



Extending the ODS and EDW

Presented by:
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Ellucian
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Session ID 2464

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Introduction

- This presentation is aimed at providing direction and insight into Ellucian's recommended approach for extending the Banner Operational Data Store and Banner Enterprise Data Warehouse solutions.
- Following these approaches will help ensure that your customizations are not overwritten as product upgrades are applied.

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Agenda

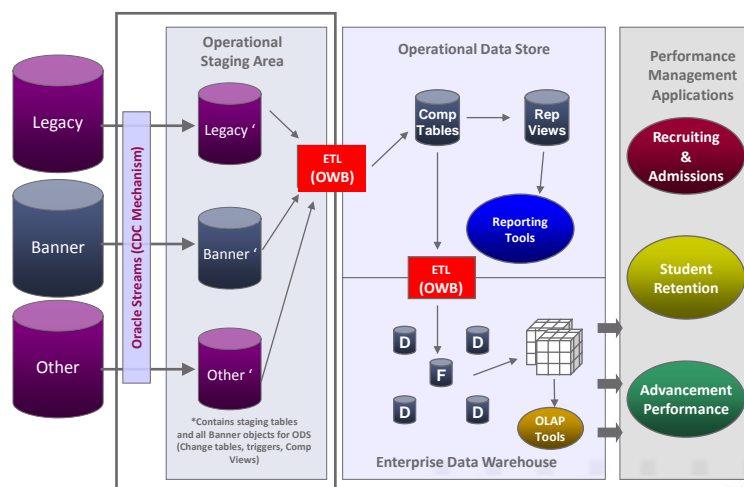
- Extending the ODS
 - Overall Recommendations
 - Overview of Staging (Streams/Mviews)
 - Adding New Content
- Extending the EDW
 - Overall Recommendations
 - EDW Objects
 - OWB Mappings
 - Administrative Interface
- Extending Delivered Cognos Models

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BPRA Architecture (Oracle Streams Foundation)

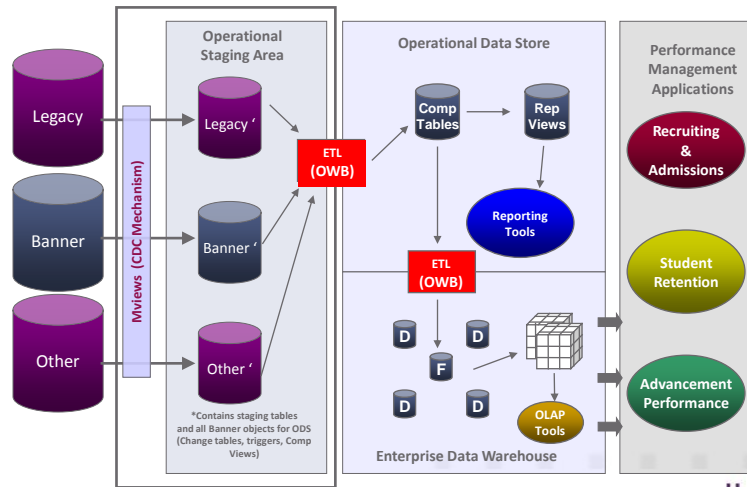


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BPRA Architecture (Mviews Foundation)



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Extending the ODS

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Extending the ODS

- Overall Recommendations
- Overview of Staging (Streams/Mviews)
- Adding New Content

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Overall Recommendations

- DO NOT modify the delivered ODS product objects.
 - Doing so may result in customizations lost when upgrading.
- DO NOT modify the delivered OWB projects.
 - Any custom work in OWB should be done in a new project.
 - Upgrades may involve dropping and recreating all projects or dropping and recreating individual mappings within a project.
- Make a copy of the object and rename
 - Use X, Y or Z as identifier in object name
 - Composite View: AX_ADDRESS or XS_ADDRESS
 - Composite Table: MXT_ADDRESS or XST_ADDRESS
 - OR use Institution extension or prefix as identifier in object name
 - Composite View: AS_ADDRESS_SJU
 - Composite Table: MST_ADDRESS_SJU
 - Reporting View: ADDRESS_SJU
 - This enables SGHE to identify custom objects for SRs

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Oracle Streams – Administrative UI

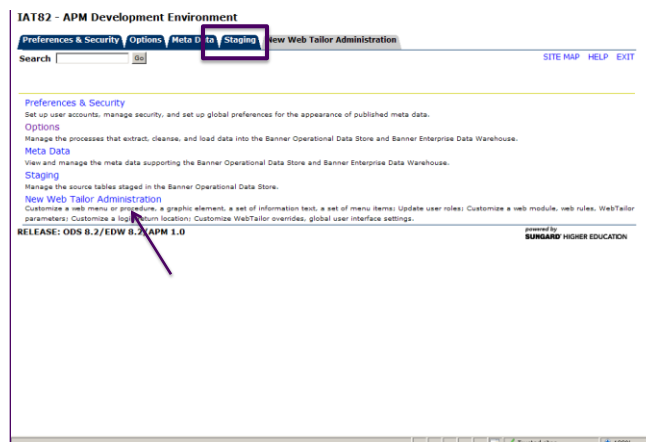
- 'Staging' tab and security
- Maintain Stage Tables
 - Add non-baseline source tables
- Report Staging Area Status
 - Status of processes
 - List of staged tables
 - Misc. staging checks
- Control Reports

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Embedded Within Administrative UI



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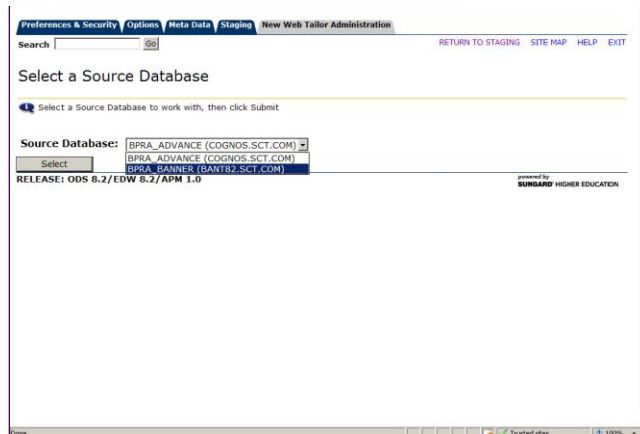
Staging Menu (Streams)



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Maintain Stage Tables (Streams)



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Staging Menu (Streams)

IAT82 - APM Development Environment

Preferences & Security Options Meta Data Staging New Web Tailor Administration

Search Go

[RETURN TO ADMINISTRATIVE MENU](#) [SITE MAP](#) [HELP](#) [EXIT](#)

Staging

[Maintain Stage Tables](#)
Add or remove tables from the Banner ODS staging area.

[Report Staging Area Status](#)
View a list of staged tables, the status of processes, and the details of any staging errors or issues.

RELEASE: ODS 8.2/EDW 8.2/APM 1.0

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Adding Tables (Streams)

IAT82 - APM Development Environment

Preferences & Security Options Meta Data Staging New Web Tailor Administration

Search Go

[RETURN TO STAGING](#) [SITE MAP](#) [HELP](#) [EXIT](#)

Schedule a Process

To submit this subprocess to the job queue, fill in the information below, then click Submit.

* - indicates a required field.

Maintain Stage Tables

Tables to Add* (0/289)

PETWEMP
PHRL042
PHRSKTP
PHRCMNT
PHRDCHG
PHRDJRD
PHRECAL
PHRECCM
PHRECDT
PHRECFD

Process Parameters

Scheduling Parameters

To schedule this job to run immediately, click [here](#) or type "NOW" into the Run Date and Run Time fields.

Run Date (dd-mon-yyyy):* NOW [Select a Date](#)

Run Time (hh24:miss):* NOW [Select A Time](#)

RELEASE: ODS 8.2/EDW 8.2/APM 1.0

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Adding Tables (Streams)

Preferences & Security Options Meta Data Staging New Web Tailor Administration

Search

RETURN TO OPTIONS SITE MAP HELP EXIT

Display a Control Report

Run Date	Job Number	Process	Status
Apr 09, 2010 03:37 pm	315	ADD_STAGE_PAYROLL	Complete

< Previous Report | Select a Report

Procedure	Message
	Start of Process at 09-APR-2010 15:37:25
	Staging table: PAYROLL.PHRCMNT sourced from BPRA_BANNER
P_ADD_TO_LOCAL_ENV	Adding supplemental log data
P_ADD_TO_LOCAL_ENV	Adding table rule
P_ADD_TO_LOCAL_ENV	Importing over the network
P_ADD_TO_LOCAL_ENV	Performing post import actions
P_ADD_TO_LOCAL_ENV	Source object: PAYROLL.PHRCMNT successfully set for staging.
	Table stage completed at 09-APR-2010 15:38:34
	Process completed successfully at 09-APR-2010 15:38:34
	End of Report

Reschedule Process

Job Duration: 1 minutes.

< Previous Report |

Done 100%

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Staging Area Status Report (Streams)

Preferences & Security Options Meta Data Staging New Web Tailor Administration

Search

RETURN TO STAGING SITE MAP HELP EXIT

Schedule a Process

To submit this subprocess to the job queue, fill in the information below, then click Submit.

* - indicates a required field.

Report Staging Area Status

Process to Schedule

Process Parameters

Source Database*

Display Required Source ☐

Archived Logs?* ☐

Display Process Status?* ☐

Display Apply Errors?* ☐

Display Staged Tables?* ☐

Perform Staging Checks?* ☐

Scheduling Parameters

To schedule this job to run immediately, click [here](#) or type "NOW" into the Run Date and Run Time fields.

Run Date (dd-mon-yyyy)*

Done 100%

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Staging Area Status Report (Streams)

Display a Control Report

Run Date	Job Number	Process	Status
Jul 07, 2009 02:16 pm	5523	STAGE_AREA_STATUS	Complete

Filter Report
Delete Report
CSV Summary

Procedure Message

Start of Process at 07-JUL-2009 14:16:29

Running: MGKSTGU.P_ARCHIVED_LOG

The following 1 archived logfiles on the source are currently required by Streams capture processes:

P_ARCHIVED_LOG Capture name: BANN82ISCAP -- Source Database: BANN821SCT.COM -- Logfile: /u011/redo/oracle/product/10.2/admin/BANN821/arch/arch_L13_091517545.dbf

Running: MGKSTGU.P_PROCESS_STATUS

P_PROCESS_STATUS Capture name: STRMADMIN.BANN82ISCAP

P_PROCESS_STATUS Status: ENABLED -- State: CAPTURING CHANGES -- First SCN: 7239212294239 -- Captured SCN: 7244318035718 -- Applied SCN: 7244318035718

P_PROCESS_STATUS Enqueue: YES -- Dequeue: YES -- Number messages: 0 -- Spill messages: 0

P_PROCESS_STATUS Propagation name: BANN821SPROP

P_PROCESS_STATUS Status: ENABLED

P_PROCESS_STATUS Apply queue: ODSSTG.BANN82ISAPPQ

P_PROCESS_STATUS Enqueue: YES -- Dequeue: YES -- Number messages: 0 -- Spill messages: 0

P_PROCESS_STATUS Apply name: BANN82ISAPP

P_PROCESS_STATUS Status: ENABLED -- Reader state: DEQUEUE MESSAGES -- Coordinator state: IDLE -- Server state: IDLE -- Apply tag: 00

Running: MGKSTGU.P_APPLY_ERRORS

There are no apply errors at this time.

Running: MGKSTGU.P_STAGED_TABLES

There are no source tables that are currently staged.

Running: MGKSTGU.P_STAGE_CHECKS

P_STAGE_CHECKS All captured source columns are currently in the destination.

P_STAGE_CHECKS All captured source tables are instantiated in the destination.

P_STAGE_CHECKS All instantiated destination tables are being captured at the source.

Process completed successfully at 07-JUL-2009 14:16:34

End of Report

Reschedule Process

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Staging Menu (Mviews)

Your Institution Name!

Preferences & Security Options Meta Data **Staging** New Web Tailor Administration

Search Go

Staging

[Maintain Stage Tables](#)
Add or remove tables from the Banner ODS staging area.

[Report Staging Area Status](#)
View a list of staged tables, the status of processes, and the details of any staging errors or issues.

[Refresh Staging Collections](#)
Refresh a list of staging collections.

[Refresh Staging Tables](#)
Refresh a list of staging tables.

[Reconcile Stage Tables](#)
Reconcile Stage tables by schema or table name.

RELEASE: BANNERODS 8.4/BANNEREDW 8.4.2/R&A PER 1.2.2/SR PER 1.0.1

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Maintain Stage Tables (Mviews)

Your Institution Name!

Preferences & Security Options Meta Data Staging New Web Tailor Administration

Search Go

Maintain Stage Tables

Select a Stage Table option.

- Add ALUMNI Tables
- Add FAISMGR Tables
- Add FISMGR Tables
- Add FTAEMGR Tables
- Add GENERAL Tables
- Add PAYROLL Tables
- Add POSNCTL Tables
- Add RELATEMGR Tables
- Add SATURN Tables
- Add TAISMGR Tables
- Add WTAILOR Tables
- Remove Stage Tables
- Add Another Schema to this List

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Adding Tables (Mviews)

Schedule a Process

To submit this subprocess to the job queue, fill in the information below, then click Submit.

* - indicates a required field.

Maintain Stage Tables

Tables to Add* (0/175)

Select All | Deselect All

AABCTRL
AABOINS
AARACAT
AARACKN
AARACKR
AARAJBD
AARAJIN
AARAJRD
AARAKDN
AARAKIN

Process to Schedule

Process Parameters

Scheduling Parameters

To schedule this job to run immediately, click [here](#) or type "NOW" into the Run Date and Run Time fields.

Run Date (dd-mon-yyyy):* [Select A Date](#)

Run Time (hh24:mi:ss):* [Select A Time](#)

Submit Reset All Fields Export Import

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Adding Tables (Mviews)

Display a Control Report

Run Date	Job Number	Process	Status
Mar 06, 2013 03:49 pm	1327	ADD_STAGE_ALUMNI	Complete

[<- Previous Report](#) | [Select a Report](#)

Procedure	Message
	Start of Process at 06-MAR-2013 15:49:02
	Session set to Resumable, timeout = 3 days (259200)
	Staging table: ALUMNI.AABCTRL sourced from BPRA_BANNER
	Staging source tables as materialized views at 06-MAR-2013 15:49:02
P_STAGE_MVIEW	Verifying schemas exist
P_STAGE_MVIEW	Finding tables to stage
P_STAGE_MVIEW	Creating materialized view logs at 06-MAR-2013 15:49:05
P_STAGE_MVIEW	Creating materialized view logs completed at 06-MAR-2013 15:49:05
P_STAGE_MVIEW	Creating materialized views at 06-MAR-2013 15:49:05
P_STAGE_MVIEW	Creating materialized view ALUMNI.AABCTRL at 06-MAR-2013 15:49:05
P_STAGE_MVIEW	Creating materialized views completed at 06-MAR-2013 15:49:09
P_STAGE_MVIEW	Creating synonyms
P_STAGE_MVIEW	Source tables successfully staged.
	Table stage completed at 06-MAR-2013 15:49:09
	Process completed successfully at 06-MAR-2013 15:49:09
	End of Report

[Reschedule Process](#)

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Staging Area Status Report (Mviews)

Schedule a Process

To submit this subprocess to the job queue, fill in the information below, then click Submit.

* - indicates a required field.

Report Staging Area Status

Source Database*

Display Staged Tables?*

Change Count Limit*

Perform Staging Checks?* ☒

Check Staging Triggers?* ☒

Process to Schedule

Process Parameters

Process Info

Note: The **Change Count Limit** parameter is only applicable when **Display Staged Tables** is set to "Yes, with Change Counts".

Scheduling Parameters

To schedule this job to run immediately, click [here](#) or type "NOW" into the Run Date and Run Time fields.

Run Date (dd-mon-yyyy):* [Select A Date](#)

Run Time (hh24:mi:ss):* [Select A Time](#)

Interval: [Select An Interval](#)

[Submit](#) [Reset All Fields](#) [Export](#) [Import](#)

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Staging Area Status Report (Mviews)

		Run Date	Job Number	Process	Status
		Mar 06, 2013 03:50 pm	1328	STAGE_AREA_STATUS	Warning
< Previous Report Select a Report					
Procedure		Message			
	Start of Process at 06-MAR-2013 15:50:32				
	Session set to Resumable, timeout = 3 days (259200)				
	Source Database: BPRA_BANNER (BAND84.SCT.COM)				
	Running: MGKSTGU.P_STAGE_CHECKS				
P_STAGE_CHECKS	Checking for Non-Baseline Staging MViews...				
P_STAGE_CHECKS	No Non-Baseline Staging MViews found.				
P_STAGE_CHECKS	Checking for Missing Baseline Staging MViews...				
P_STAGE_CHECKS	All Baseline Staging MViews are present.				
P_STAGE_CHECKS	Checking for Staging MViews Not In Any Refresh Group...				
P_STAGE_CHECKS	All Baseline Staging MViews In A Refresh Group.				
P_STAGE_CHECKS	Checking for Refresh Groups Not Connected With an ODS Refresh Process...				
P_STAGE_CHECKS	All Baseline Refresh Groups Connected With an ODS Refresh Process.				
P_STAGE_CHECKS	Checking for Missing Baseline Warehouse Staging Indexes...				
P_STAGE_CHECKS	All Baseline Warehouse Staging Indexes found.				
	Running: MGKLIB.P_CHECKTRIGGERS				
CHECK_TRIGGERS	WARNING: Trigger BT_MODEL_UPDATE_ODS_CHANGE is missing on table RELATEMGR.REL_LIFECYCLE_MODEL				
CHECK_TRIGGERS	WARNING: Trigger BT_STATE_UPDATE_ODS_CHANGE is missing on table RELATEMGR.REL_LIFECYCLE_STATE				
CHECK_TRIGGERS	WARNING: Trigger BT_TRACK_UPDATE_ODS_CHANGE is missing on table RELATEMGR.REL_LIFECYCLE_TRACK				
CHECK_TRIGGERS	NOTE: Additional trigger RT_RBRAPBC_INSERT_ODS_CHANGE found on table FAISMGR.RBRAPBC				
CHECK_TRIGGERS	NOTE: Additional trigger RT_RBRAPBG_INSERT_ODS_CHANGE found on table FAISMGR.RBRAPBG				
	Process completed with warnings at 06-MAR-2013 15:50:42				
	End of Report				
		Reschedule Process			



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Create Reporting View (Optional)

- Create a Reporting View on top of Custom Table
 - Creates a layer of insulation
 - Gives the ability to join to other tables
 - Can create calculations

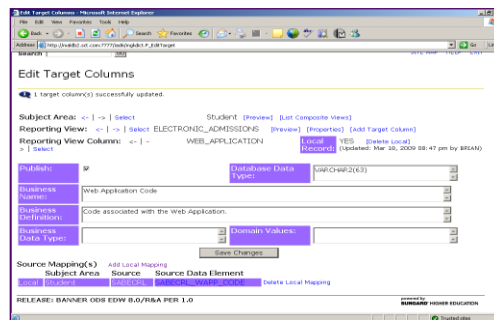


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Create Custom Meta Data (Optional)

- Using the Administrative Interface
 - Create Local Meta Data
 - Won't be overwritten in upgrades



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Add to Reporting Tools

- Add tables to your Reporting Tool layer
 - Import into baseline Cognos Model or Discoverer End User Layer or add to any other Reporting Tool being used
 - Create joins to existing packages or create your own packages
 - Retain transaction logs for changes made – upgrades will redeploy the packages and the scripts would need to be rerun.
- Cognos 10
 - Add reporting view to sghe_ods_dv and sghe_ods_bv framework models
 - Customizations will not be overwritten with upgrades
 - Using Transaction History
- Discoverer
 - Grant object access the EUL schema
 - GRANT SELECT on ELECTRONIC_ADMISSIONS to ODSEUL
 - Add reporting view to the End User Layer
 - Customizations will not be overwritten with upgrades

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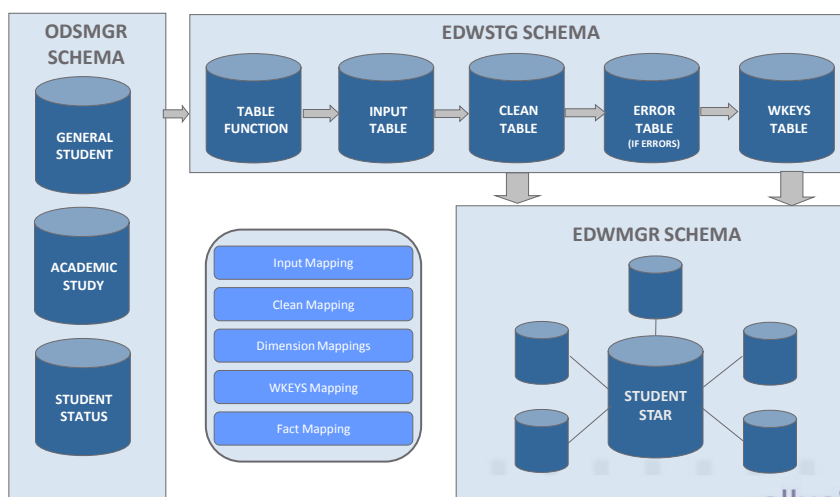
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Extending the EDW

Baseline EDW, BRM, RAP and SRP

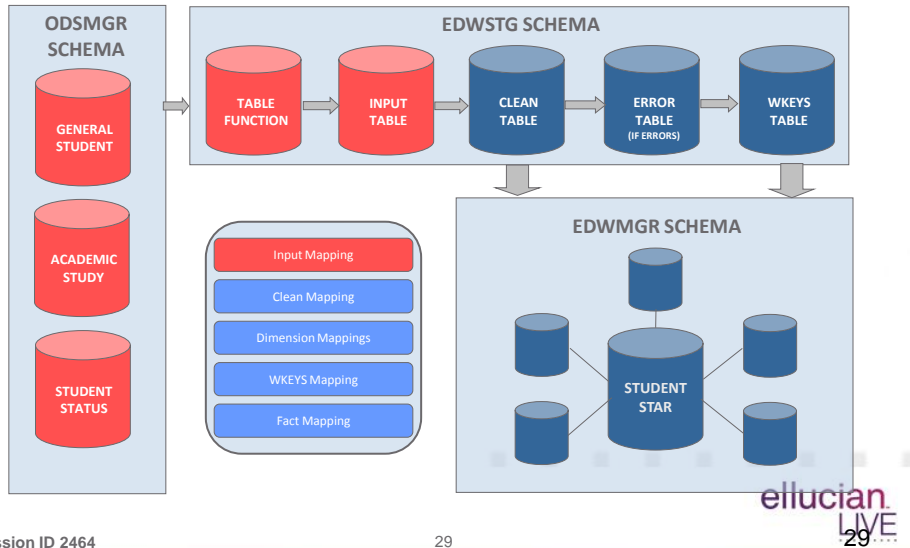
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EDW Detailed Processing

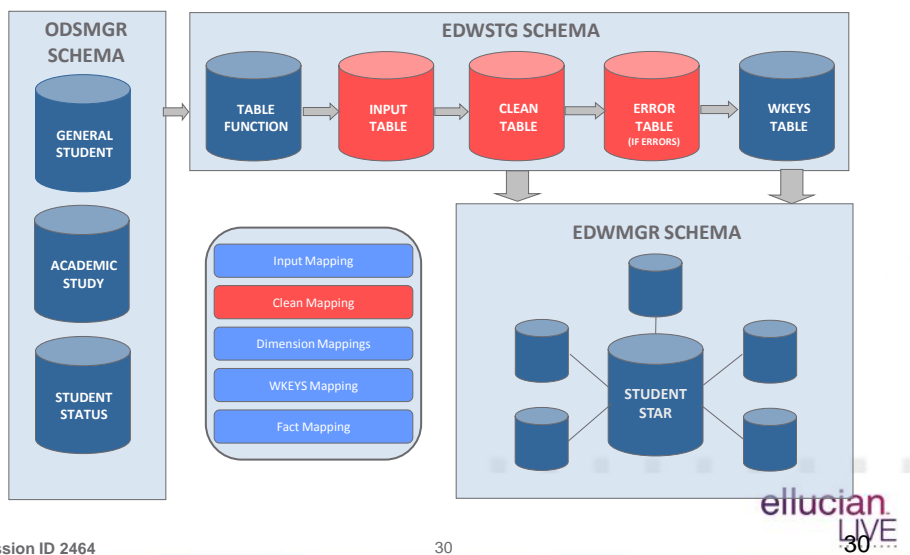


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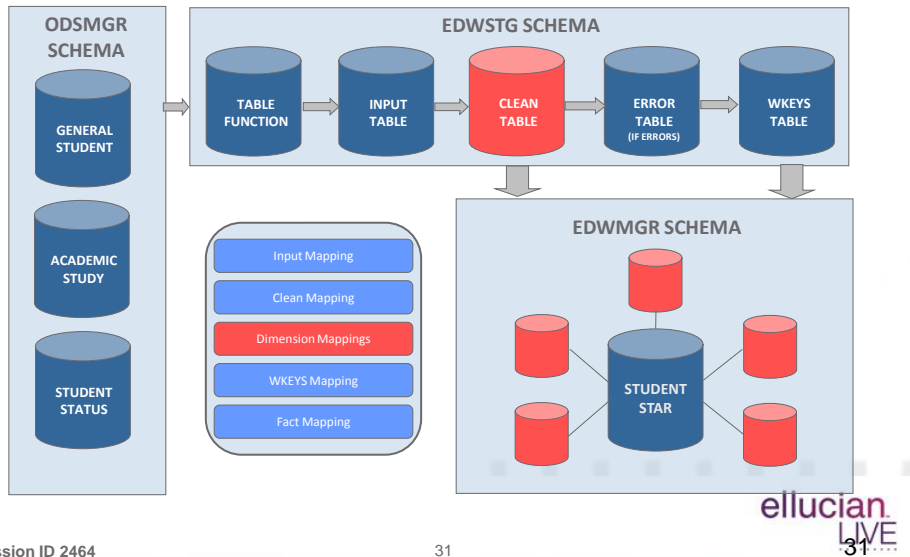
EDW Detailed Processing



EDW Detailed Processing



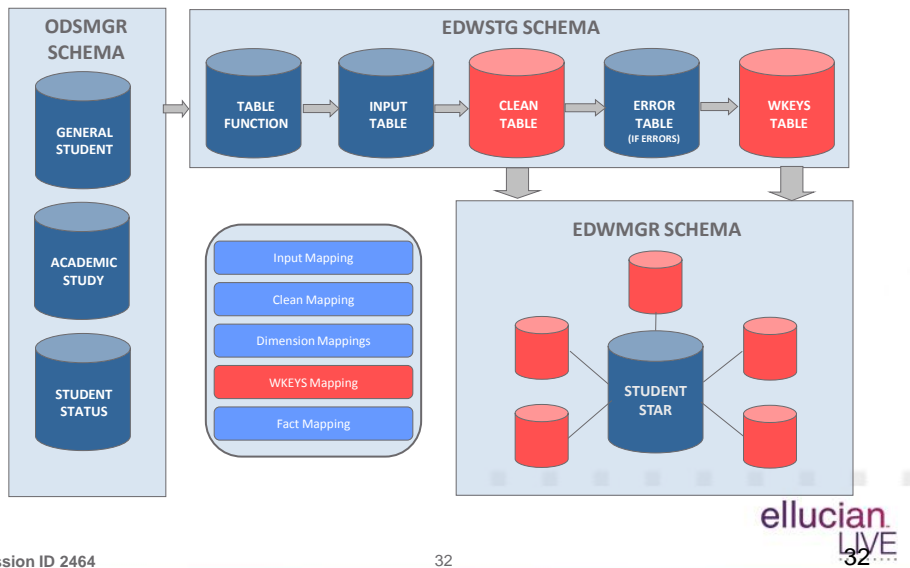
EDW Detailed Processing



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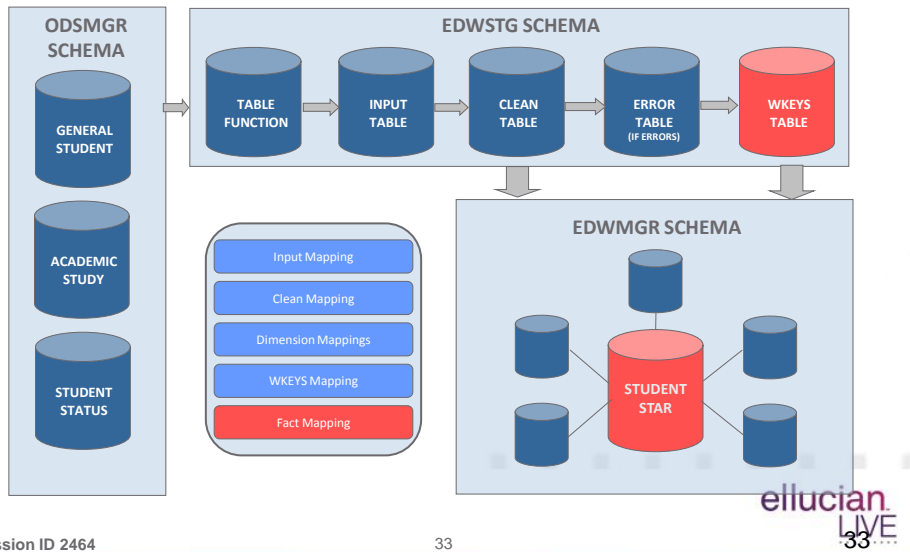
EDW Detailed Processing



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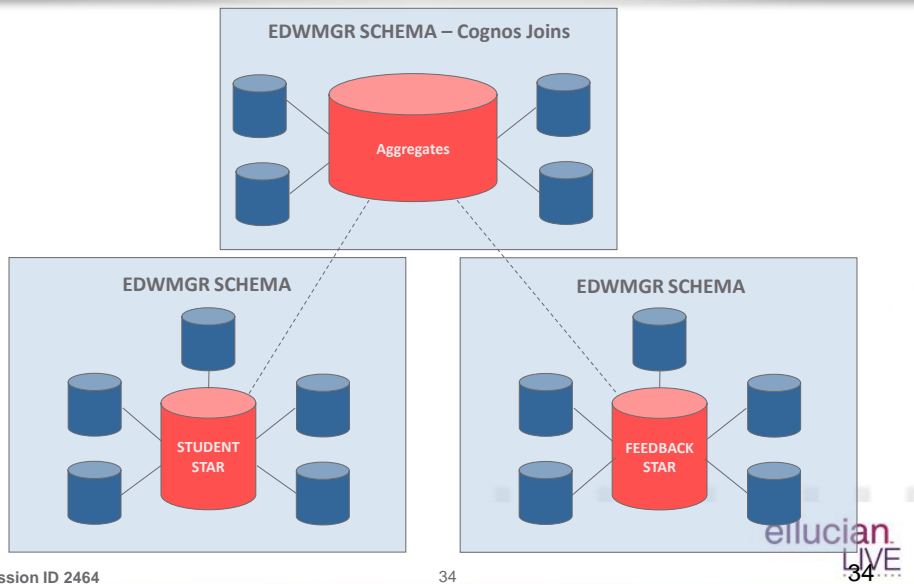
EDW Detailed Processing



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EDW Detailed Processing



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Enterprise Data Warehouse Overview

- Dimensionally modeled, i.e. Star Schemas
- Fact tables
 - Contain Measures Used to Perform Analysis
- Dimension Tables
 - Contain Attributes
 - Surrogate (Calculated) Keys
 - Conformed
- Every dimension and every fact table has five additional user defined fields that may be exercised for extensibility purposes

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Considerations when extending models

- Where/how is that data being captured?
 - This will tell you what the source is, is it already in the ODS or some other system, will it be automatically incorporated into the refresh.
- How will the new object be used – as an attribute or as a measure?
 - This will tell you whether it should be added to a dimension or fact table.
- If a measure, is it captured at the same level of granularity as the other data in the star?
 - If different, this will tell you what adjustments should be made on either the reporting or ETL side to accommodate the difference.

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Step 1: Table Function Modification

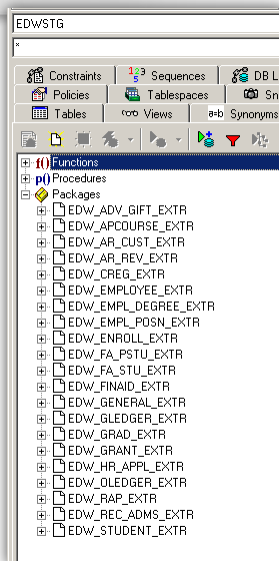
- Table functions are used to extract the data from the ODS to the EDW for loads/refreshes
- There is one table function per star schema
- Snapshot stars' table functions live in individual PL/SQL packages
- Operational stars' table functions live in one package per product
- Table function packages created in EDWSTG schema
- Package naming convention is EDW_<product or snapshot star>_EXTR

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Table Function Packages

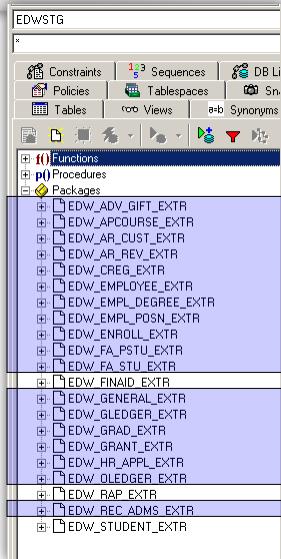


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Table Function Packages



Snapshot Stars

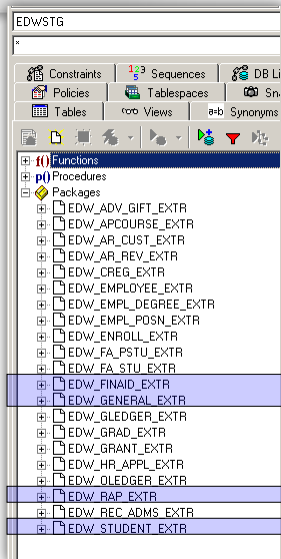
One package per star

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Table Function Packages



Operational Stars

One package per product

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Recommendations

- Copy of the table function package script to an institution-specific directory outside of the baseline EDW code tree
- Rename the script to reflect that it is modified
- Do not change the name of the object created by the script
- Update the script to include desired attributes or measures

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Table Function Structure

- Driving cursor – selects population that will drive extract
- Supporting cursors – select supporting data related to driving population
- Return row definition – where selected values are assigned to staging input table columns

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Function Table Cursor Modification

- In our example we will add Academic Period Type to the first set of user defined fields in the Academic Time Dimension for the Admissions Application star
- The Academic Period Type is part of our driving cursor, selected from the ODS composite table
MST_ADMISSIONS_APPLICATION
- The Banner validation table for this column is STVTRMT



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WDT_ACADEMIC_TIME

WDT_ACADEMIC_TIME: Created: 8/5/2008 2:47:48 PM Last DDL: 1/30/2009 5:54:29 PM

Columns | Indexes | Constraints | Triggers | Data | Scripts | Grants | Synonyms | Partitions | Subpart

ACADEMIC_TIME_KEY

Column Name	ID	Pk	Null?	Data Type
ACADEMIC_TIME_KEY	1	1	N	NUMBER
ACADEMIC_PERIOD	2	Y		VARCHAR2 (63 Char)
ACADEMIC_PERIOD_SD	3	Y		VARCHAR2 (255 Char)
ACADEMIC_PERIOD_LD	4	Y		VARCHAR2 (255 Char)
ACADEMIC_PERIOD_BEGIN_DATE	5	Y		DATE
ACADEMIC_PERIOD_END_DATE	6	Y		DATE
ACADEMIC_YEAR	7	Y		VARCHAR2 (63 Char)
ACADEMIC_YEAR_SD	8	Y		VARCHAR2 (255 Char)
ACADEMIC_YEAR_LD	9	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_01	10	Y		VARCHAR2 (63 Char)
USER_ATTRIBUTE_01_SD	11	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_01_LD	12	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_02	13	Y		VARCHAR2 (63 Char)
USER_ATTRIBUTE_02_SD	14	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_02_LD	15	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_03	16	Y		VARCHAR2 (63 Char)
USER_ATTRIBUTE_03_SD	17	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_03_LD	18	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_04	19	Y		VARCHAR2 (63 Char)
USER_ATTRIBUTE_04_SD	20	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_04_LD	21	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_05	22	Y		VARCHAR2 (63 Char)
USER_ATTRIBUTE_05_SD	23	Y		VARCHAR2 (255 Char)
USER_ATTRIBUTE_05_LD	24	Y		VARCHAR2 (255 Char)
SYSTEM_LOAD_PROCESS	25	N		VARCHAR2 (30 Char)
SYSTEM_LOAD_TMSTMP	26	N		DATE



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Driving Cursor Update

BASILINE:

```
SELECT ...
  ACADEMIC_YEAR,
  ACADEMIC_PERIOD,
  PERSON_UID,
  APPLICATION_NUMBER,
  APPLICATION_RANKING_ORDER,
  APPLICATION_STATUS,
  ....
FROM MST_ADMISSIONS_APPLICATION
WHERE ...;
```

MODIFIED:

```
SELECT ...
  ACADEMIC_YEAR,
  ACADEMIC_PERIOD,
  ACADEMIC_PERIOD_TYPE,
  PERSON_UID,
  APPLICATION_NUMBER,
  APPLICATION_RANKING_ORDER,
  APPLICATION_STATUS,
  ....
FROM MST_ADMISSIONS_APPLICATION
WHERE ...;
```

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Return Row Update

BASILINE:

```
ret_row.academic_period := admissions_appl_rec.academic_period;
ret_row.academic_period_begin_date := acad_time_rec.start_date;
ret_row.academic_period_end_date := acad_time_rec.end_date;
ret_row.academic_year := admissions_appl_rec.academic_year;
ret_row.atim_user_attribute_01 := NULL;
ret_row.atim_user_attribute_02 := NULL;
ret_row.atim_user_attribute_03 := NULL;
ret_row.atim_user_attribute_04 := NULL;
ret_row.atim_user_attribute_05 := NULL;
```

MODIFIED:

```
ret_row.academic_period := admissions_appl_rec.academic_period;
ret_row.academic_period_begin_date := acad_time_rec.start_date;
ret_row.academic_period_end_date := acad_time_rec.end_date;
ret_row.academic_year := admissions_appl_rec.academic_year;
ret_row.atim_user_attribute_01 := admissions_appl_rec.academic_period_type;
ret_row.atim_user_attribute_02 := NULL;
ret_row.atim_user_attribute_03 := NULL;
ret_row.atim_user_attribute_04 := NULL;
ret_row.atim_user_attribute_05 := NULL;
```

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Table Function Compilation

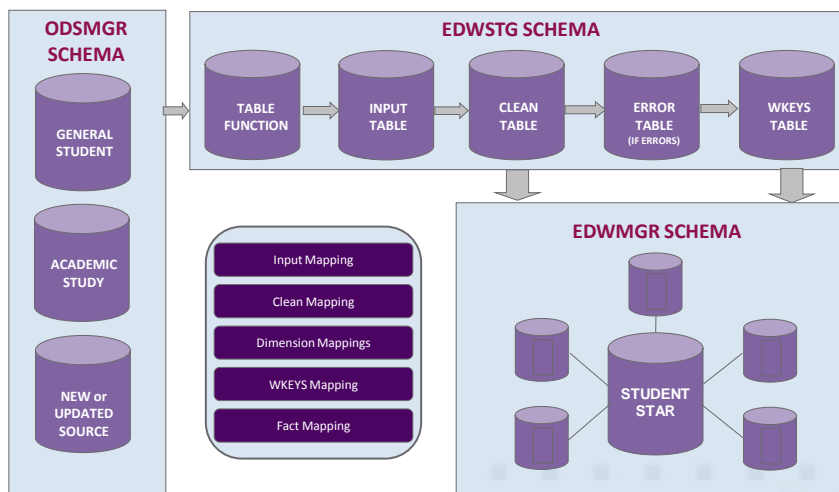
- Compile your modified package under the EDWSTG schema
- Grant execute on the package to IA_ADMIN
 - This ensures that permissions were not lost
 - Reminder that load/refresh jobs are run from the Administrative Interface utilizing records in the IA_ADMIN schema tables
- No updates to OWB mappings needed

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EDW Architecture



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Step 2: Cleansing Rule Creation

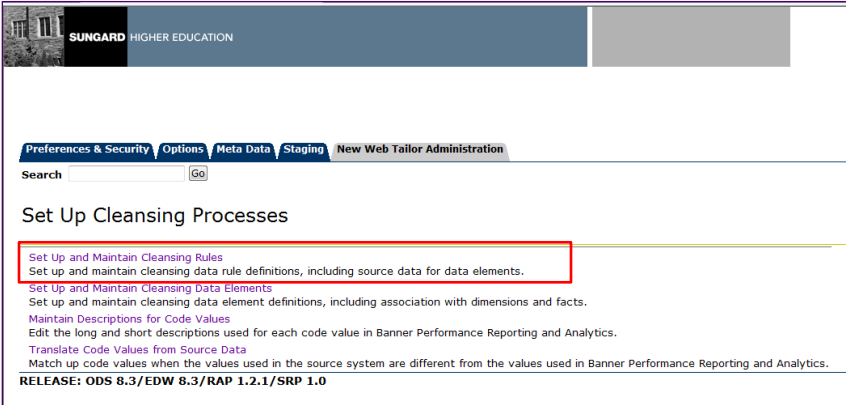
- Via Admin Interface, set up new Parameters
- Cleansing Rule - identifies the source query that should be used to generate the default cleansing values and translations for your new data element
 - Our Banner source validation table is STVTRMT
 - Our new data element is ACADEMIC_TERM_TYPE
- Cleansing Data Element – links your newly defined data element to the star, dimension and input table field it will be used to cleanse
 - Our star, dimension and input table field are ADMISSIONS_APPL, WDT_ACADEMIC_TIME and ATIM_USER_ATTRIBUTE_01
 - Our data element is ACADEMIC_TERM_TYPE

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Cleansing Rule Definition



SUNGARD HIGHER EDUCATION

Preferences & Security | Options | Meta Data | Staging | New Web Tailor Administration

Search Go

Set Up Cleansing Processes

- Set Up and Maintain Cleansing Rules**
Set up and maintain cleansing data rule definitions, including source data for data elements.
- Set Up and Maintain Cleansing Data Elements
Set up and maintain cleansing data element definitions, including association with dimensions and facts.
- Maintain Descriptions for Code Values
Edit the long and short descriptions used for each code value in Banner Performance Reporting and Analytics.
- Translate Code Values from Source Data
Match up code values when the values used in the source system are different from the values used in Banner Performance Reporting and Analytics.

RELEASE: ODS 8.3/EDW 8.3/RAP 1.2.1/SRP 1.0

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Cleansing Rule Definition

Preferences & Security | Options | Meta Data | Staging | New Web Tailor Administration

Search

Update a Cleansing Rule

To update this Cleansing Rule, make changes to the information below, then click Save.

* - indicates a required field.

Rule Name: * ACADEMIC_PERIOD_TYPE

Rule Source Query: *

Prefix Column: -No Prefix For This Rule

Range Rule?: ☐

Effective Date Rule?: ☐ (Last updated: 20-MAR-2011:06:47:24 by SCOLLINS)

This rule is associated with 1 [Cleansing Data Element\(s\)](#). [\[Create a Cleansing Rule | List Cleansing Rules \]](#)

RELEASE: ODS 8.3/EDW 8.3/RAP 1.2.1/SRP 1.0

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Cleansing Data Element Definition

Preferences & Security | Options | Meta Data | Staging | New Web Tailor Administration

Search

Set Up Cleansing Processes

Set Up and Maintain Cleansing Rules
Set up and maintain cleansing data rule definitions, including source data for data elements.

Set Up and Maintain Cleansing Data Elements
Set up and maintain cleansing data element definitions, including association with dimensions and facts.

Maintain Descriptions for Code Values
Edit the long and short descriptions used for each code value in Banner Performance Reporting and Analytics.

Translate Code Values from Source Data
Match up code values when the values used in the source system are different from the values used in Banner Performance Reporting and Analytics.

RELEASE: ODS 8.3/EDW 8.3/RAP 1.2.1/SRP 1.0

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Cleansing Data Element Definition

Preferences & Security Options **Meta Data** Staging New Web Tailor Administration

Search

Select a Cleansing Data Element

Click a Column in the table below to select the Cleansing Data Element you want to update or delete, or change the search criteria and click Search.

WDT_ACADEMIC_TIME

Dimension	Column	Def Null Value	Def Null Short Desc	Def Null Long Desc	Cleansing Ind?	Cleansing Rule	Sys Req?
WDT_ACADEMIC_TIME	ACADEMIC_PERIOD				N (Enable)	ACADEMIC_PERIOD	Y
WDT_ACADEMIC_TIME	ACADEMIC_YEAR				N (Enable)	ACADEMIC_YEAR	Y
WDT_ACADEMIC_TIME	USER_ATTRIBUTE_01				N (Enable)	ACADEMIC_PERIOD_TYPE	Y
WDT_ACADEMIC_TIME	USER_ATTRIBUTE_02				N (Enable)	DEFAULT_RULE	Y
WDT_ACADEMIC_TIME	USER_ATTRIBUTE_03				N (Enable)	DEFAULT_RULE	Y
WDT_ACADEMIC_TIME	USER_ATTRIBUTE_04				N (Enable)	DEFAULT_RULE	Y
WDT_ACADEMIC_TIME	USER_ATTRIBUTE_05				N (Enable)	DEFAULT_RULE	Y

RELEASE: ODS 8.3/EDW 8.3/RAP 1.2.1/SRP 1.0 [\[Create a Cleansing Rule \]](#) [\[List Cleansing Rules \]](#)

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Step 3: Meta Data Creation

Preferences & Security Options **Meta Data** New Web Tailor Administration

Search [SITE MAP](#) [HELP](#) [EXIT](#)

Edit Target Columns

Please click Save Changes to save any changes you make.

Banner EDW Star: <- | -> | [Select](#) Admissions Application [\[Preview\]](#)

Banner EDW Target: <- | -> | [Select](#) WDT_ACADEMIC_TIME [\[Preview\]](#) [\[Properties\]](#) [\[Add Target Column\]](#)

Banner EDW Column: <- | -> | [Select](#) USER_ATTRIBUTE_01 [Local Record:](#) YES [\[Delete Local\]](#) (Updated: Feb 06, 2009 04:32 pm by DEB)

Publish: ☒ **Database Data Type:**

Business Name:

Business Definition:

Business Data Type: **Domain Values:**

Source Mapping(s) [Add Local Mapping](#)

Subject Area	Source	Source Data Element
Done		

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Step 4: Reporting Metadata Modification

- Update reporting metadata to include new column
- User Attribute and Measure fields exist in database layer
- Rename WDT_ACADEMIC_TIME's USER_ATTRIBUTE_01, USER_ATTRIBUTE_SD and USER_ATTRIBUTE_LD fields to have business name
 - E.g. Academic Period Type, Academic Period Type Description, and Academic Period Type Long Description

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Retracing Our Steps ...

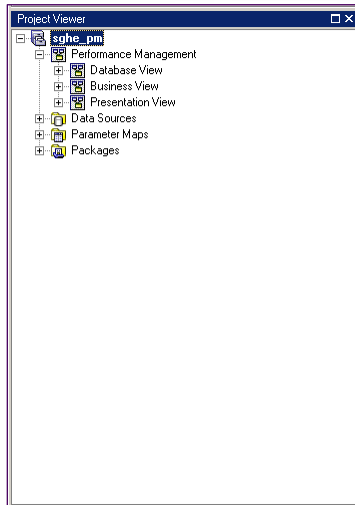
- Step 1 Table Function Modification
 - Change and/or enhance data being loaded from ODS
- Step 2 Cleansing Rule Creation
 - Ensure valid data is loaded into the EDW
- Step 3 Meta Data Creation
 - Update business definitions of data elements
- Step 4 Reporting Metadata Modification
 - Make new/updated columns available for end users

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Cognos Framework Manager Model



Three High Level Layers

Database View

Reference to database objects

Business View

Business-centric grouping of objects

Business-centric table aliases

Business-centric relationships

Presentation View

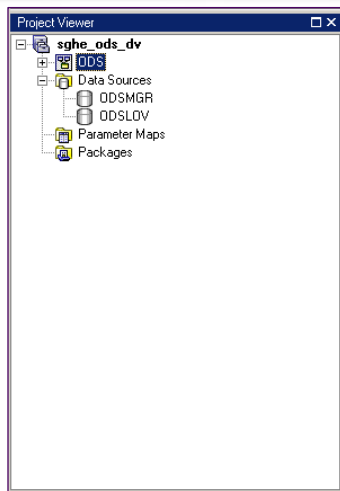
End user experience

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ODS FM Model: Database View



1st of 2 Layers in the Model

Separate model and referenced

Ease of maintenance

Layer of “insulation” for updates

Objects referenced “as is”

Objects Imported from 2 Sources

ODSMGR: Reporting views
Composite tables

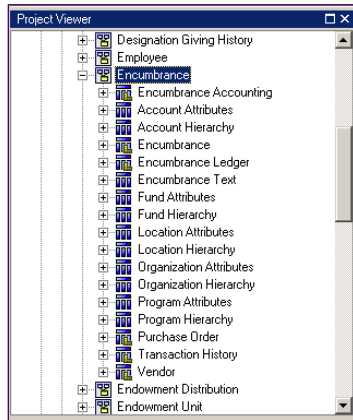
ODSLOV: LOV tables

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ODS FM Model: Business/Presentation View



2nd of 2 Layers in the Model

Business Concepts

Focused on specific reporting needs

Roughly 50 Business Concepts

Object names made readable

Joins defined among objects (views)

Some formatting defined

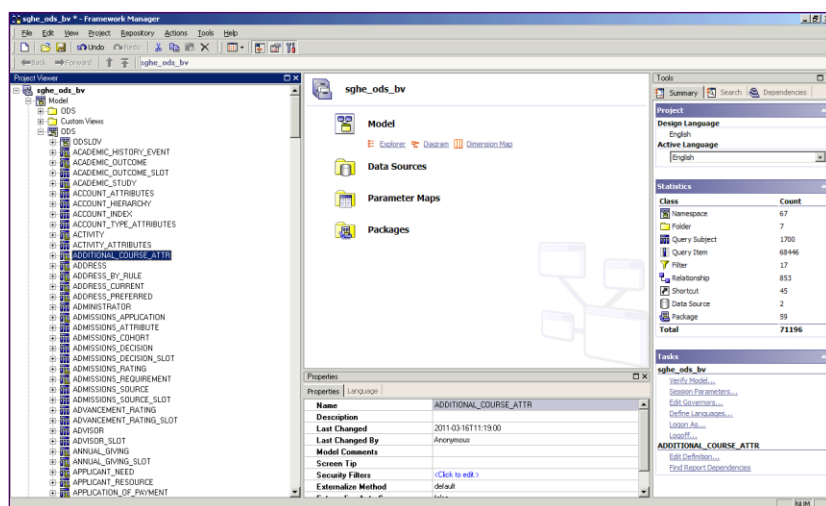
Layer which is actually published

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ODS: Business/Presentation View (After importing into sghe_ods_dv)

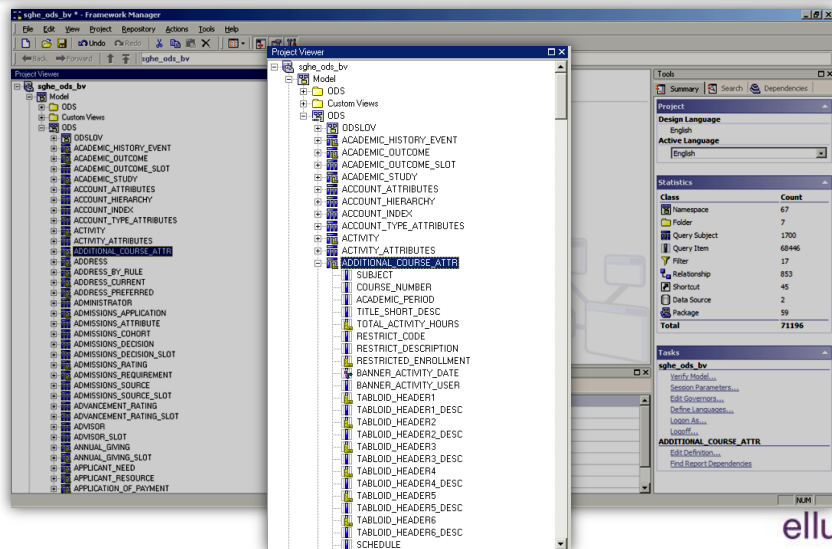


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ODS: Business/Presentation View (After importing into sghe_ods_dv)

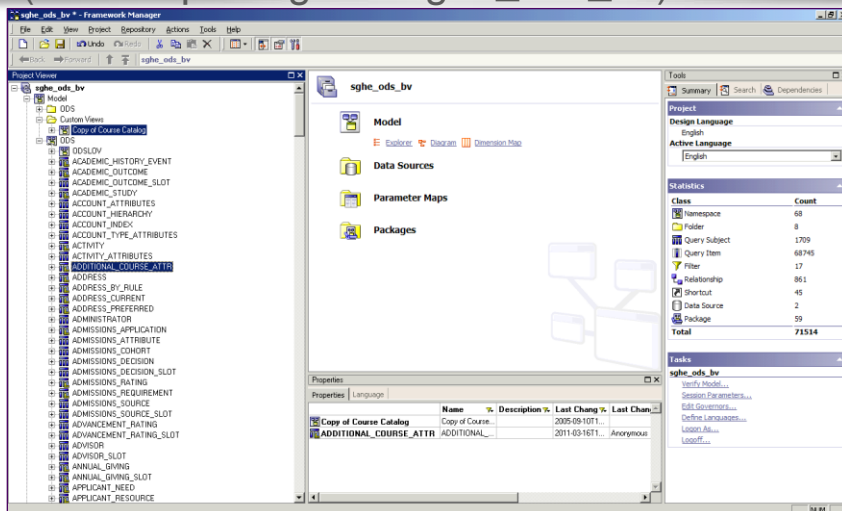


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ODS: Business/Presentation View (After importing into sghe_ods_dv)

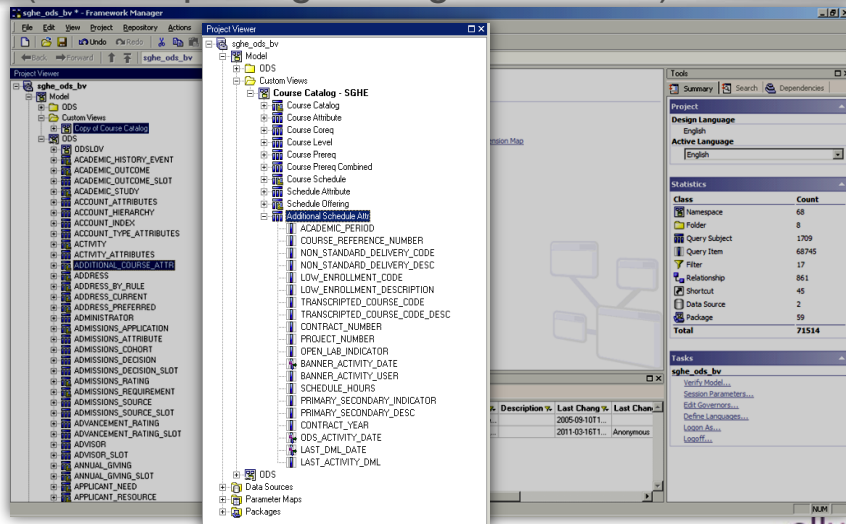


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ODS: Business/Presentation View (After importing into sghe_ods_dv)

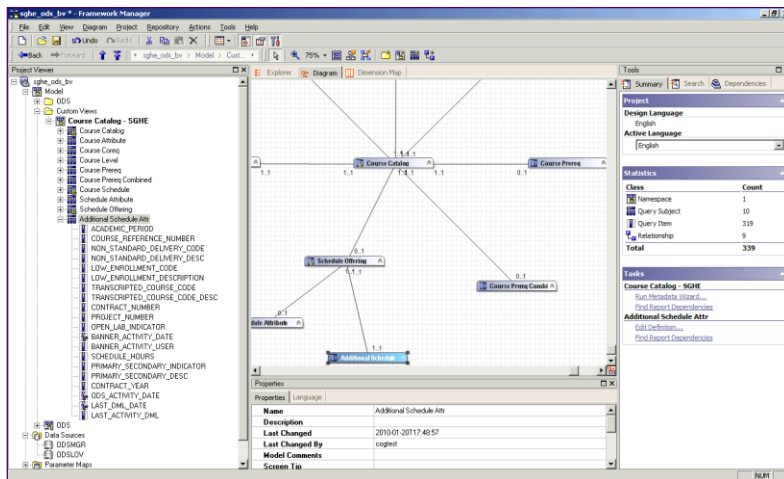


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ODS: Business/Presentation View

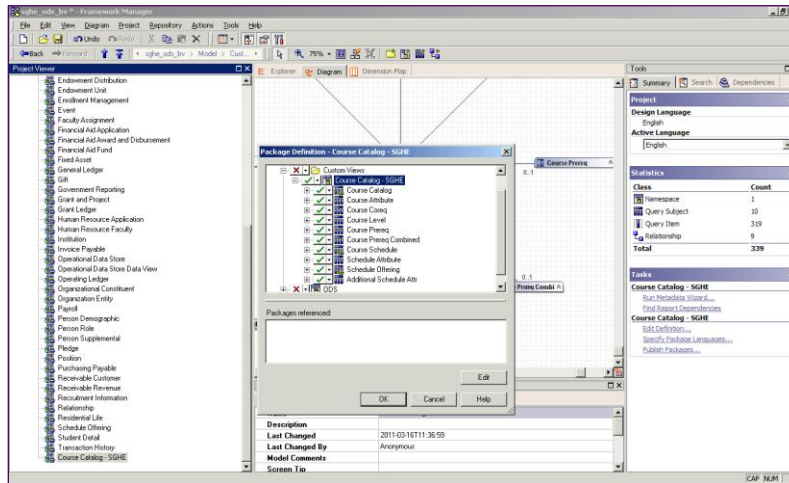


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ODS: FM Package Definition

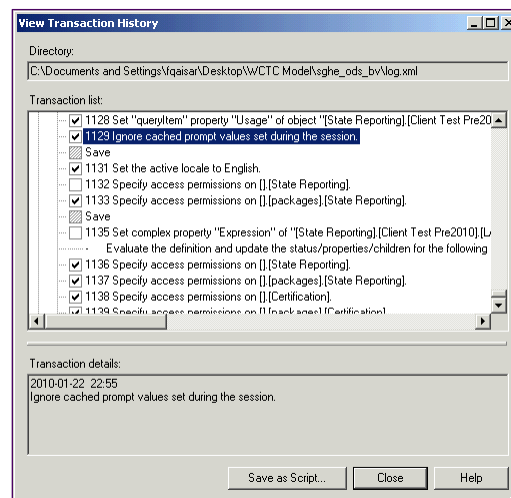


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Save Custom Work Through Transaction History

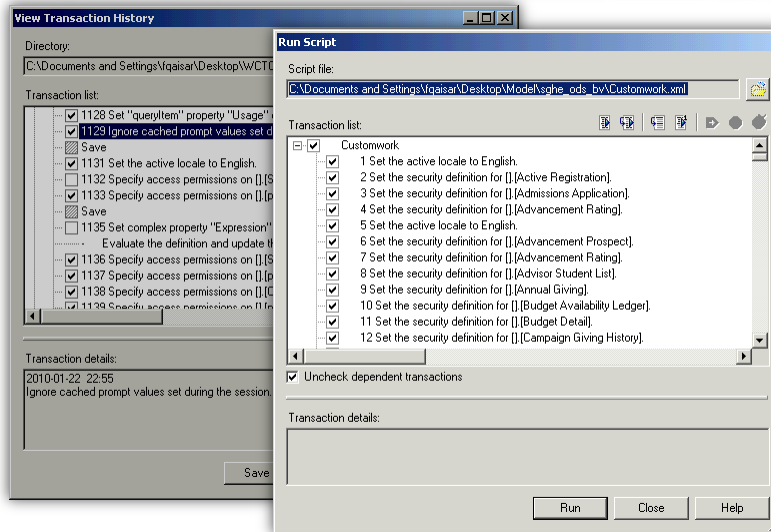


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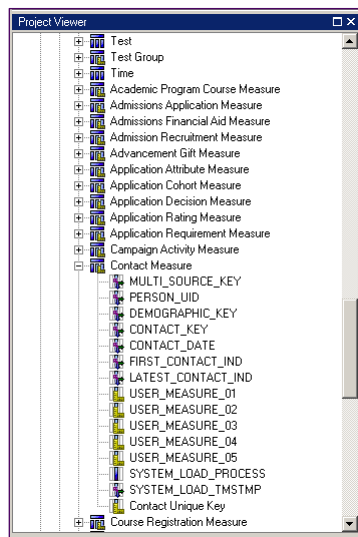
... And Playback During Your Upgrades



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EDW FM Model: Database View



1st of 3 Layers in the Model

Objects May Be Renamed

- Table names made readable
- Select columns made readable
- Fact tables obtain "Measure" suffix
- Some concatenated unique keys added
- Some formatting and aggregation defined

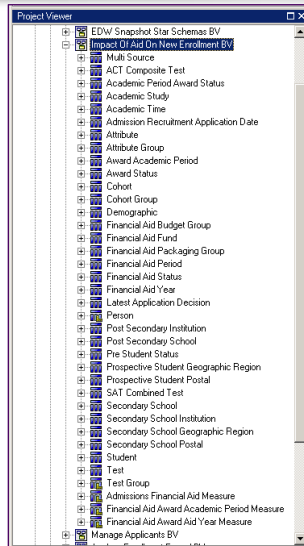
Objects Imported from 1 Source

- EDWMGR: Dimension tables
- Fact tables

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EDW FM Model: Business View



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2nd of 3 Layers in the Model

Business Concepts

1 original snapshot EDW Stars

2 business centric EDW concepts

1 RAP-specific concept

Alias (use case) tables created

Alternate aggregation query items defined

Averages

Percents

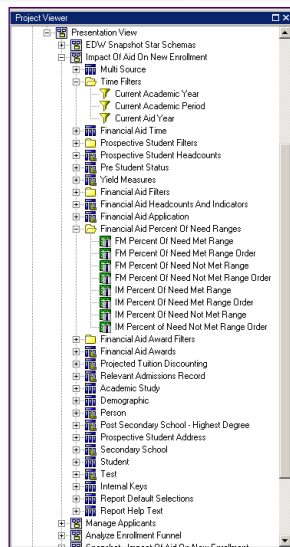
Headcounts

Counts

Joins defined among objects (tables)

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EDW FM Model: Presentation View



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3rd of 3 Layers in the Model

Designed for Ease of Use

Commonly used items grouped together

Folders used to remove clutter

Commonly used filters

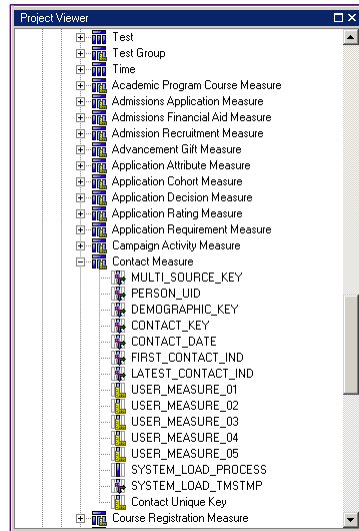
Commonly used calculations

Customizable parameter driven items

Layer which is actually published

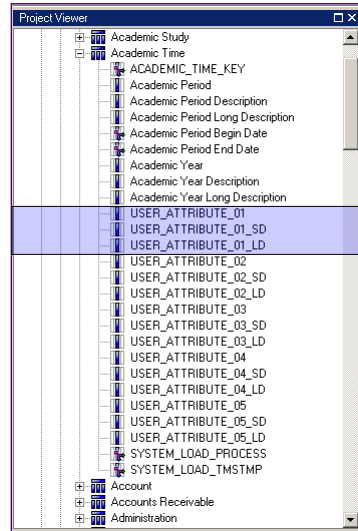
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EDW: Database View

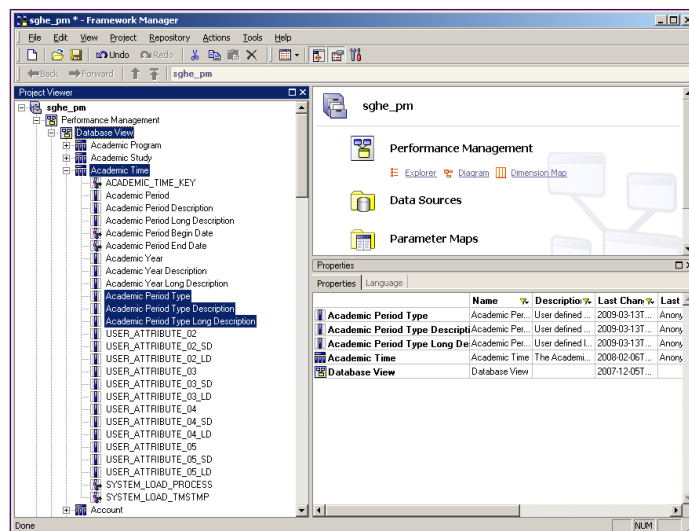


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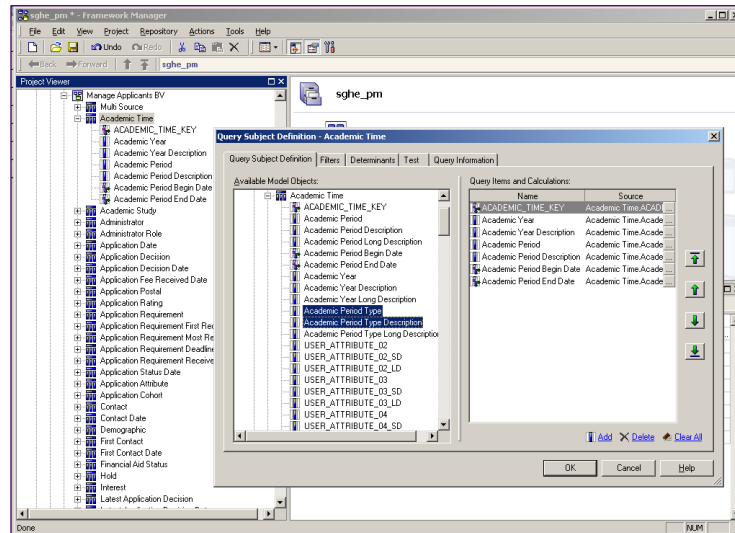
EDW: Database View



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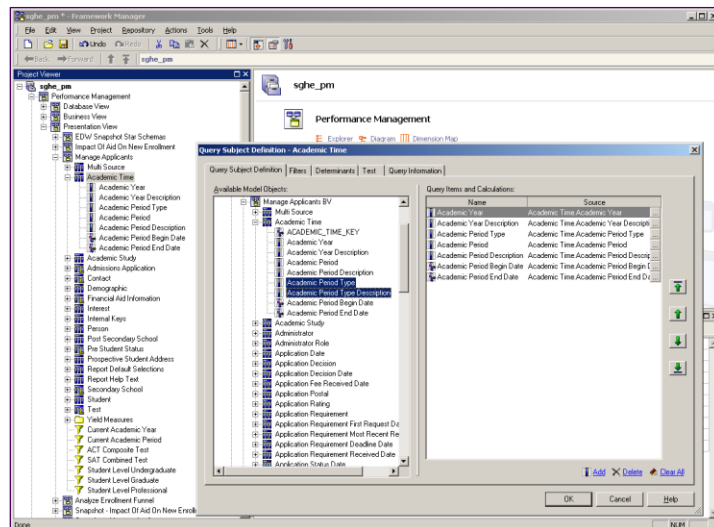
EDW: Business View



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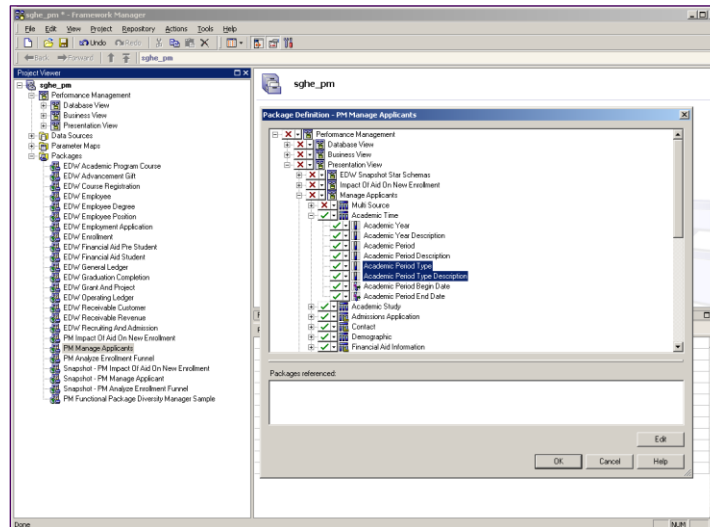
EDW: Presentation View



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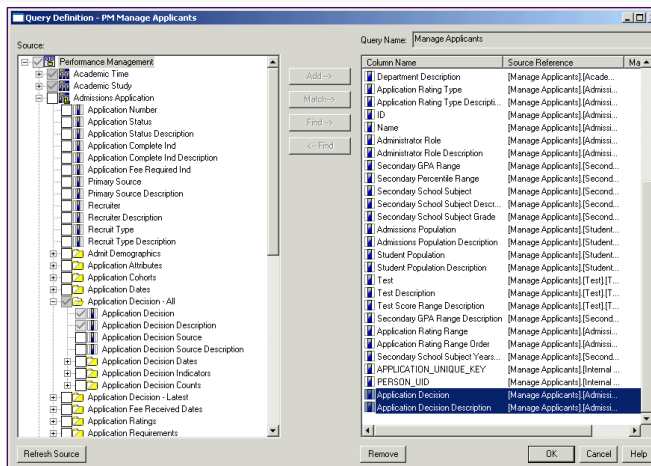
EDW: FM Package Definition



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Extending Cognos Transformer Models

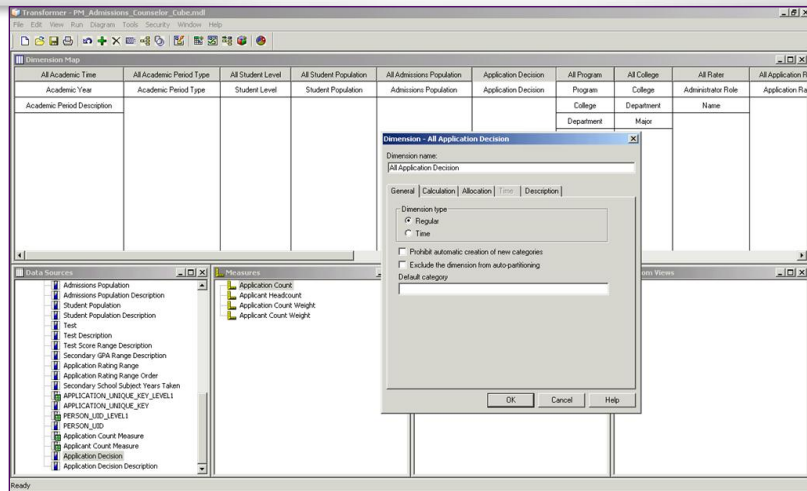


Update Cube Model Data Source with New/Existing Columns

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Extending Cognos Transformer Models



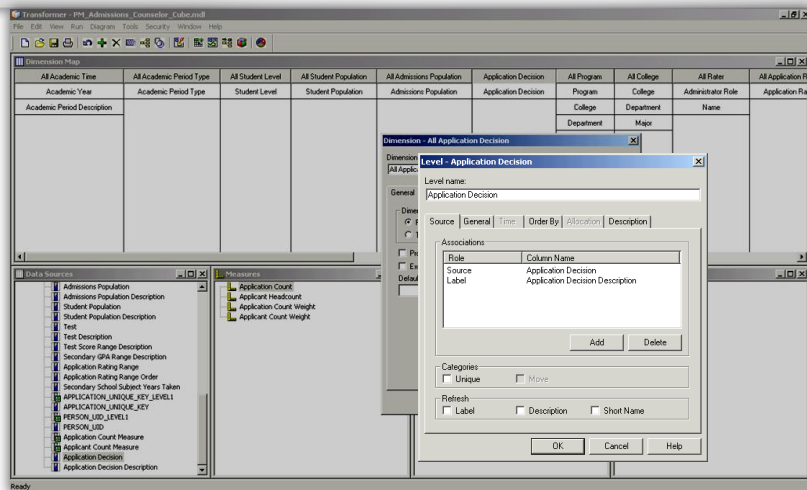
Identify Dimensional and Fact columns

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Extending Cognos Transformer Models



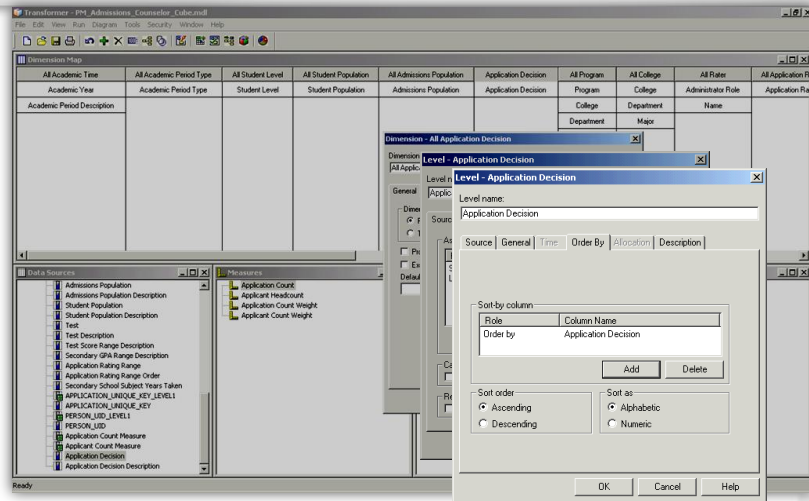
Identify Dimensional and Fact columns

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Extending Cognos Transformer Models



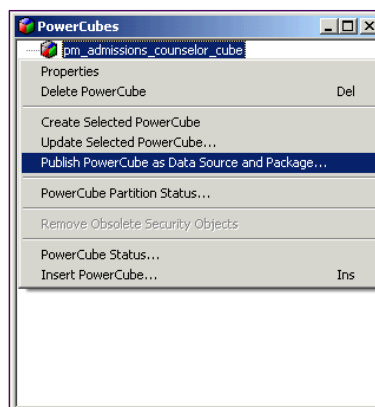
Identify Dimensional and Fact columns

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Extending Cognos Transformer Models



Publish Cube Model with Added Columns

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Questions & Answers



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Thank You!

Vishal Thacker vishal.thacker@ellucian.com

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