pending' as status.
Start Date	NA	Y	Start date for the processing period. Usually first date of the month.
End Date	NA	Y	End date for the processing period. Usually first date of the month.
Scenario			Applicable only for HFM to HFM(HH) and HFM to Relational(HR), based on PROCESSING_TYPE in HAL_APPLICATIONS
View			
Year			

A&R Batch System Specifications

			table.
Refresh Entity Metadata	N	Y	Y - Does Entity metadata refresh (Loads entity metadata only (no data) when defined PROCESSING_TYPE = 'PA' in HAL_APPLICATIONS table, for policy app load) N – No refresh (Loads supplemental data only when defined PROCESSING_TYPE = 'PA' in HAL_APPLICATIONS table, for policy app load)
Refresh Account Metadata	N	Y	Y - Does Acct metadata refresh N - No refresh
Refresh Custom1 Metadata	N	Y	Y - Does Custom1 metadata refresh N - No refresh
Refresh Custom2 Metadata	N	Y	Y - Does Custom2 metadata refresh N - No refresh
Refresh Custom3 Metadata	N	Y	Y - Does Custom3 metadata refresh N - No refresh
Refresh Custom4 Metadata	N	Y	Y - Does Custom4 metadata refresh 1. N - No refresh
GL/Supplemental Ind	G	Y	1. G – Load GL Data 2. S – Load Supplemental Data 3. B – Load both GL and Supplemental data
GL Account Ind	N	Y	Y – GL accounts Null allowed.
Email Confirmation Ind	Y	Y	Y - 1) Sends an OK email when there are no errors. 2) Sends Error email when there are any errors. N – Does not send an OK email, but sends Error Email.
Application Description	From hal app table	N	Just displays description from HAL application table, to help create new request.

2.1.17.3 Notes:

- On 11/24, HAL loaded data with amount zero, for MIDAS supplemental data, and it loaded on 11/25, after truncating the HAL log tables and setting GL Account indicator to N in the user request table for MIDAS supplemental data.

2.1.18 HFM MAPPINGS (SCREEN)

2.1.18.1 General

This is multi-purpose screen. This screen allows administrator to query and maintain HFM entity and account mappings, also allows them to validate current month's GL and Supplemental data and display missing mapping information.

A&R Batch System Specifications

Entity Search

Application: MARS Source Entity ID: 1 Currency: USD HFM Entity ID: 140_0000

Entities

Application Name	Source Entity ID	Currency	Target Entity ID
MARS	1	USD	140_0000
MARS	2	EUR	021_OEUR
MARS	2	GBP	021_OGBP
MARS	2	JPY	021_OJPY

Accounts (Specific to the selected Entity)

Source Account ID	Account Id	ICP Partner	Custom1	Custom2	Custom3	Custom4	Switch Sign ?	GL Acct?
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>

Global Accounts (Applies when Account is not defined for selected entity)

Source Account ID	Account Id	ICP Partner	Custom1	Custom2	Custom3	Custom4	Switch Sign ?	GL Acct?
Accrued Interest Payable Ci	2_5600	[ICP NONE]	[NONE]	LOADBALANCE	[NONE]	MARS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accrued Interest Payable Ci	2_5605	[ICP NONE]	[NONE]	LOADBALANCE	[NONE]	MARS	<input type="checkbox"/>	<input type="checkbox"/>
Accrued Interest Payable Ci	2_5600	[ICP NONE]	[NONE]	LOADBALANCE	[NONE]	MARS	<input type="checkbox"/>	<input type="checkbox"/>
Accrued Interest Payable Ci	5_4150	[ICP NONE]	[NONE]	[NONE]	[NONE]	MARS	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Record: 1/1 <OSC> <DBG>

2.1.18.2 Field Level Information for Frequencies

Please refer to RFN_HFM_ENTITY_MAPPING and RFN_HFM_ACCOUNT_MAPPING Tables.

2.1.18.3 Notes:

- You can search and maintain entities and their details of accounts.
- If the account for a selected entity is not defined then HAL code looks for Global Account, which has entity define as '*' in the table.
- Switch Sign Indicator: account mapping table has this column as well as AXS1 Switch Sign Ind columns. AXS1 Switch Sign only applies for HFM2AXS data load, so when user navigates to HFM2AXS entity, the screen replaces the display.
- The following two screens are part of this form, which allows user to select source application and search for missing mapping information for the current month source data.

A&R Batch System Specifications

2.2 ERROR HANDLING / MESSAGES

Error Message	Screen / Component	Resolution

A&R Batch System Specifications

3. DATABASE DESIGN

3.1 DATABASE TABLES AND COLUMNS (FOR EACH TABLE DISCUSSED)

Table	Column	Optional	Type
RPU_JOB_FREQS	JOB_FREQ_ID	N	NUMBER(10,0)
	JOB_FREQ_SHORT_DESC	N	VARCHAR2(256)
	JOB_FREQ_DESC	N	VARCHAR2(4000)
	JOB_FREQ_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_CALENDAR	JOB_PROCESS_DATE	N	DATE
	JOB_FREQ_ID	N	NUMBER(10,0)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_BY	Y	VARCHAR2(30)
	UPDATE_DATE	Y	DATE
RPU_JOB_CURRENT_PROCESS_DATES	CURR_RPT_PROCESS_DATE	N	DATE
	CURR_RPT_AS_OF_DATE	N	DATE
	CURR_RPT_JOB_FREQ_ID	N	NUMBER(10,0)
	CURR_RPT_JOB_STATUS	N	CHAR(1)
	PREV_RPT_PROCESS_DATE	N	DATE
	PREV_RPT_AS_OF_DATE	N	DATE
	PREV_RPT_JOB_FREQ_ID	N	NUMBER(10,0)
	PREV_RPT_JOB_STATUS	N	CHAR(1)
	NEXT_RPT_PROCESS_DATE	N	DATE
	NEXT_RPT_AS_OF_DATE	N	DATE
	NEXT_RPT_JOB_FREQ_ID	N	NUMBER(10,0)
	NEXT_RPT_JOB_STATUS	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_BY	Y	VARCHAR2(30)
	UPDATE_DATE	Y	DATE
RPU_JOB_CRITERIA_PROCESS_DATES	CRITERIA_ID	N	NUMBER(10,0)
	CRITERIA_NAME	N	VARCHAR2(50)
	CRITERIA_DESC	N	VARCHAR2(4000)
	CRITERIA_PROCESS_DATE	N	DATE
	CRITERIA_AS_OF_DATE	N	DATE
	CRITERIA_USED_BY_BATCH_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)

A&R Batch System Specifications

Table	Column	Optional	Type
RPU_JOB_DB_CONNECTIONS	JOB_DB_CONNECTION_ID	N	NUMBER(10,0)
	JOB_DB_CONNECTION_SHORT_DESC	N	VARCHAR2(256)
	JOB_DB_CONNECTION_DESC	N	VARCHAR2(4000)
	JOB_DB_CONNECTION_ACTIVE_IND	N	CHAR(1)
	HOST_NAME	Y	VARCHAR2(30)
	PORT_NUMBER	Y	VARCHAR2(30)
	SID_NAME	Y	VARCHAR2(30)
	USERID	Y	VARCHAR2(30)
	PASSWORD	Y	VARCHAR2(30)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_APP_PARAMS	APP_PARAM_NAME	N	VARCHAR2(256)
	APP_PARAM_VALUE	Y	VARCHAR2(4000)
	APP_PARAM_SHORT_DESC	N	VARCHAR2(256)
	APP_PARAM_DESC	N	VARCHAR2(4000)
	APP_PARAM_ACTIVE_IND	N	CHAR(1)
	APP_PARAM_DERIVED_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_PGM_TYPES	JOB_PGM_TYPE_ID	N	NUMBER(10,0)
	JOB_PGM_TYPE_NAME	N	VARCHAR2(256)
	JOB_PGM_TYPE_SHORT_DESC	N	VARCHAR2(256)
	JOB_PGM_TYPE_DESC	N	VARCHAR2(4000)
	JOB_PGM_TYPE_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_PGMS	JOB_PGM_ID	N	NUMBER(10,0)
	JOB_PGM_NAME	N	VARCHAR2(256)
	JOB_PGM_SHORT_DESC	N	VARCHAR2(256)
	JOB_PGM_DESC	N	VARCHAR2(4000)
	JOB_PGM_ACTIVE_IND	N	CHAR(1)
	JOB_PGM_TYPE_ID	N	NUMBER(10,0)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)

A&R Batch System Specifications

Table	Column	Optional	Type
RPU_JOB_PGM_PARAMS	JOB_PGM_PARM_ID	N	NUMBER(10,0)
	JOB_PGM_ID	N	NUMBER(10,0)
	JOB_PGM_PARM_SEQ	N	NUMBER(10,0)
	JOB_PGM_PARAM_NAME	N	VARCHAR2(256)
	JOB_PGM_PARAM_SHORT_DESC	N	VARCHAR2(256)
	JOB_PGM_PARAM_DESC	N	VARCHAR2(4000)
	JOB_PGM_PARAM_DFLT_VAL	Y	VARCHAR2(4000)
	JOB_PGM_PARAM_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_CLASSIFICATIONS	JOB_CLASSIFICATION_ID	N	NUMBER(10,0)
	JOB_FREQ_ID	N	NUMBER(10,0)
	JOB_CLASSIFICATION_PROC_SEQ	N	NUMBER(10,0)
	JOB_CLASSIFICATION_SHORT_DESC	N	VARCHAR2(256)
	JOB_CLASSIFICATION_DESC	N	VARCHAR2(4000)
	JOB_CLASSIFICATION_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_CLASS_DEPENDENCIES	JOB_CLASSIFICATION_ID	N	NUMBER(10,0)
	JOB_CLASS_DEPEND_ON_ID	N	NUMBER(10,0)
	JOB_CLASS_DEPEND_SHORT_DESC	N	VARCHAR2(256)
	JOB_CLASS_DEPEND_DESC	N	VARCHAR2(4000)
	JOB_CLASS_DEPEND_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SUBJECT_AREAS	JOB_SUBJECT_AREA_ID	N	NUMBER(10,0)
	JOB_CLASSIFICATION_ID	N	NUMBER(10,0)
	JOB_SUBJECT_AREA_PROC_SEQ	N	NUMBER(10,0)
	JOB_SUBJECT_AREA_SHORT_DESC	N	VARCHAR2(256)
	JOB_SUBJECT_AREA_DESC	N	VARCHAR2(4000)
	JOB_SUBJECT_AREA_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)

A&R Batch System Specifications

Table	Column	Optional	Type
RPU_JOBS	JOB_ID	N	NUMBER(10,0)
	JOB_SUBJECT_AREA_ID	N	NUMBER(10,0)
	JOB_PROC_SEQ	N	NUMBER(10,0)
	JOB_SHORT_DESC	N	VARCHAR2(256)
	JOB_DESC	N	VARCHAR2(4000)
	JOB_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_STEPS	JOB_STEP_ID	N	NUMBER(10,0)
	JOB_ID	N	NUMBER(10,0)
	JOB_STEP_PROC_SEQ	N	NUMBER(10,0)
	JOB_PGM_ID	N	NUMBER(10,0)
	JOB_STEP_SHORT_DESC	N	VARCHAR2(256)
	JOB_STEP_LONG_DESC	N	VARCHAR2(4000)
	JOB_STEP_ACTIVE_IND	N	CHAR(1)
	JOB_DB_CONNECTION_ID	N	NUMBER(10,0)
	CONTINUE_ON_FAILURE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_STEP_PGM_PARAM_VALUES	JOB_STEP_PARM_ID	N	NUMBER(10,0)
	JOB_STEP_ID	N	NUMBER(10,0)
	JOB_PGM_PARM_ID	N	NUMBER(10,0)
	JOB_STEP_PARM_VALUE	Y	VARCHAR2(4000)
	JOB_STEP_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_LOGS	JOB_LOG_ID	N	NUMBER(10,0)
	JOB_PROCESS_DATE	N	DATE
	JOB_FREQ_ID	N	NUMBER(10,0)
	JOB_CLASSIFICATION_ID	N	NUMBER(10,0)
	JOB_SUBJECT_AREA_ID	N	NUMBER(10,0)
	JOB_ID	N	NUMBER(10,0)
	JOB_STEP_ID	N	NUMBER(10,0)
	JOB_START_DATE_TIME	N	DATE
	JOB_END_DATE_TIME	Y	DATE
	JOB_MESSAGE_TXT	Y	VARCHAR2(4000)
	JOB_STATUS_IND	N	VARCHAR2(1)
	JOB_DB_SID_NAME	Y	VARCHAR2(30)

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Table	Column	Optional	Type
	JOB_DB_USERID	Y	VARCHAR2(30)
	JOB_COMMAND	Y	LONG(0)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_LOG_ARCHS			
	JOB_LOG_ID	N	NUMBER(10,0)
	JOB_PROCESS_DATE	N	DATE
	JOB_FREQ_ID	N	NUMBER(10,0)
	JOB_CLASSIFICATION_ID	N	NUMBER(10,0)
	JOB_SUBJECT_AREA_ID	N	NUMBER(10,0)
	JOB_ID	N	NUMBER(10,0)
	JOB_STEP_ID	N	NUMBER(10,0)
	JOB_START_DATE_TIME	N	DATE
	JOB_END_DATE_TIME	Y	DATE
	JOB_MESSAGE_TXT	Y	VARCHAR2(4000)
	JOB_STATUS_IND	N	VARCHAR2(1)
	JOB_DB_SID_NAME	Y	VARCHAR2(30)
	JOB_DB_USERID	Y	VARCHAR2(30)
	JOB_COMMAND	Y	LONG(0)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_INDEX_DDLS	INDEX_OWNER	N	VARCHAR2(30)
	INDEX_NAME	N	VARCHAR2(30)
	TABLE_OWNER	N	VARCHAR2(30)
	TABLE_NAME	N	VARCHAR2(30)
	INDEX_DDL	N	LONG(0)
	INDEX_DESC	Y	VARCHAR2(4000)
	INDEX_STATUS_IND	N	VARCHAR2(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_BY	Y	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
RPU_JOB_OLTP_OBJECTS	RPT_AS_OF_DATE	N	DATE
	RPT_PROCESS_DATE	N	DATE
	OBJECT_OWNER	N	VARCHAR2(30)
	OBJECT_TYPE	N	VARCHAR2(18)
	OBJECT_NAME	N	VARCHAR2(30)
	OBJECT_DDL	N	CLOB(4000)
	OBJECT_STATUS_IND	N	VARCHAR2(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE

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Table	Column	Optional	Type
	UPDATED_BY	Y	VARCHAR2(30)
RPU_EXP_JOBS	EXP_JOB_ID	N	NUMBER(10,0)
	JOB_STEP_ID	N	NUMBER(10,0)
	JOB_SHORT_DESC	N	VARCHAR2(256)
	JOB_DESC	N	VARCHAR2(4000)
	EXP_PROGRAM_NAME	N	VARCHAR2(4000)
	EXP_BASE_DIR	N	VARCHAR2(4000)
	RPT_AS_OF_DATE	N	DATE
	RPT_PROCESS_DATE	N	DATE
	EXP_SCHEMA_NAME	N	VARCHAR2(30)
	EXP_TBL_BY_TBL_IND	N	CHAR(1)
	EXP_ROWS_IND	N	CHAR(1)
	JOB_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_EXP_TABLES	EXP_TABLE_ID	N	NUMBER(10,0)
	EXP_JOB_ID	N	NUMBER(10,0)
	EXP_TABLE_SHORT_DESC	N	VARCHAR2(256)
	EXP_TABLE_LONG_DESC	N	VARCHAR2(4000)
	TABLE_NAME	N	VARCHAR2(30)
	EXP_TABLE_ACTIVE_IND	N	CHAR(1)
	CONTINUE_ON_FAILURE_IND	N	CHAR(1)
	EXP_START_DATE_TIME	Y	DATE
	EXP_END_DATE_TIME	Y	DATE
	EXP_DIRECTORY	Y	VARCHAR2(4000)
	EXP_FILENAME	Y	VARCHAR2(4000)
	EXP_LOG_FILENAME	Y	VARCHAR2(4000)
	EXP_MESSAGE_TXT	Y	VARCHAR2(4000)
	EXP_STATUS_IND	N	VARCHAR2(1)
	EXP_COMMAND	Y	VARCHAR2(4000)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_IMP_JOBS	IMP_JOB_ID	N	NUMBER(10,0)
	EXP_JOB_ID	N	NUMBER(10,0)
	JOB_DB_CONNECTION_ID	N	NUMBER(10,0)
	JOB_SHORT_DESC	N	VARCHAR2(256)
	JOB_DESC	N	VARCHAR2(4000)
	IMP_PROGRAM_NAME	N	VARCHAR2(4000)
	EXP_BASE_DIR	N	VARCHAR2(4000)
	RPT_AS_OF_DATE	N	DATE
	RPT_PROCESS_DATE	N	DATE

A&R Batch System Specifications

Table	Column	Optional	Type
	IMP_PROCESS_DATE	N	DATE
	EXP_SCHEMA_NAME	N	VARCHAR2(30)
	IMP_SCHEMA_NAME	N	VARCHAR2(30)
	IMP_TBL_BY_TBL_IND	N	CHAR(1)
	DROP_TBL_BEFORE_IMP_IND	N	CHAR(1)
	IGNORE_CREATE_ERRS_IND	N	CHAR(1)
	IMP_ROWS_IND	N	CHAR(1)
	DBMS_JOB_ID	Y	NUMBER
	JOB_ACTIVE_IND	N	CHAR(1)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_IMP_TABLES	IMP_TABLE_ID	N	NUMBER(10,0)
	IMP_JOB_ID	N	NUMBER(10,0)
	IMP_TABLE_SHORT_DESC	N	VARCHAR2(256)
	IMP_TABLE_LONG_DESC	N	VARCHAR2(4000)
	TABLE_NAME	N	VARCHAR2(30)
	IMP_TABLE_ACTIVE_IND	N	CHAR(1)
	CONTINUE_ON_FAILURE_IND	N	CHAR(1)
	IMP_START_DATE_TIME	Y	DATE
	IMP_END_DATE_TIME	Y	DATE
	EXP_DIRECTORY	Y	VARCHAR2(4000)
	EXP_FILENAME	Y	VARCHAR2(4000)
	IMP_LOG_FILENAME	Y	VARCHAR2(4000)
	IMP_MESSAGE_TXT	Y	VARCHAR2(4000)
	IMP_STATUS_IND	N	VARCHAR2(1)
	IMP_COMMAND	Y	VARCHAR2(4000)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_OBJECT_PROCESS_DATES	OBJECT_OWNER	N	VARCHAR2(30)
	OBJECT_NAME	N	VARCHAR2(30)
	MIN_RPT_AS_OF_DATE	N	DATE
	MAX_RPT_AS_OF_DATE	N	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATE_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)

A&R Batch System Specifications

Table	Column	Optional	Type
Application Security Related Tables:			
RPU_JOB_USERS	USER_ID	N	NUMBER
	LOGIN	Y	VARCHAR2(30)
	NAME	Y	VARCHAR2(30)
	TITLE	Y	VARCHAR2(30)
	ENABLED	Y	NUMBER(1,0)
	CHG_USER_ID	Y	NUMBER
	CHG_USER_DATE	Y	DATE
	PHONE	Y	VARCHAR2(20)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SECURITY_GROUPS	GROUP_ID	N	NUMBER
	GROUP_DESC	Y	VARCHAR2(30)
	CHG_USER_ID	Y	NUMBER
	CHG_USER_DATE	Y	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SECURITY_GROUP_USERS	GROUP_USER_ID	N	NUMBER
	GROUP_ID	N	NUMBER
	USER_ID	N	NUMBER
	CHG_USER_ID	Y	NUMBER
	CHG_USER_DATE	Y	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SECURITY_SCREENINGS	SCREEN_ID	N	NUMBER
	SCREEN_NAME	N	VARCHAR2(32)
	SCREEN_DESC	Y	VARCHAR2(40)
	SPECIAL1_ACCESS_DESC	Y	VARCHAR2(100)
	SPECIAL2_ACCESS_DESC	Y	VARCHAR2(100)
	SPECIAL3_ACCESS_DESC	Y	VARCHAR2(100)
	CHG_USER_ID	Y	NUMBER
	CHG_USER_DATE	Y	DATE
	GROUP_KEYWORD	Y	VARCHAR2(20)
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)

A&R Batch System Specifications

Table	Column	Optional	Type
RPU_JOB_SECURITY_MENU_TYPES	MENU_TYPE_ID	N	NUMBER
	MENU_TYPE_NAME	N	VARCHAR2(255)
	CHG_USER_ID	N	NUMBER
	CHG_USER_DATE	N	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SECURITY_MENUS	MENU_ID	N	NUMBER
	MENU_NAME	N	VARCHAR2(255)
	PARENT_MENU_ID	Y	NUMBER
	MENU_LEVEL	N	NUMBER
	MENU_TYPE_ID	N	NUMBER
	SCREEN_ID	Y	NUMBER
	CHG_USER_ID	N	NUMBER
	CHG_USER_DATE	N	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_JOB_SECURITY_SCREEN_ACCESS	SCREEN_ID	N	NUMBER
	GROUP_ID	N	NUMBER
	READ_ACCESS	Y	NUMBER(1,0)
	ADD_ACCESS	Y	NUMBER(1,0)
	MODIFY_ACCESS	Y	NUMBER(1,0)
	DELETE_ACCESS	Y	NUMBER(1,0)
	SPECIAL1_ACCESS	Y	NUMBER(1,0)
	SPECIAL2_ACCESS	Y	NUMBER(1,0)
	SPECIAL3_ACCESS	Y	NUMBER(1,0)
	CHG_USER_ID	Y	NUMBER
	CHG_USER_DATE	Y	DATE
	CREATED_DATE	N	DATE
	CREATED_BY	N	VARCHAR2(30)
	UPDATED_DATE	Y	DATE
	UPDATED_BY	Y	VARCHAR2(30)
RPU_V_JOB_GROUP_SCREEN_ACCESS	GROUP_ID	N	NUMBER
	GROUP_DESC	Y	VARCHAR2(30)
	SCREEN_NAME	N	VARCHAR2(32)
	SCREEN_DESC	Y	VARCHAR2(40)
	SPECIAL1_ACCESS_DESC	Y	VARCHAR2(100)
	SPECIAL2_ACCESS_DESC	Y	VARCHAR2(100)
	SPECIAL3_ACCESS_DESC	Y	VARCHAR2(100)
	GROUP_KEYWORD	Y	VARCHAR2(20)
	SCREEN_ID	N	NUMBER
	READ_ACCESS	Y	NUMBER(1,0)

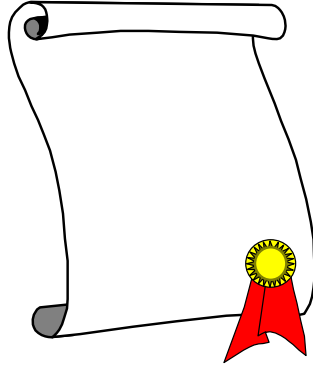
A&R Batch System Specifications

Table	Column	Optional	Type
	ADD_ACCESS	Y	NUMBER(1,0)
	MODIFY_ACCESS	Y	NUMBER(1,0)
	DELETE_ACCESS	Y	NUMBER(1,0)
	SPECIAL1_ACCESS	Y	NUMBER(1,0)
	SPECIAL2_ACCESS	Y	NUMBER(1,0)
	SPECIAL3_ACCESS	Y	NUMBER(1,0)

3.2 LOOKUPS IDENTIFIED (LOV)

Table	Description / Allowed Values
Xxx Types	Aaa, bbb, ccc, ddd
Yyy Types	Ggg, hhh, iii, jjj
zzzz	This will consist of xxxxx

3.3 DATA MODEL



4. ISSUES AND STANDARDS

1. Calendar and Monthly cycle is based on Accounting Period Closing.

STATUS: OPEN

Explanation:

Currently the monthly cycle is based on accounting period closing, and we manually set the frequency in the calendar, when we have to process the monthly cycle. Since MIDAS Accounting Period does not close on a specific date, and since we process monthly cycle for MIDAS on the Sunday after the closing of Accounting, we may have to introduce different calendars for different OLTP system's ETL.

2. Calendar data needs to be populated within the batch.

STATUS: CLOSED

Explanation:

Currently we populate calendar data manually, for the whole year at the end-of-the year. We need to add a job step in the batch to automatically add data in the calendar. Since the frequencies are based on Accounting Period Closing, we can not put this job in Yearly cycle, that might be assigned to process in Mid January.

3. Exports Log Screen.

STATUS: OPEN

Explanation:

Currently the job step are assigned in the batch to perform the exports and to manually kick-off export, we need to modify this screen or add a screen.

4. Decide on-line, off-line and archived data retention periods.

STATUS: OPEN

Explanation:

On-Line Data:

RPT Schema: Currently we have data from January 2002 in RPT partitioned tables.

Off-Line Data in Export files:

RPTOUT_MDS Schema:

RPTIN_MDS Schema:

RPT Schema:

ESSOUT_RPT Schema:

RPT_UTIL Schema:

RPT_BAL Schema:

Archived Off-Line Export files on to the Tapes:

RPTOUT_MDS Schema:

RPTIN_MDS Schema:

RPT Schema:

ESSOUT_RPT Schema:

RPT_UTIL Schema:

RPT_BAL Schema:

5. Remote Shell Execution.

STATUS: CLOSED

Explanation:

Enhanced batch system to execute remote jobs. E.g. to kick-off batch jobs on Essbase server to load Essbase cubes.

A&R Batch System Specifications

6. Create screen and tables necessary to maintain contact list.

STATUS: OPEN

Explanation:

Create screen and tables necessary to maintain contact list, to support batch system.